

# TRANSFORMATION OF THE FORESTRY DEPARTMENT

## MODERNISATION PLAN



January 2008

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## **EXECUTIVE SUMMARY**

### Introduction

This Modernisation Plan has been developed to chart the way forward for the transition of the Forestry Department (FD) to an Executive Agency within the portfolio of the Ministry of Agriculture. It is envisaged that the modernisation process will take place over a three year period with full Executive Agency status being granted at the start of the second year. The Executive Agencies Act (EAA) and the Financial Instruction to Executive Agencies (FIEA) provide for a “Transition Agency” status to cover the period of modernisation. It is put forward that this status be conferred on April 1, 2008.

### The Case for Executive Agency Status

The Forestry sector has critical service needs such as protection of Jamaica’s forest cover, the development of the local forestry sector and alignment of the sector with global initiatives and guidelines.

These service needs have been identified primarily through stakeholder consultations and technical reviews. The modernisation of the sector is also supported by the Public Sector Modernisation imperatives especially those as laid out in Ministry Paper No. 56/2002 – ***Government at Your Service: Modernisation Vision and Strategy, 2002 – 2012***. Key strategic objectives contained in this Ministry Paper clearly set out the context in which this Forestry Department Modernisation Plan is framed. All of these factors clearly called for the strengthening of the Forestry Department so that it would be able to deliver on service needs. In deciding on the way forward for the Department the following options were presented:

- Retain the institutional model but strengthen operational capability
- Strengthen the institutional model using the Executive Agency model. The strengthening of the operational capability would proceed in tandem with the model change; or
- Strengthen the institutional model using the Statutory Body model. The strengthening of the operational capability would proceed in tandem with the model change.

The pros and cons of these options may be summarised as follows:

<b>Option</b>	<b>Advantages</b>	<b>Disadvantages</b>
Retain existing institutional arrangements	Would not require change in employment status of employees	Entity would remain as a department of the Ministry of Agriculture with no delegated authority given to the Head of the Department and financial control still maintained by Ministry of Agriculture.  Would not allow adequate management control over resources and performance.
Executive Agency	EA model suited to service	Entity’s powers limited by

	delivery entity operating in a core public policy area but without direct responsibility for policy	legislation covering services provided
Statutory Body	Specific mandate and powers can be provided by the entity's enabling legislation	Promulgation of enabling legislation is time-consuming

These options were evaluated using prior options and diagnostic review tools. The recommendation was that the Forestry Department would best fit the profile of an Executive Agency for the following reasons:

- Greater end-point service delivery performance capabilities. This fits the current needs of the sector.
- Enhanced delegated authorities over the management of their resources including human resources, finances and assets.
- Government still maintains control so Ministry accountability and governance oversight is still possible.
- Organisational & governance arrangements can be changed to suit the circumstances
- Revenue mix flexibility as the Agency can move between three types of finance classifications under the FIEA. By default the agency will be classified as a type B meaning partially funded by government and partially funded by its own income generating activities.
- Increased clarity of objectives for the organisation leading to clearer performance targets
- The existing statutory framework governing the Forestry Department's products and services is adequate for the short term, and will contribute to the promotion of accountability and transparency in carrying out the entity's work.
- Overall the executive agency model allows for a more agile and nimble business model which helps the organisation remain relevant to changing service expectations.

### Strategic Review

The mandate for this review was done within the context that the Forestry Department will become a Performance-Based Institution. The strategic review was done to highlight issues facing the sector, strengths and weaknesses and the identification of opportunities and threats in keeping with international best practice and to provide a roadmap for the sector to raise the bar on service delivery. This transformation programme also complements the thrust by the Ministry of Agriculture to strengthen its position as a policy Ministry as it moves operational activities to the required service delivery agent.

The Strategic Review had 2 phases. Phase 1 was consultative with key stakeholders and covers the review of the activities of the Forestry Department inclusive of the various operational activities associated with the implementation of the National Forest Management and Conservation Plan (NFMCP). Phase 2 was instructive, based on consensus with key stakeholders, and covers the proposed strategic plan that is required to guide the modernisation team in implementing a Performance-Based Institution. This modernisation study also examined the roles and responsibilities of the entity in the context of the national and portfolio policy

frameworks, and highlighted key issues that will have to be addressed in the modernisation process.

The Strategic Review was a very interactive process and consultations were held with a number of key stakeholders. The Forestry Department management team made a significant input to the process and their technical knowledge of the sector contributed greatly to the validity of the conclusions reached. Another key component in the consultation process was the discussions with interfacing agencies in the public sector and private sector interests with which the Forestry Department currently interacts.

The main conclusions reached in the Strategic Review may be summarised as follows:

- The Forestry Department should remain as a single public sector entity falling under the portfolio of the Ministry of Agriculture.
- Decentralisation of operations should be taken as a serious consideration with the possibility of deploying staff outside of Jamaica.
- Significant attention will have to be paid in the design and implementation of the institutional arrangements, to promote effective working relationships with key agencies in the Ministry of Agriculture portfolio and other ministerial portfolios.
- Strategies are required to be developed that will foster greater cohesion in the production of outputs and delivery of services.
- While there are some opportunities for broadening the range of outputs, the core services should remain as is, with emphasis being placed on improving the efficiency of service delivery and the development of performance standards reflecting all stakeholder expectations.
- The Forestry Department should have greater control over its resources, primarily because it operates in specialised areas that are subject to growth and fluctuations of demand and workload.
- Regardless of the institutional arrangements that are agreed, there needs to be capacity-building within the Forestry Department in the areas of financial management, human resource management and corporate planning.
- The management structure and mandate may have to be reviewed to provide a separation of strategic management from operational supervision.
- The Forestry Department resource base requires further investment to facilitate process improvement and the implementation of technological opportunities that will improve service delivery and controls.
- Information-sharing, training for staff and other key stakeholders and public education will be vital components in the transformation programme.

Enhancing planning and the performance structure and culture within the Forestry Department are vital, supplemented by the strengthening of policy capacity in the Ministry of Agriculture.

In summary, investments made in the Forestry Department will be optimised once the modernisation plan is implemented.



## Operational Review

The efficiency and effectiveness of operations is at the heart of a performance management system and the Operational Review phase of the study entailed an in-depth examination of the following areas of the Forestry Department:

- Its current business processes
- How it compares to international best practice in the subject areas
- The statutory and regulatory framework it operates within
- The physical resources available for service delivery
- The use of Information and Communications Technology (ICT) in its operations
- Its internal administrative capabilities
- The current staffing situation
- The Operational Review was conducted against the background of some current issues that had attracted outside attention, namely:
  - Weaknesses identified with major processes to creatively increase environmental services
  - Need to establish financial and economic values for forest services
  - Absence of a proper management system of the forest reserves for recreational and eco-tourism purposes
  - Need for steps be taken to allow for increase use of earnings from the sale of forest products in the management of the resources

Some of the key findings arising from the Operational Review are:

- The core business processes of the Forestry Department are basically sound, but would benefit from the wider application of Information and Communications Technology and improvements in the supporting facilities and mechanisms.
- Forestry Department's operations generally comply with international best practice, although there are a number of gaps that require management attention.
- Current physical facilities housing the Forestry Department's operations in Eastern, Western and Central regions are very inadequate. The shortcomings impact on good customer service delivery, the provision of appropriate staff facilities and the overall image of the entity.
- The use of information communication and technology is a key enabler in the Forestry Department's drive for service delivery performance and will need to be strengthened significantly.
- Currently, the Ministry of Agriculture provides administrative support in the areas of financial and human resources management as the Forestry Department is a portfolio of the Ministry.

Coming out of the Operational Review, the following areas will serve as a guide for the development of the modernisation strategy:

- Designing an organisational structure that supports the new operational model and meets the agency's role in forestry management and conservation.
- Justifying staffing levels that can be related to the outputs and the required performance standards of the agency.
- Delivering services at suitable locations that will foster improved customer service.
- Implementing modern technology-based systems that support process improvement, information analysis and dissemination and performance management and control mechanisms.
- Introducing a performance management regime that encourages continuous improvement and rewards employees for their contribution to the improvement process.

### The Modernisation Strategy

The mandate of the new agency was established from the results of the reviews and work done on the sector, current environmental challenges and considerations, Jamaica's forestry profile and issues, and international best practices. These will guide all other objectives and policies and procedures of the agency. The mandate is as follows:

- Maintain the forest cover at not less than 30% of the country
- Increase forest cover to at least 2% over the next ten years
- Transfer the local experience and technology to two other territories in the region in the first five years

There are two dimensions to the required mandate of the new Forestry Department. These dimensions are:

- Strengthening the performance management capabilities of the entity to address service delivery imperatives.
- Implementation of strategic and operational changes which will enable the protection and improvement of Jamaica's **forest and forest ecosystems**.

In keeping with these goals, the previous phases of this study highlighted the following requirements of the modernisation process:

- Strengthening regional forestry service delivery infrastructure through regional facilities improvement and increasing field staff capability and mobility in each region.
- Implementing modern technology-based systems such as the implementation and use of geographical information system to assist in forest data capture and field research.
- Re-configuring staffing levels and job descriptions to fit the proposed structure and operational model and required service deliverables.
- Introducing performance management mechanisms that cover both the agency and its employees.
- Reviewing and formalising the working relationship with interfacing GoJ entities and other stakeholders such as the National Environment Planning Agency.

- Strengthening the statutory and regulatory framework within which the agency will operate. Currently the Forest Act is being revised to strengthen the framework and ensure the legislative base exists for empowering the new Forestry Department to protect forests and forest ecosystems.

In addition to addressing the known operational issues, all of these activities are relevant to compliance with the required attributes of an Executive Agency.

It is proposed that when Executive Agency status is conferred on the Forestry Department that it maintains the name 'Forestry Department'. The communication plan will ensure that the re-branding of the institution occurs and that the change in status is well-communicated and understood. This not only signals the fact that these functions are no longer carried out by a department of the ministry, but it is also important to "announce" the change in status to all stakeholders.

It is recommended that implementation of the modernisation strategy is undertaken in three phases, namely:

- **Pre Transition (Phase 1 – April 2007 to March 2008)**, in which the preparatory work will be undertaken while the Forestry Department operates under its current mandate.
- **Transition Phase (Phase 2 – April 2008 to March 2009)**, during which the intensive modernisation work will be undertaken and the Forestry Department will receive its mandate as a Transition Agency as defined in the Executive Agencies Act and the Financial Instructions to Executive Agencies.
- **Completion Phase (Phase 3 – April 2009 to March 2010)**, during which the remaining implementation activities will take place, but full Executive Agency status will have been granted.

In order to complete the work in the second phase, several workstreams will have to be undertaken concurrently. They are:

- Staff selection and implementation of the proposed organisational structure and pay scales
- Complete the change management process at the Forestry Department
- Capacity-building within the new entity to transfer the administrative functions currently performed for the Forestry Department by Ministry of Agriculture are fully transferred to the new Forestry Department.
- Integrating and upgrading the Forestry Department's operational and information technology systems so as to facilitate the exchange and management of information

# 1 INTRODUCTION

## 1.1 Overview

This draft Modernisation Plan is one of three documents that sets out the future direction of the Forestry Department (FD). Together with the draft Framework Document contained in Annex A and the draft Medium Term Financing Plan which forms Annex B, they present a picture of the strategic direction of the Forestry Department as it moves to Executive Agency status.

The Modernisation Plan is presented in three parts as follows:

1. The **Strategic Review** of the Forestry Department, which provides the basis for the proposed institutional status of the entity.
2. The **Operational Review** of the Forestry Department, which provides the basis of the proposed system of performance management.
3. The **Modernisation strategy**, setting out areas for change and the critical actions and initiatives required to bring about the transformation of the entity into an executive agency.

### 1.1.1 Public Sector Reform Context

Jamaica's public sector reform programme has been in progress since the mid-1990's. One of the success stories of the first phase of the programme was the introduction of Executive Agencies, and several government departments including the Registrar-General's Department, Management Institute for National Development (MIND), the Office of the Registrar of Companies, the Jamaica Information Service and the National Works Agency have made the transition. They are generally seen to be very effective public sector entities.

Now in its second phase, and guided by White Paper No. 56/2002 – **Government at Your Service: Modernisation Vision and Strategy, 2002 – 2012**, the reform process is moving ahead. Key strategic objectives contained in the White Paper clearly set out the context in which this Forestry Department Modernisation Plan is framed. They are to:

- confirm the role and core functions of Government;
- improve the ways in which Jamaica is governed, through sharing the exercise of power and increasing participation in decision-making;
- promote effective management, through appropriate mechanisms, that expressly reflects the government's priorities;
- re-affirm the values of public service, stressing integrity, objectivity and accountability;
- deliver high quality services to users at reasonable cost;
- deliver high quality policy advice to the government;
- secure improvements through the establishment of a performance culture in the public sector;
- value public servants and make sure that they are both motivated and properly equipped to meet challenges; and
- manage all the resources in the public sector to achieve best value for money in the delivery of services.

### 1.1.2 Importance of this Modernisation Project

The Forestry Department has the lead responsibility for the management and conservation of Jamaica's forests. Its functions are mandated by the Forest Act (1996) and are aimed at managing forests on a sustainable basis to maintain and increase the environmental services and economic benefits they provide.

Its main functions, as currently stated, are:

- Conservation and sustainable management of the Forest Estate
- Promotion of private forestry
- Promotion of agro forestry
- Public education and awareness
- Research
- Promotion of forest recreation and tourism
- Promotion of community participation – 'Social Forestry'

Challenges faced by the Forestry Department however point to the need for significant strengthening of current forest management capabilities. Examples of challenges are the:

- roles of Conservator of Forests being complex and multifunctional, which have to be conducted with stakeholders and socio-economic factors. This means that the Conservator needs to have stronger delegated authority;
- competitive interaction environment between different land users and forest lands where most forest lands are privately owned;
- threat to the remaining forest cover. Currently the remaining forest cover is 330,100 hectares or approximately 30% of the overall surface area of the country. The 1989-1998 period shows a loss of forest cover amounting to 0.91 % establishing the annual deforestation rate at approximately 0.1 %; and
- pressure forest land use is facing against human activity and especially agriculture. This is evidenced by most of the remaining forest now being of disturbed broadleaf type showing various degrees of human disturbance. In addition, the only closed canopy characterized by very little human disturbance was assessed in 2001 as only 8% of the overall surface area.

Whilst considerable strides have taken place in introducing new technology and engaging key stakeholder, greater attention needs to be given to improving overall service delivery and developing a performance-based approach to managing the Forestry Department.

Prior Options and Diagnostic Reviews were done to determine the best institutional arrangement to follow in the transformation of the Forestry Department into a Performance-Based Institution. The results of these reviews recommended that the preferred form of a Performance-Based Institution should be the executive agency model. These reviews were submitted to the then Ministry of Finance and Planning and the said Ministry gave permission in February 2007 to prepare the schemes of management to effect transformation of the Forestry Department into an executive agency.

This project has therefore proceeded on the basis that the Forestry Department will be transformed into an Executive Agency.

## 1.2 Critical Actions Required

The high level action plan below illustrates the magnitude of the transformation.

### Critical Actions Required During December 2007 to March 2008

Major Actions Required	Responsible Person	Evidence of Completion
CEO already in place since September 2007	Public Service Commission/Minister	Contract
Appoint Advisory Board	Minister	Letters of Appointment
Finalise and agree Modernisation Plan, Medium Term Financial Plan and Framework Document	CEO/Minister	Confirmation Letter from Minister to CEO
Internal communications strategy agreed	CEO	Agreed strategy document; communications mechanism operating
Establish Agency	Minister	Legal instrument issued

### Critical Actions Required During Transition Year 2008/2009

Major Actions Required	Responsible Person	Evidence of Completion
Appoint senior management team (i.e. members of Senior Management Committee (SMC))	CEO	Letters of Appointment
Appoint other key senior staff	CEO/Director of Corporate Services (DCS)	Letters of Appointment
Develop/ review IT Strategy	CEO/DCS/Head of IT	Strategy Agreed
Develop remaining job descriptions	SMC/Head of HRM	Agreed job descriptions
Develop Asset Register	Head of Finance/Auditor General	Assets valued and agreed
Pay and grading review	CEO/SMC/Ministry of Finance & the Public Service (MoFPS)	Review completed and agreed
Implement IT network and accounting system	DCS/Head of IT/ Head of Finance	Network in place; accounting package operational
Review HRM Strategy, and	DCS/ Head of HRM/MoFPS/	HRM Manual Published

Major Actions Required	Responsible Person	Evidence of Completion
agree new terms and conditions of service, including pay levels	Cabinet Office/PSC	
Fill all remaining posts	DCS/Line Managers	Staff in post
Performance information system developed	DCS/Head of Strategic Planning	System in place and operational
Rebuild training facility	DCS/Head of HRM	Training facility operational
Modernise nursery facilities	Head of Forest Operations	New facilities operational
Upgrade Forest Roads	Head of Forest Science and Technology Services	Forest roads upgraded
Expansion of office facilities to house additional staff	Director, Corporate Services	Facilities built

## **2. STRATEGIC REVIEW**

### **2.1 Introduction**

The Strategic Review report follows and details the initial findings presented by the Consultant at the Forest Department Workshop held in Kingston on December 5, 2006. The first part of the report covers the Review of the Forestry Department activities which has been broken down using the thematic contained in the terms of reference. In addition to the diagnosis of the operations of the Forestry Department, the Consultant has also updated, with the assistance of the staff of the Department, the various operational activities associated with the implementation of the National Forest Management and Conservation Plan (NFMCP). The implementation of this Plan is critical for the Forestry Department and is directly in line with the objectives of its mission.

The second part of the report covers the proposed strategic plan and associated topics which are required by Section 5 of Executive Agencies Act 2002 to serve the modernisation team in moving forward to implement a Performance Based Forestry Institution. Special attention have been taken to reflect the consensus obtained in the various workshops the Forestry Department held including the one of December 5, 2006, where two working groups retained the option of converting the Forestry Department into an Executing Agency. There was however a need to obtain more information on the functioning of such an Executive Agency.

#### **2.1.1 Background**

Jamaica's forestry territory is characterized by a remaining dense forest and woodland cover which has been constantly encroached and subject to loss over the years, mainly due to human activities. The protection function of the forest cover and the related water quality the watershed maintain are in constant interaction with agricultural practices and other human activities. This utilization of the forestry territory is complicated by the fact that Jamaica's geomorphology is

distinct because of abundant sloping land and steep mountainous areas which make it very vulnerable to the removal of natural forest cover for other types of land uses. It is in this competitive interaction environment between different land users that the Forestry Department has to exercise its role of “conservator of the forest cover”, a complex and multifunctional role which has to be conducted with stakeholders and socio-economic actors.

One of the factors that contribute the most in the decline of Jamaica’s forest is population growth and the corresponding needs for new lands within a non structured agriculture. Informal agriculture and associated shifting cultivation have encroached several areas which passed over the year from “forestry territory“ status to “non forestry“ because of the removal of the natural tree cover.

Mining operations is another factor which facilitates encroachment by creating access. Even if legislation obliges mining companies to restore their sites by re-establishing a green cover, the Consultant considers that the standards imposed to these companies are weak, especially that there is no obligation to establish “functional forestry ecosystems“ using native species and enrichment planting. The fact that there is no monitoring on access roads once the companies have left facilitates the access to squatters. The Forestry Department has also to deal with other illegal activities such as fuel wood collection, yam sticks, etc. for which alternative plantation sources have to be created.

#### 2.1.1.1 Forest Cover

1998 is the reference year for the most recently documented forest cover and land use assessment in Jamaica. The coverage has been realized using satellite imagery (LANDSAT) which also combined aerial survey and ground control points. While 2005 is also considered as a reference year for the evaluation of the forest cover, results have been mainly obtained by interpolation and statistical corrections.

### Overall land use and most recent estimate of forest cover in Jamaica (2005) .<sup>1</sup>

Table 1.1

Land use in Jamaica	Surface area ( 000 ha)	Percentage (%)
Bamboo	3,1	0,3 %
Mangrove	9,6	0,9 %
Closed broadleaf	88,0	8,0 %
Disturbed broadleaf	173,3	15,8 %
Short open dry	12,1	1.1 %
Swamp	2,0	0,2 %
Tall open dry	42,0	3,8 %
<b>Sub-total (forest)</b>	<b>330,1</b>	<b>30,1 %</b>
Mixed land use	336,7	30,6 %
<b>Sub-total (forest and mixed)</b>	<b>666,8</b>	<b>60,7%</b>

<sup>1</sup> Global Forest Resource Assessment 2005, Jamaica Country Report, Report No 178, Food and Agriculture Organization of the United Nations (FAO), Rome.



Non forest land use	416,2	37,9%
Water	16,0	1,4%
<b>Total (Non forest land use and water land)</b>	<b>432,2</b>	<b>39,3%</b>
<b>Grand-total</b>	<b>1,099,0</b>	<b>100,0%</b>

The remaining forest cover in Jamaica covers 330,100 hectares which represent approximately 30% of the overall surface area of the country. Mix and disturbed forest types represent almost the same surface area with 336,700 hectares or 30.6%.

The only closed canopy characterized by very little human disturbance now represents only 8% of the overall surface area. Most of the remaining forest in Jamaica is now of disturbed broadleaf type showing various degrees of human disturbance. This shows the enormous pressure forest land use is facing against human activity and especially agriculture.

The remaining 38% of the area of Jamaica being classified as non-forest consists of wholly cultivated areas, bare rock, bauxite mines, buildings and other infrastructures. Bauxite mines have frequently encroached forested areas but have the potential to be rehabilitated. Despite some of the areas have been subject to rehabilitation works in partnership with bauxite companies, an approach consisting in better introduce Jamaican native species is highly suitable.

#### 2.1.1.2 Ownership

Most of the forest cover is privately owned in Jamaica which strongly limits the capability of the Forestry Department to act especially in the protection of forest cover for watershed. Several watersheds are partially on the management jurisdiction of the Forest Department which constitutes a handicap. Despite that guidelines for forest land use have been prepared with permitted uses identified according to slope and soil depth and type of forest cover, the weakness of environmental regulation in the private sector makes it almost impossible to conserve watershed integrity. That is why Local Forest Management Committees (LFMCs) are so important, as these guidelines require their intervention at the planning level.

The incentive to convert forest into agricultural land is still very present; even though the Forestry Department observed the tendency for descendants of farmers, established in mountainous areas seem not to be interested in pursuing the farming profession, especially farms on steep slopes. While there is still a large private ownership of wood lands, the incentive to lease forest land to grow crops is important in Jamaica.

### **Ownership of forest lands in Jamaica<sup>2</sup>**

**Table 1.2**

Ownership	Forest		Other wood land	
	(000 ha)	(%)	(000 ha)	(%)
Private	222	65 %	172	91 %
Public	94	28 %	10	5 %

<sup>2</sup> Global Forest Resource Assessment 2005, Jamaica Country Report, Report No 178, Food and Agriculture Organization of the United Nations (FAO), Rome.

Others	25	7 %	7	4 %
<b>Total</b>	<b>341</b>	100 %	<b>189</b>	100 %

The only protection of the forest cover in Jamaica is in the form of special tenure. Areas are considered “protected” if they fall into one or more of the following categories:

- Forest reserve declared by or under the Forest Act
- National Park declared under the Natural Resources Conservation Authority Act
- Game reserve or bird sanctuary protected under the Wildlife Protection Act
- Other protected areas designated under the Natural Resources Conservation Authority Act or the Forest Act

Nearly 35% of all forests in Jamaica are designated as protected including over 73% of closed broadleaf forests. This explains the major role of the Forestry Department in watershed protection. However, of the total forest surface, almost 64% is unprotected corresponding to privately-owned and Crown lands.

Although a significant part of Jamaica’s forest is protected, there is still serious encroachment within forest reserves. The National Forest Management and Conservation Plan<sup>3</sup> indicates that more than 20% of land within forest reserves has been impacted by human activity and is classified as disturbed broadleaf forest with another land use. Over one-third of all forest reserves and other protected areas have been significantly disturbed. This illustrates the difficulty of the Forestry Department to enforce the Forest Act as part of the land occupation leases have been obtained by other sources than the Forestry Department (e.g.: Land Commission). Of course, there is illegal squatting on Crown Land and Forest Reserves, but there is also heavy construction (villas, residences, private properties) within limits of forest reserves that leaves an external observer perplex on the real willingness of the power in place to let the Forestry Department control its own territory and help in enforcing the Law.

In 1999, land managed by the Forestry Department accounted for 109,514 hectares, of which 98,962 hectares were forest reserves and 10,552 hectares Crown lands. Estimates of the annual deforestation rate from 1980 vary largely ranging from 0.1% to 11.3 %<sup>4</sup> per year according to several sources. The 1989-1998 period shows a loss of forest land amounting to 3,063.6 hectares or 0.91 % of the forest land in 1989 establishing the annual deforestation rate at approximately 0.1 %.

### 2.1.1.3 Plantations

Tree planting is the most widely silviculture method used in Jamaica as enrichment planting, reforestation due to hurricane damage, commercial plantations as well as for shading in agro forestry.

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<sup>3</sup> National Forest Management and Conservation Plan, Forestry Department. Ministry of Agriculture, Kingston, Jamaica, 2001.

<sup>4</sup> National Forest Management and Conservation Plan, Page 23. In reply to a section summarizing the findings of a paper, Forest Cover and Deforestation in Jamaica – An Analysis of Forest Cover Estimates over Time, prepared by O.B. Evelyn and R. Camirand and presented at the Public Awareness Workshop, U.N. Convention on Desertification, Kingston, Jamaica, March 2000.

The Forestry Department is directly involved in seedling production and conducts tree planting at several levels since its inception. Reforestation activities peaked during the period 1974 to 1977 when 3,000 hectares of plantation were established under a project supported by the United States Agency for International Development (USAID). The reforestation activities were abandoned following Hurricane Gilbert in 1988 which destroyed most of the poorly managed immature pine stands.

By 1983, the Forest Industry Development Company (FIDCo) had established 572 hectares of forest plantations. Species still currently planted are Mahoe, Teak, Honduras Mahogany, Cedar, Teak, and Jamaican Mahogany. There was also some Eucalyptus and Santa Maria species planted. The number of native species of which the Forestry Department has a master is then quite limited.

According to the Global Forest Resource Assessment 2005, plantation destined to production raised 8,000 hectares on forest land in 2005. Protection plantations were established at 6,000 hectares in forest land (mostly Crown lands) and 21,500 hectares in other wood lands (mostly Crown land and private land).

#### 2.1.1.4 Overview of the Forestry Productive Sector

After the closure of FIDCo the supply of local softwood to the trade was substantially reduced. The Forestry Department continued to supply small quantities of pine and hardwood to sawmillers throughout the island. Supply of timber (from salvaging operations) for pallets and crates from the Forestry Department only started after Hurricane Ivan in 2004. Therefore, in comparison with other countries having similar forestry areas, the wood transformation sector in Jamaica can be considered as marginal. However, with the development of hardwood forest plantations, such as Cedrella and Teak, there might be avenues to develop future wood processing functions with better value added. For the time being, the strategy should be more to consolidate and monitor to stop wood wasting by enterprises and illegal logging.

#### 2.1.1.5 Lumber Supply and Demand

The National Forest Management and Conservation Plan (NFMCP) states that:

*“The quantity of lumber produced legally from state-owned lands can be estimated from total wood volumes on cutting licenses issued by the FD and the application of an appropriate recovery rate. The recorded amount of timber taken from state-owned lands in recent years is, however, less than 500 m3 per year; no estimates are available for the volume of timber illegally removed. In the past few years (late 90’s) there has been an increase in the number of chainsaw mills. These highly portable operations can be taken deep into the forest to extract and convert timber trees previously considered inaccessible.”*

The above statement suggests that the Forestry Department should be more active with customs in controlling the entry of “chain saw guide bars” and other portable instruments which can be used to illegally produce in the forest. This could certainly be done without even changing and/or amending any law pertinent to the Forestry Department. A simple “interagency” and/or “inter-departmental” technical note addressed to Customs on the import limitation of such equipment could be sufficient.

Reliable data is not available on lumber and other wood production from Jamaica's forests. Approximate annual production estimates are:

- □□hardwood lumber: 59,000 cubic metres (1993)
- softwood lumber: 3,000 cubic metres (1993)
- □□charcoal: 37,000 to 60,000 tonnes
- fuel wood: 300,000 cubic metres
- yam sticks: 150,000 m<sup>3</sup>

Based on the socio-economic profile of Jamaican households and despite no specific studies having been conducted, production of fuel wood and charcoal seems to be the major volume of wood collected in the forest. Charcoal utilization is common at both the urban and rural levels for both households and the commercial sector. The lack of control to wood access and minimum capital requirements renders charcoal production an easy and obvious income-earning activity for the rural unemployed.

Based on the NFMCP, the annual production of 3 to 4 metres yam sticks (6 to 8 cm in diameter) has been estimated in 2000 at 15 million sticks. This corresponds to an annual round wood consumption of 150,000m<sup>3</sup>. The problem with yam sticks is that it is made from hardwood. Illegal and intensive harvesting in forest has a significantly negative impact on natural regeneration of forests.

## **2.2 Sustainable Management and Effective Forest Conservation on Crown Lands and Forest Reserves**

This section reviews two distinct key functions of the Forestry Department in the application of the Forest Act. There is of course integration between forest management activities and conservation. But the first relates more to the result of technical capabilities performance and political willingness to implement the principles prescribed. The conservation function is the result obtained by the integration of sustainable management principles and protection especially on Crown lands and forest reserves.

### **2.2.1 Sustainable Forest Management Functions**

Country wide, the Forestry Department is responsible of ensuring sustainable management of the Jamaican forestry resources. Therefore, it must deploy technical and operational inputs in order to conserve, protect and allocate forest resources so as not to compromise their sustainability while at the same time satisfying the needs of the population. While the Consultant is of the opinion that the notion of "sustainability" of forest management is only partially achieved in Jamaica for reasons explained further, the Forestry Department does effectively "prescribe" and partially conduct the management of its forests via a series of implementing activities and actions that are determined, coordinated and driven by the National Forest Management and Conservation Plan (NFMCP). This plan was prepared in 2001 for an active period of five years (2001-2006). It provides what we can consider to be the "general and overall planning" guidelines of forest resources management.

The second implementation level of the forest management function is through the Local Forest Management Plans (LFMPs). Only one Local Forest Management Plan has been prepared. This was done for the Trees for Tomorrow Pilot Project Area (Buff Bay/Pencar Watershed

Management Unit). This plan has not been implemented because of the lack of resources to implement it.

In terms of Local Forest Management Committees, only three have been created. Another three will be created in the Cockpit Country in March, 2007.

### **2.2.2 The National Forest Management and Conservation Plan (NFMCP)**

According to the Consultant, the NFMCP prepared by the Forestry Department is in conformity with international standards including public hearings, definition and objectives, participation of stakeholders as well as biophysical description and prescription of the forest resources and utilization. To achieve its objectives, the plan formulates and describes the ten strategies listed below which themselves refer to a thematic function the Forestry Department must maintain in its regulatory operations:

- Community Participation
- Public Education
- Forestry Research
- Local Forest Management Plans
- Co-operative Management Agreements
- Forest Protection
- Forest Production Programme
- Investment and Incentives
- Role of the Forestry Department
- Role of the Private Sector
- Coordination and Monitoring

Although the plan is supported by implementing activities which will be listed in the following section, the NFMCP is also associated to the National Forest Inventory completed in 2003. This inventory covers all the forests of the national territory providing broad information on the various forest types. The Forestry Department has also completed a series of detailed inventories of several critical areas in order to integrate a five-year forest cover assessment change within a period of five years.

As mentioned earlier, the preparation of the NFMCP was the result of public consultations and hearings, not only from the Forestry Department's directly linked stakeholders but also from other statutory authorities such as Government agencies who have an interest in the management of Jamaica's forests (e.g. NEPA, forest conservation and environmentally concerned NGOs etc.); all of them have expressed serious constraints obstructing or impairing the achievement of the goals of the forest management and conservation function which the Forestry Department is to execute. Among these constraints are of course the needs in public awareness, cooperation and compliance, the continuous needs in training and human resources to improve the enforcement capability of the Forestry Department, the barrier to investment in reforestation, information on land use, etc.

However, the Consultant has repeatedly noted that there are two predominant causes that subordinate the constraint to implement the forest management function in Jamaica, even with a Forestry Department that is funded and fully staffed with trained personnel. The first is the lack of commitment and accountability by senior Governmental levels to enforce environmental laws and especially the Forest Act. This observation comes from most of the documents consulted,

reading and hearings made during the mission, most of them originating from various stakeholders and NGOs. The second constraint is more structural and refers to the fact that at least fourteen Government offices, ministries, departments, authorities, commissions or boards have overlapping and sometimes conflicting interests in forest land management. Overlapping responsibilities have resulted in uncoordinated planning and decision making, which in turn have created problems in accountability, efficiency, prioritisation and programme implementation. The fact that the Forestry Department has presently a status which can be assimilated as a “Technical department or Technical entity” of the Ministry of Agriculture does not help to facilitate the implementation of such a highly suitable cooperation such as:

- Inter-agencies / institutional agreement on a common and comprehensive system of land use zoning
- Formal cooperative management arrangements between implementing agencies
- Effective participation in forest planning at a senior level of Government having sufficient authority to resolve differences between the management agencies.

### **2.2.3 Implementing the Forest Management Function**

The implementation of the NFMCP consists of a series of specific activities with targets and goals consistent with strategies stated in the Plan itself.

As mentioned in the Plan, its implementation is implied by an explicit commitment from the Government of Jamaica to donors and other investors including commitment to a budget contribution sustained for at least the 5-year period the plan is expected to cover. Alternatively, the NFMCP is locally implemented *via* Local Forest Management Committees (LFMCs) which were expected to be at the number of ten at the time the NFMCP was prepared.

The dependence on international aid to implement several forest management activities puts forward the necessity for the Forestry Department to be much more active in fund raising to properly accomplish its function in forest management. The fact that the present Forestry Department is attached to the Ministry of Agriculture as a departmental structure significantly limits its flexibility to properly finance its forest management activities. It may come to a point that certain forest management activities which may have been planned will not be implemented because of a lack of alternative international financing.

Table 2.1 refers to the forest management activities mentioned in the NFMCP. These implementing activities are those making the forest management plan operational and the Forestry Department functional in forest management.

### **2.2.4 Resources to Accomplish the Forest Management Function**

It can be said that most of the human resources and a large part of the technical capabilities are mobilized at the Forestry Department to achieve the forest management function. Because the NFMCP is the core of the forest policy implementing strategy, the forest management function touches most of the technical and regulatory services the Forestry Department maintains whether in Kingston or in its three regional offices. In addition to table 2.1 but more relevant to the Forestry Department’s regulatory services, the Consultant has listed a series of activities the

Forestry Department has to maintain/develop in the context of its mission in order to properly accomplish its function in forest management. This exercise will be for each Forestry Department functions to point out where the Consultant's findings in terms of activity performance may interact with the several functions analysed. Therefore, to successfully perform its forest management function, the Forestry Department must maintain the following activities:

- Forest inventory and forest survey (inventory and monitoring systems)
- Forest Protection (all forest officers)
- Support to local communities (implement Local Forest Management Committees)
- Legal Unit (enforcing the law and adapting/updating legislation)
- Public awareness
- Tree planting
- Forest nursery
- Research
- Regional offices capabilities

### **2.2.5 Summary of Consultant's Findings at the Forest Management Level**

As a result of public hearings and in addition to what has been said in terms of difficulties in implementing the NFMCP, the following was also noted:

- Lack of demonstrated commitment and accountability by senior levels of Government to enforce the Forest Act.
- Overlapping and sometimes conflicting interests in forest land management (land authorities, NEPA, etc).
- Lack of capabilities to adequately take advantage of the various financing options offered by international organizations. Difficulties to address importance of international finance organization membership (eg: ITTO).
- Forestry Department's limited inter-agencies/institutional agreement on a common and comprehensive system of land use zoning.
- Forestry Department's limits in having formal cooperative management arrangements between implementing agencies.
- Forestry Department's lack of sufficient authority to resolve differences between management agencies. Its present status and structure limits it in having an effective participation in forest planning at a senior governmental level.
- Partial achievement of the sustainability objective of forest management.

Although the Forestry Department maintains its objective of sustainable management of the forestry resource, this objective seems to be only partially achieved especially in the prescription of Annual Allowable Cut (AAC) relating to forest plantation logging under the jurisdiction of the Forestry Department.

Despite all commercial exploitation is forbidden in closed broadleaf forest on Crown lands and consequently an AAC prescription is not applicable, the Forestry Department maintains a

responsibility toward the private forest land owner who may wish to place his forest under a sustainable forest management regime. Having no background information on indigenous species increments and natural stand yields, the “sustainability notion” of all silvicultural prescription that the Forestry Department may provide to a third party (private sector) is not applicable at this time. Similarly, the AAC prescribed when logging permits in Pine plantations are awarded is based on a general yield table.

With the exception of Caribbean pine and Mahoe, there is no species incremental data taken from the field. The Forestry Department is quite conscious of this gap and this is the reason why a program of permanent sample plot is presently ongoing in order to convert certain temporary sample plots measures during the national forest inventory into permanent sample plots.

#### 2.2.5.1 Use of Ecosystemic Management System

Being a signatory of the Convention on Biological Diversity (CBD) as a part of the Earth Summit in Rio Janeiro (1992), Jamaica has implicitly adhered to the use of the “Ecosystemic concept” in its forest management approach. The Consultant has noted that without any proper biophysical information originating from permanent sample plots, forest management under an ecosystem approach is not possible. The main reason being that individual species and forest type growth rates not estimated from permanent sample plots systems only produce an inaccurate measure of the real yield and by extension of the “sustainability” of any form of harvesting. ITTO’s criterion on sustainability of management of tropical forest is very clear<sup>5</sup>

#### 2.2.5.2 Decentralisation and the Reinforcement of Regional Offices

During the mission, the Consultant has noted that the Regional Offices of the Forestry Department lack autonomy in terms of regulatory management and provisions of technical services to the community. As the regional offices are a key element in the interaction between the Forestry Department and the Local Forest Management Committees, they must be managed as an independent entity using the most decentralized approach as possible. Substantial improvement should be made in the mobility and communication of forestry agents in region (vehicle, motorcycle, telecommunication facilities...) in order to implement adequately the forest management plan at the regional level. It should also have a significant positive impact on the motivation of the regional Forestry Department personnel.

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<sup>5</sup> ITTO principles, criteria and indicators for the sustainable management of African natural tropical forests, ITTO Policy Development Series No 14.



## Forestry Department - National Forest Management and Conservation Plan Activities 2001 – 2006

**Table 2.1**

<b>Expected goal from the National Forest Conservation and Management Plan</b>	<b>Plan programmed implementing activity</b>	<b>Plan's programme performance indicator and target</b>	<b>Corresponding level of accomplishment recorded to date</b>
<b>Protect Forest Resources</b>	Establish and operate protection system	100,000 ha currently reserved, plus additional remaining closed broadleaf forest (approximately 23,000 ha), and mangrove (5,600 ha), effectively patrolled and protected by staff of 60 trained wardens.	<ul style="list-style-type: none"> <li>• Approx. 99,731 ha being managed as Forest Reserves on Forest Estate</li> <li>• Approx. 10, 346 ha additional Crown Lands being managed as part of Forest Estate</li> <li>• Mangrove status not yet addressed</li> <li>• Most of the Forest Estate being patrolled by 33 trained wardens</li> </ul>
	Establish and maintain inventory and monitoring system	Current broad biophysical inventory of all forest land; detailed inventory of critical emphasis areas; change detection system in place for assessing forest cover change at 5-year intervals.	<ul style="list-style-type: none"> <li>• National Forest Inventory 2003 done</li> <li>• Inventory of critical emphasis areas, Four (4) Watershed MU), done. One (1) other currently in progress</li> <li>• Change detection system in place</li> </ul>
	Protection/forest conservation on private lands	Preservation of threatened undisturbed forest on private land in critical emphasis areas (assumed 5000 ha) through acquisition or incentives to landowners.	<ul style="list-style-type: none"> <li>• Two (2) private properties declared Forest Reserve and Forest Management Areas.</li> <li>• Tulloch Estate – Approx. 320 ha</li> <li>• Catadupa – Approx. 50.0 ha</li> </ul>
	Survey existing forest reserve boundaries	400 km (consisting of the 100 km being surveyed at present by FD plus an additional 300 km).	<ul style="list-style-type: none"> <li>• No additional FR boundaries surveyed</li> </ul>
	Survey new forest reserve boundaries	75 km	<ul style="list-style-type: none"> <li>• No new FR boundaries surveyed</li> </ul>
	Maintain boundaries, trails, fire breaks	300 km per year	<ul style="list-style-type: none"> <li>• 100km FR boundaries maintained</li> </ul>

## Forestry Department - National Forest Management and Conservation Plan Activities 2001 – 2006

**Table 2.1**

<b>Expected goal from the National Forest Conservation and Management Plan</b>	<b>Plan programmed implementing activity</b>	<b>Plan's programme performance indicator and target</b>	<b>Corresponding level of accomplishment recorded to date</b>
<b>Protect forest Resources (con't)</b>	Produce Local Forest Management Plans (LFMPs)	LFMPs approved by Minister and endorsed by public for all forest reserves in critical emphasis areas within 5 years (including new declarations and forest management areas)	<ul style="list-style-type: none"> <li>• One (1) plan produced but not approved by the Minister.</li> </ul>
	Establish and support Local Forest Management Committees	10 committees appointed and functioning, focused on critical emphasis areas	<ul style="list-style-type: none"> <li>• Three (3) LFMC's established</li> </ul>
	Forest policy update	Updated Forest Policy	<ul style="list-style-type: none"> <li>• Forest policy updated (2001).</li> </ul>
	Public awareness	Local public awareness programme reaching all residents and stakeholders within critical emphasis areas; national public awareness programme reaching all school children	<ul style="list-style-type: none"> <li>• Approximately 75% of residents and stakeholders in critical emphasis areas reached</li> <li>• Approximately 80% of all schools reached</li> </ul>
	FD training	All FD staff trained and functionally competent in areas of responsibility	<ul style="list-style-type: none"> <li>• All staff members trained and some demonstrating an increase level of competence</li> </ul>
	Community training	Effective community participation in forest management in 10 critical emphasis areas	<ul style="list-style-type: none"> <li>• Three (3) LFMC's formed and demonstrating satisfactory participation in forest management efforts in their locations</li> </ul>
	Forest road maintenance and restoration	100 km per year	<ul style="list-style-type: none"> <li>• 10 km of roads maintained but no effective restoration of damaged roads done because of the lack of funds.</li> </ul>

## Forestry Department - National Forest Management and Conservation Plan Activities 2001 – 2006

**Table 2.1**

<b>Expected goal from the National Forest Conservation and Management Plan</b>	<b>Plan programmed implementing activity</b>	<b>Plan's programme performance indicator and target</b>	<b>Corresponding level of accomplishment recorded to date</b>
<b>Restore tree cover</b>	Reforestation (planting, maintenance, silviculture)	1000 ha per year planted and maintained (20% Government; 80% private)	<ul style="list-style-type: none"> <li>• 250 ha planted. (Approx. 20% on government lands and 80% on private.)</li> </ul>
	Survey Crown land for leasing	1100 ha of suitable Crown land leased for approved agro forestry use	<ul style="list-style-type: none"> <li>• No Crown lands have been leased for this purpose</li> </ul>
	Establish nursery system	3 nurseries with combined capacity of 1.5 million seedlings per year	<ul style="list-style-type: none"> <li>• Four (4) nurseries in operation with a total capacity of approx. 2.0 million seedlings</li> </ul>
	Operate nursery system	1.1 million seedlings per year (to support 1000 ha per year); includes 65,000 seedlings for urban use	<ul style="list-style-type: none"> <li>• Approximately 300, 000 per year which supported approx 4, 600 ha. An additional 20,000 seedlings were produced for urban use.</li> </ul>
	Develop and implement research programme	Reforestation programme supported by trials evaluating and verifying species selection, silvicultural and agro forestry systems and productivity	<ul style="list-style-type: none"> <li>• Not done</li> </ul>
	Mining reclamation support	No net loss of tree cover	<ul style="list-style-type: none"> <li>• Being implemented</li> </ul>
	Mangrove protection and restoration	Protect or restore mangrove forests to maintain at least 10,000 ha	<ul style="list-style-type: none"> <li>• Not yet in place</li> </ul>
<b>CO<sub>2</sub> sequestration</b>	Develop CO <sub>2</sub> sequestration programme	Exploratory studies and trials completed; definitive	<ul style="list-style-type: none"> <li>• Exploratory studies and trials completed</li> </ul>

## Forestry Department - National Forest Management and Conservation Plan Activities 2001 – 2006

**Table 2.1**

<b>Expected goal from the National Forest Conservation and Management Plan</b>	<b>Plan programmed implementing activity</b>	<b>Plan's programme performance indicator and target</b>	<b>Corresponding level of accomplishment recorded to date</b>
		programme in place	<ul style="list-style-type: none"> <li>• Programme not yet in place</li> </ul>
<b>Biodiversity conservation</b>	The activities for this goal are encompassed within the goals for "Protect Forest Resource" and "Restore Tree Cover"	Habitat for native flora and fauna is maintained by increasing the extent of forest reserves and other protected areas together with effective patrolling and protection of these areas.	<ul style="list-style-type: none"> <li>• Limited success achieved</li> </ul>
<b>Economic contribution of the forests</b>	Forest resource valuation	Established financial values for forest services including wood products, non-wood products, water, soil conservation, recreation	<ul style="list-style-type: none"> <li>• Not done</li> </ul>
	Revenue collection and administration	Fair stumpage value being paid by users for all wood harvested on Crown land	<ul style="list-style-type: none"> <li>• Done</li> </ul>
	Develop extension capability	60 wardens, 31 foresters trained and competent in extension.	<ul style="list-style-type: none"> <li>• 33 wardens and 36 trained foresters.</li> </ul>
	Extension operations	Reforestation and protection objectives met; private sector establishing minimum of 800 ha per year of productive forest	<ul style="list-style-type: none"> <li>• Most of our reforestation and protection objectives met</li> <li>• Approx. 200 ha established</li> </ul>
	Support community project start-up	50 small projects started and successfully operating	<ul style="list-style-type: none"> <li>• Two (2) projects started</li> </ul>
	Tree growers' association	Tree growers' association formed and functioning.	Tree growers' association formed and functioning.

## Forestry Department - National Forest Management and Conservation Plan Activities 2001 – 2006

**Table 2.1**

<b>Expected goal from the National Forest Conservation and Management Plan</b>	<b>Plan programmed implementing activity</b>	<b>Plan's programme performance indicator and target</b>	<b>Corresponding level of accomplishment recorded to date</b>
<b>Economic contribution of the forests</b>	Manage the Jamaica Forest Management and Conservation Fund	Fund established and independently administered with a capitalised value, or equivalent income, of at least J\$500 M	<ul style="list-style-type: none"> <li>• Forest Conservation Fund established.</li> </ul>
	Yam stick market study	Production, consumption, utilisation and economics evaluated; production programme established	<ul style="list-style-type: none"> <li>• Not done</li> </ul>
<b>Sustainable fuel wood production</b>	Fuel wood/charcoal studies	Production, consumption and economics evaluated; definitive implementation programme established	<ul style="list-style-type: none"> <li>• Not done</li> </ul>
<b>Recreation and tourism</b>	Develop and maintain recreational facilities	3 sites operating in forest areas	<ul style="list-style-type: none"> <li>• Facilities on two (2) sites repaired</li> </ul>

## **2.3 Control of Harvesting and Renewal of Forest Resources Function**

According to the Forest Act, the Forestry Department is entitled to direct and control the exploitation of the forest in a rational manner, based on adequate systems to renew these forest resources. However, in reality, the scope of work of the Department is limited to territories and areas included in its jurisdiction (forest reserves and crown land) or in private lands declared by the Minister to be Forest Management Areas or Forest Reserves. The Forestry Department can therefore not execute its function of harvesting control and implementation/maintenance of the forest resources renewal system in the private sector areas. The Consultant believes this situation is a handicap for the Forestry Department as only NEPA is entitled to act upon the interdiction and/or limitation of tree harvesting in private lands if such tree harvesting operations are not performing according to certain standard levels (limitation on % slopes and tree cover). The only hope at this level is that there is a recommendation in the revision of the Forest Act to the effect that the Forestry Department be entitled to act in these situations.

To perform the harvesting control and forest resources renewal systems, the Forestry Department has to mobilize human and technical resources to accomplish tasks related to the following process:

- Allocation of forest resources (wood and non-wood forest products)
- Grant of logging licences and permits described in the Forest Act
- Supervision and verification of such harvesting operations
- Implementation of forest resources renewal systems

Notwithstanding several other activities, the Forestry Department may perform in the context of special projects or research activities. The four above referential topics have been used to evaluate how the Forestry Department meets its harvesting control and resources renewal functions and how its performance can be improved. The activities outlined above are what are currently being done, not as efficiently as the Forestry Department would like, mainly due to limited resources. However, the Consultant maintains that an improvement of the mobility in the field and the development of a more efficient management approach would improve the efficiency.

### **2.3.1 Allocation of Forest Resources**

Forest resources allocation is the process by which a forest administration and its stakeholders decide on the type of usage wood and non-wood forest products will be attributed (commercial harvesting, restricted harvesting, phytosanitary thinning, salvage operation, etc). This allocation process also takes into account the type of prescribed land use of the territory such as conservation (forest reserve, watershed), protection (forest under recovery or regeneration) or commercial use (production forest).

In Jamaica, the National Forest Management and Conservation Plan (NFMCP) gives the path of the type of allocation of forest resources (mainly wood products) the Forestry Department may attribute onto a given territory. The Forestry Department performs this process *via* its Forest Resource Management and Planning Section which is actively involved in the preparation and continuous monitoring of the NFMCP. The implementation of the forest resource allocation scheme is then transferred into the operation phase *via* the LFMP and LFMC with the necessary support of the regional office staff.

However, as there seems to be a jurisdiction overlapping in land use policy between the Forestry Department, the Commissioner of lands and other entities, many Government offices have statutory interest and often conflicting interest in forest lands which encompass or weaken the

Forestry Department's authority on wood allocation policies. In this sense Article 6 (2)(b) of the Forest Act (1996) says about the lease of a land located within a forest reserve that "...if the parcel of land includes any Crown lands, the Commissioner of Lands shall not grant lease without the approval in writing of the Conservator." It seems that in many cases, this cannot be enforced for the reasons mentioned above.

### **2.3.2 Grant of Logging Licences and Permits Described in the Forest Act**

The granting of logging licences and permits described in the Forest Act is also a process the Forestry Department has to conduct in collaboration with the regional offices. The process implicates the Forest Management and Planning Section of the Kingston Head Office as most of the research, map location; aerial photograph, control points and forest inventory data (if any) have to be extracted from the central database. At this level, the Forest Management and Planning Section would certainly benefit by having an aerial coverage at 15:000 for all the territory of Jamaica to improve the Forestry Department's ability to update its land use maps, particularly for forest plantations as well as to extensively better monitor other interventions within the forest. Similarly, the region suffers also from a lack of portable GIS which should simplify and better precise the overall monitoring of licences boundaries and other land related granting which are under the responsibility of the Conservator of Forests.

The logging licence granting process consists mainly of a direct negotiation between a buyer and the Forestry Department; with the buyer being in a position to pay the agreed stumpage fee, which is fixed regularly by the Forestry Department for each species. It must be pointed out that logging licences are awarded without an open bidding process putting at risk the Forestry Department for any questions of transparency.

However, it can be understandable that in some regions, logging licences represent so little volumes (20 or 50 m<sup>3</sup>) at a time, that it would become a heavy process to sell such volumes by announced tendering. This aspect shall also be studied in order to see if there is enough competition to support a market oriented auction process. An intermediary solution might be also to consider the "aggregation" of logging licences within a single district or region but the main idea is for the Forestry Department to obtain the best market value for the wood products sold.

As no tree cutting is permitted in closed broadleaf (natural) forests, licences are issued mainly for planted pines on Crown lands and marginally for hardwood species. Logging licences on pines are some of the time granted as the result of a salvage operation as Jamaica has been hit several times by hurricanes (eg: Ivan in 2004), the pine seeming to be quite vulnerable.

This raises also the question of *Pinus caribea*, as a non indigenous species imported from central America a long time ago, being the right choice to replace Caribbean pine salvaged plantations by the same pine, especially on sites on which heavy damage have been reported. This brings us to the question of native species being promoted in Jamaica.

### **2.3.3 Supervision and Control of Harvesting Operations**

The Forestry Department is entitled to supervise and control the harvesting operations for which licences have been granted. It currently accomplishes this process *via* its regional and district divisions which seem to suffer from a lack of mobility. Supervision and the control process itself of logging operations is made by timber measurement of harvested logs and the verification of conformity with the volume stated in the licensee contracts. Standing trees are initially marked by a Forestry Department agent. Stumpage fees and other applicable taxes are paid on the<sub>31</sub>

volume purchased by the licensee.

It seems however that the timber measurement procedure should be more standardized and unified in the sense that it should be clearly stated within logging contracts. This suggestion made by the Forestry Department itself raises the question that there might be a written procedure and more agents to carry on the work.

Finally, since forestry district boundaries date back more than 50 years, it does not necessarily reflect the current situation. It should be important for the Forestry Department to reconsider the boundaries of districts in relation with the current trend and forestry issues in Jamaica. The Consultant has been advised that this issue is already addressed considering the proposed watershed approach as being the Management Unit at the regional level. It is however suggested that in addition to a Management Unit, socio-economic criterion being added to set the new districts as there is no relation between watershed surface area and the capability of the Forestry Department to adequately balance its monitoring effort to the socio economic reality of an area.

### **2.3.4 Implementation of Forest Resources Renewal Systems**

The Forestry Department acts on the renewal of the forest resources function in two ways. The most important is the tree planting program by which the Forestry Department conducts reforestation operations where natural regeneration is insufficient. It also promotes tree planting to stakeholder groups (farmers, NGOs, etc) as a substitution to agriculture activities and/or as a part of integrated agro-forestry activities. Reforestation is also conducted on abandoned and disrupted bauxite mining sites where mining legislation obliged mining companies to restore exploited bauxite mines. Enrichment planting is then conducted in order to restore the forest cover.

Finally, the second way the Forestry Department conducts its renewal of forest resources function is by prescribing an Annual Allowable Cut (AAC) on logging operations in uneven forest plantation stands.

#### **2.3.4.1 Tree Planting and Reforestation**

Historically, reforestation has been done in Jamaica to resolve some of the problems associated with loss of tree cover due to human activities and/or climatic damage. The Forestry Department has almost always maintained this function since its inception. However, it is reported that the period from 1974 to 1977 was particularly active since 3,000 hectares of plantations were established via a USAID funded project. In addition to the Forestry Department, FIDCo planted an estimated area of 5,350 ha of Caribbean pine between 1979 and 1988.

The Forestry Department presently conducts various tree planting activities in the context of prescribed reforestation tasks (mine restoration, enrichment planting...etc) including those that might be prescribed in LFMP. Actually, only one LFMP has been prepared and it has not been implemented. When such plans include timber harvesting activities, tree planting is prescribed by a replanting schedule (tree replacement). Some engineering guidelines for road construction and maintenance may also include prescriptions for reforestation on a punctual basis.

The Forestry Department does not intervene in tree planting functions in closed broadleaf forest unless for restoration/enrichment works. This may include undisturbed broadleaf forests but also natural disturbed broadleaf forests on very steep slopes (over 30 degrees) and rocky soil. It may also include forests and mangroves, either within declared protected areas or otherwise<sup>32</sup>



considered to having special ecological or eco-tourism value. Even in fully protected areas in primary natural forest, the Forestry Department may have to intervene for enrichment planting in certain categories of disturbed natural stands.

The Forestry Department is also quite involved in the promotion and development of private plantation through a program called "Private Planting Program". The Department is also called to conduct, on a contractual basis, tree seedling provision and reforestation operations on former disrupted bauxite mining sites. Since the Forest Act (1996) in its Article 4 (n) and 16 (d) assigned a precise role of watershed protection to the Forestry Department, the Department prepares forest management procedures which may include from time to time reforestation operations and enrichment planting in order to meet the watershed conservation function.

#### 2.3.4.2 The Private Planting Program (PPP)

The Private Planting Program (PPP) started in 1977 and was renewed in 1998 by the Forestry Department with assistance from the CIDA funded "Trees for Tomorrow Project". The program has been designed to promote the use of trees as an alternative to crop production and/or also to integrate tree growing within agro-forestry practices. It also intends to offer opportunities to investors in commercial tree plantations for timber, fuel wood and even yam stick production. The program itself targets the following customers:

- Smallholder farmers
- Large estate farms
- Absentee land owners whose lands are not presently in productive use
- Bauxite companies with land for restoration
- Public land holding entities

The most recent statistics accessed by the Consultant for the Private Planting Program was that up to the end of 2004, over 650 persons have been registered in the program with over 370 000 tree seedlings distributed. This represented over 570 hectares of plantation establishment. The target objective for private tree planting (assumed not only PPP) as mentioned in the NFMCP is 1 030 ha.

##### 2.3.4.2.1 Services Offered by the Private Planting Program

The PPP services consist in the provision of free seedlings and technical services to customers and stakeholders. Seedlings are produced from four forest nurseries located in the Western, Eastern and Central regions. The types of services rendered include:

- Species selection
- Site preparation
- Tree/plantation maintenance
- Thinning and pruning
- Growth and yield determination

In addition to free seedlings and associated technical services, tree growers benefit from tax rebates and may be also eligible for duty reductions on the acquisition of farm vehicles and equipment. However such tax rebates are only eligible if their property is declared a Forest Management area. Participants are responsible for all costs related to tree establishment and maintenance as well as for transportation of tree seedlings to their planting sites.

It is obvious that the PPP impacts positively on the development of private forestry in Jamaica<sup>33</sup>

since the Forestry Department is the only producer of tree seedlings for commercial use. However, the introduction of decentralization to the benefit of the regions would certainly help to render the program more efficient and based on customer quality satisfaction.

The development of private forestry in Jamaica is facing the quick payback and immediate revenue that agricultural activities offers. Coffee and other types of productions pay well and quickly. In addition, coffee is an export product meaning it is in the chain of hard currency. So that means that in its research of satisfying its customer, the Forestry Department has attractive incentives of offering free seedlings and tax rebates. However, visits and meetings held with the regional staff and nursery personnel has raised the issues that logistical and internal management problems occur which seem to be all related to the management process and centralization. The problem of seedling transportation has also been raised, mostly in the Western Region, as some small farmers cannot afford to absorb the cost of seedling transportation.

The PPP application process involves both the regional office staff and Kingston's head office approval and it can take six months between the approval and the actual seedling delivery. According to some regions, this has had a demotivating effect on customers and stakeholders of the PPP and it should be remembered that tree planting is in difficult competition with crop production.

Some other problems have been also raised in most of the regions to the effect that the species/types the buyers want to have are not available at the appropriate moment. Some species may have to be transferred from one region to the other. This suggests that communication and information exchange should be improved but moreover a new information exchange should be established, strengthened by the ISO 9000 written process. The initial challenge of most of the performance-based institutions is to break information circulation constraints. Experience dictates that free circulation of information (shared database, information/communication procedures ...etc) combined with accountability and transparency gives better results.

So there should be access by each regional and sub-regional offices to the central database of Kingston and the development of written procedures of the PPP's application and approval with target performance indicators (eg: a delay of more than 5 weeks for approval is considered to be a failure in product delivery to the customer).

### **2.3.5 Gaps in Tree Planting and Reforestation Activities and Suggested Solutions**

In comparison to other tropical countries of the world, the Consultant considers the way in which the Forestry Department is institutionally promoting reforestation as quite interesting. However, some technical gaps have been noticed in the way reforestation activities can respond to the Forestry Department's function in forest resources renewal systems. This should be considered for both the reestablishment of tree cover *via* enrichment planting (restoration of disrupted bauxite mining sites, implication in watershed forest cover restoration, restoration of forest cover as a result of climatic event) and also commercial planting (fuel wood plantations, yam stick and other commercial plantations, agro forestry). It should focus on three (3) points:

- Current limitation of available species list
- Mastering nursery propagation of Jamaican native species
- Professional reforestation

### 2.3.5.1 Current Forest Species List

The Forestry Department has the master on a list of 9 species out of which three are exotic species imported since the colonial times and the Forestry Department should expand its expertise in the propagation of native species. It is difficult to understand how enrichment planting can be conducted into natural forests with the objective of re-establishing natural cover and at the same time, promoting ecosystemic objectives of forest management.

To expand its master of native species, the Forestry Department should initiate a series of activities which would include the constitution of a forest seed bank:

- Constitute a native species seed bank
- Improve forest nursery techniques
- Conduct phenotypical and elimination trials

A native species seed bank should be constituted and shared with the Ministry of Agriculture's seed storage and conditioning facilities (seed bank) as well as improve forest nursery techniques at least in one of the three forest nurseries visited. Finally, tree improvement programs (phenotypic selection, elimination trials) should be conducted in order to isolate commercially interesting native species and promote them in the PPP.

### 2.3.5.2 Forest Nursery Techniques

Based on the Consultant's experience gained in other tropical countries, there is no doubt that a growing substratum from biomass, the use of shade systems and "root trainers" as rigid containers to replace the very popular plastic bags have given very positive results where implemented. For almost two decades, North American nurseries have been using controlled growing substrates made of biomass or compost to increase initial seedling growth and rooting systems. Recyclable rigid containers have also proven to be highly efficient in acting not only as a growth support for forest seedlings but also as root trainers. The result is a significant increase in post plantation seedling survival rate, a better growth rate and resistance to soil/water high in salt content. Using compost made of biomass may also increase the chances of success in new native species propagation trials, which may have failed in the past.

The Forestry Department presently uses an uncontrolled mix of compost (soil, sand, organic material). This generates a growing substrate porosity index too low and a high vulnerability to the transposition of nematodes and pest from the nursery to the plantation site while controlled growing substrate would have fertility parameters (Ph, cationic exchange capacity, Carbon – Nitrogen ratio, porosity index. etc) under control.

Several training programs have been successfully conducted through pilot forest nurseries where one nursery is equipped with compost preparation equipment and procedures. Staff from other nurseries can be trained on this pilot site and compost preparation procedures developed and adapted to various regions as the type and availability of organic material may vary from one region to the other. Experience in the region has shown that a six to eight month training program is necessary to define the procedure (finding adaptable sources of biomass) and train nursery staff in compost preparation and nursery set-up.

### 2.3.5.3 Professional Reforestation

Both the private and institutional sectors would benefit from improved forest nursery techniques at the Forestry Department. However, reforestation operations on mining restoration sites would certainly welcome the Forestry Department to innovate in the improvement of tree planting material and also, as a side effect, expand the species list.

If there is a sector ready for private reforestation contract, it is certainly the mining restoration sites. However, the Forestry Department being alone in mastering forest nursery techniques, it would certainly benefit from better financial arrangements with the mining companies considering it would generate more various indigenous and resistant tree species for planting.

With regards to tree planting, the Consultant recommends that tree planting operations be “professionalized” not only in terms of nursery techniques (use of compost based growing substrate, root trainers, etc) but also in terms of tree planting equipment and team organizations. Notwithstanding the fact that these reforestation operations have to be labour intensive in order to provide employment, the small equipment used by professional tree planters would provide better results and productivity in terms of the number of trees planted per day. It should of course be associated with appropriate training and organization.

### **2.3.6 Other Forest Renewal Systems Conducted by the Forestry Department**

As previously mentioned, without any species and incremental data on forest types, the Forestry Department is not in a position to prescribe Annual Allowable Cut (AAC) based on yield tables. However, taking into account that the AAC is prescribed for plantations located on Crown lands, the impact is not so important. The AAC is then calculated based on the distribution of diameters on the station, a maximum tree removal surface area and other criterion which are left to the judgment of the forester on duty.

However, it becomes essential that the permanent sample plot system the Forestry Department wants to implement becomes operational as soon as possible, in order to collect essential incremental data on natural stands, even if no commercial operations are conducted on natural forests. Such permanent sample plots systems will enable to construct yield tables which may be also useful in case native species are propagated into nursery. As farmers and tree growers always ask the Forestry Department when commercial maturity occurs if they acquire such species, the Department will be in a position to provide them such information.

Permanent sample plots will also enable the Forestry Department to collect biophysical information on vegetation succession in natural forests, an essential part of a real and sound ecosystem restoration. Despite the fact that the Forestry Department has historically collected information on the physiographic composition of forests, there is still a lot of information a permanent sample plot system would provide in order to better conduct restoration silviculture, post salvage operation ecosystem restoration, etc.

Finally, one of the essential requirements the Forestry Department must have in order to perform in state-of-the-art AAC prediction is as previously mentioned the 1:15 000 aerial coverage of the Jamaica territory.

### **2.3.7 Recap of Major Gaps and Summary of Consultant's Findings at the Harvesting Control and Renewal of Forest Resources Function**

Hereafter is the summary of the Consultant's findings in reviewing the **Harvesting Control and Renewal of Forest Resources Function**:

- The Forestry Department cannot act on its function of harvesting control and implementation/maintenance of forest resources renewal system in the private sector area.
- Jurisdiction overlapping in land use policy between the Forestry Department, the Land Commission and other entities weakens the Forestry Department's authority on wood allocation policies.
- Article 6 (2)(b) of the Forest Act (1996) in the lease of a land located within a forest reserve often obtained without the permission of the Conservator of Forest.
- Need for colour/multispectral aerial coverage at 1: 15:000 for all the territory of Jamaica in order to better implement forest management, land use and acquire ecosystemic data.
- Lack of portable GIS in the regions to simplify and obtain a precise overall monitoring of licences boundaries and other land related grants which are under the responsibility of the Conservator of Forest.
- Logging licences are awarded without an open bidding process putting at risk the FD for any questions of transparency.
- Since *Pinus caribea* is a non-indigenous specie imported from Central America a long time ago, is it the right choice to replace Caribbean pine stands damaged by hurricanes by the same pine? Would native species be a better choice?
- Since forestry district boundaries date back more than 50 years, it should be important to reconsider such boundaries as current trends and forestry issues do not necessarily reflect today's situation from a combined biophysical and socio economic standpoint.
- Regional and district divisions play a key role in supervising and controlling the harvesting operations for which licences have been granted. They currently accomplish this process with very limited mobility (vehicles and motorcycle).
- Timber measurement procedure should be more standardized and unified in the sense it should be clearly stated within logging contracts. This suggests a lack of uniformity in timber measurement procedure and more uniformity in carrying out the work.
- The Private Planting Program suffers from too much delay in the application – efficient seedling delivery cycle. Decentralization in decision making, communication improvement and introduction of a customer based quality satisfaction criterion would be suitable.
- The actual species list seems to not entirely satisfy the private sector market requirements (PPP). Facing the needs for native species in enrichment planting, the Forestry Department does not seem to have the capabilities to offer them.
- Interregional communication (between regional offices) should be improved especially computer network communication (database) as it impacts on cross regional updates of<sup>37</sup>

forest nursery stocks for Tree Planting Program.

- There is no native species seed bank as such and associated continuous elimination trials conducted at the Forestry Department to make available a larger variety of species.
- Nursery growing media used in Forestry Department nurseries are not controlled and the combined effect of the use of plastic bags affects the morphology of seedlings.

There is a gap between the modern and advanced environmental regulatory approach used for mining sites restoration and on the other side the field work planning/control management. Reforestation seems to be done with very low productivity.

## **2.4 Function Related to Control and Supervision Milling and Sales of Wood Products**

Through the Forest Act (1996)<sup>6</sup>, the Forestry Department is entitled to control and supervise the cutting, harvesting, milling and sale of timber and other forest products originating from the areas under its responsibilities meaning Forest Reserves and Crown lands.

Even if the wood processing sector is quite small in Jamaica compared to other countries, its activities must be monitored by the Forestry Department:

- Wood processing enterprises are the only measuring point of the intensity of the overall timber collection on private lands and therefore a partially reliable statistical source;
- Sawmills and other wood processing enterprises are sometimes the focal point of entry where the Forestry Department can detect illegal activities (illegal timber cuttings and species harvesting from crown lands and Forest Reserve, etc).

### **2.4.1 Issuing Licences for Sawmills**

As of now, the Forestry Department has not enforced the award of annual permits for sawmills and other wood processing enterprises. So far, there was no indication that the Department has begun to consider a system which would take into account the size, the type and the location of an operation. The experience of northern countries like Canada and the USA has shown that any wood processing enterprise which operates on a given territory has to apply and annually renew for an operation permit if:

- It exclusively converts timber originating from its own property and/or other private properties
- It processes a volume of timber below an applicable minimum.

At the same time the wood processing enterprise operates, it would have to fill a statistic questionnaire which would enable the Forestry Department to at least have an idea of what is going on in the sector. So far, the Forestry Department can refer to its own licence records on Crown lands but there is very little information it can obtain from the private sector converting its own timber and/or converting timbers obtained from Forestry Department's timber sales.

In order to implement this control, each district and regional office should have the responsibility to identify the mills, sawmills and wood processing enterprises in order to measure their

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<sup>6</sup> The Forest Act (1996), Article 4 k)

qualification and classification to register as such and the Consultant recommends that wood milling permits be granted on an annual basis. A further step may be to introduce a “Sawmill hammer number” by which the origin of wood products can be identified.

## **2.4.2 Control of Wood Product Sales**

It is known in most countries (tropical and non tropical) that illegal logging operates in the informal sector. It is not at the corner construction and hardware store that illegally acquired chainsaw, hardwood planks or other illegally acquired wood-based material will be sold to the public, but more in the streets and village markets that illegal wood is acquired. In most of the countries where illegal wood products are sold, experience has shown that as much as the authorities are present to monitor the activity of wood product sales, it is difficult to informally market such wood-based products.

As wood-based milling activities may be a starting point to “ formalize “ the sector, the sales point maybe also another point of control for the enforcement of the Forest Act. So far, no GCT is collected on informal wood products which probably represent quite an important lost of public treasury.

### **2.4.2.1 Non-wood Forest Products**

With a primary forest still remaining and a growing interest from the public in natural plants, the monitoring of Non-Timber Forest Products (NTFP) has grown within forest administrations worldwide. Many non-wood forest products are collected to make utility objects and natural medication. Without enumerating such products, it is the regional capability of the Forestry Department (Wardens and Foresters who can better monitor such type of commercial operations. An efficient performance by which the Forest Act can be applied greatly depends on the capacity of the personnel to be mobile within each district in order to know if NTFP have been collected on Crown lands and if the law has been respected.

The Forestry Department is presently not in a position to control nor to estimate the NTFP trade and market on the territories under its jurisdiction (Crown lands, forest reserves and part of private forest lands under forest management). An initial step would be a substantial research to survey this market quantitatively and qualitatively to see if additional law enforcement is required and also to measure if NTFP may be an interesting option for forest management.

It should be remembered that in Jamaica, among promising non wood forest products are wickers as well as Jippi Jappa (*Carludovica Palmata*), a plant material collected from the forest and used for a variety of purposes including hats, bags, table-mats, etc. The Consultant assumes these are widely utilized in handicrafts not only for the population itself but also for the growing tourism industry. However the Forestry Department claims that further assessment and complementary analysis should be conducted in order to better analyze the resource and its location.

### **2.4.3 Modernize and Professionalize the Wood-based Sector**

With the closing down of FIDCo, the former Jamaican state-owned pine sawmill and impregnating plant, the wood-based sector is quite limited and characterized by a high level of wood waste. The wood-based sector can be defined as several portable or semi-portable mills established on the island, most of them operating with very low yield. The Consultant agrees that it is mainly up to the private sector to develop an efficient wood processing sector.

Two avenues shall be promoted in order to develop a sound small wood transformation sector in Jamaica which would create additional job opportunities;

- The Forestry Department should offer and promote the utilization of a more wide variety of species in forest plantations. Offering a better variety of wood species (both local and exotics) may stimulate the local demand for furniture and other wood products.
- Import Duties on modern small primary and secondary processing units shall be reduced at a minimum. This should contribute to reduce the waste of wood material by the sawmillers. The roles of the Forestry Department would be then to certify to the Custom and Import tax authority the adequacy of the imported wood processing equipment.

### **2.4.4 Recap on Major Gaps and Summary of the Consultant's Findings on the Control and Supervision of Milling and Sales of Wood Products**

Hereafter is the summary of the Consultant's findings in reviewing the **control and supervision of milling and sales of Wood Products**:

- There is a need to better control the activities of sawmills and other wood processing enterprises. The Forestry Department statistically knows very little of what happens in the wood transformation sector of Jamaica.
- Facing the growing illegal logging there is no system (hammer, papers, etc) to trace the origin of wood products on the local markets.
- There is no entitled function to control "wood product sale points" at the Forestry Department in order to gradually formalize the sector.
- The Forestry Department's knowledge of NTFP appears to be limited. The Department would highly benefit from the implementation of extension research programs.
- Wood transformation equipment used by the private sector is very inefficient producing low yield and wasting a lot of wood resource.



## **2.5 Forest Research Program Function**

By the Forest Act (1996), the Forestry Department is mandated to promote, establish and maintain a forest research programme. The areas that the Forestry Department is entitled to pursue are:

- enhance forest management and development
- identify and obtain silvicultural data to be used in improving financial yields of species important to the national economy
- ensure reforestation/afforestation of suitable lands

The NFMCP and the 2001 Forest Policy has endorsed the above priorities but the following additional issues were added:

- Valuation of forest resources, including non-wood products and services
- Establishment of a germplasm bank for tree species for conservation, commercial forestry and agro forestry
- Development of participatory methods of watershed management and agro forestry
- Restoration of mining and otherwise degraded lands
- Mangrove protection and restoration
- Economic growth and market studies of fuel wood, charcoal and timber production
- Bamboo utilization.

The research priorities mentioned above seem to fit in most of the major forest economic and environmental issues Jamaica is facing (NFTP, sharing of watershed functions, fuel wood, charcoal and commodity products for agriculture such as yam stick), which enhance the various interests of forestry ecosystems. It would be however, suitable to better integrate an initiative to propagate native species into an ecosystemic approach, even if it may be the case in various research topics, but it would be beneficial to focus on the re-establishment of natural ecosystems and/or to diversify (commercial plantation of fuel wood, yam stick production alternative species, etc. In order to contribute to achieve that, the Forestry Department shall consider the continuation of elimination trials which were conducted in the early years of the Department's existence.

In the review of the documentation provided by the Forestry Department, there effectively is mention for research activities conducted on native species. The Consultant believes that it should however be quickly enforced in order to establish performance objectives such as "Mastering the propagation of 20 additional native species by the end of 2007, etc". More extended studies on the propagation of native species seeds, their conditioning, conservation and germination should also be conducted.

Without minimizing the importance of other research programs the Forestry Department is presently pursuing, which focus more on "wood product substitution", integrating exotic species which in fact have already proven their results, propagation and promotion of native species is the research niche which is the most in line with Jamaica's major forestry issues, i.e. rehabilitation, protection and management of natural forest ecosystems. Reforestation, enrichment planting and agro forestry are all topics which may benefit from an expanded list of native species.

The other advantage of recentring and/or reformulating the research approach into a more ecosystem rehabilitation and/or protection approach (ecosystemic concept) would be that the Forestry Department might better qualify for an additional category of research funding. The following list is only a sample of the new type of organizations with which the Forestry

Department may find research financing:

- International Union of Conservation of Nature (IUCN)
- World Wildlife Fund (WWF)
- European Centre for Nature Conservation (ECFNC)
- European Union (EU)
- International Tropical Timber Organization (ITTO)

The above organizations normally grant research activities which would promote the reestablishment of ecosystemic functions and from the opinion of the Consultant, any research which encompasses native species propagation as a function of effectively re-establishing ecosystems function will qualify in substance.

### **2.5.1 Project Preparation Coordinating Unit**

With the new autonomous structure the Consultant will propose, there will be a need for a project preparation unit which would integrate the search for research funds, the registration with the above-mentioned organizations and the preparation of prequalification and proposal documents. This Unit, which could be under the supervision of an economist, would be in charge of:

- Determining and list research priorities with the Forestry Department research and management team
- Proposing recommendations on how research projects can be formulated
- Lobbying and proposing bilateral, multilateral agencies as well as research Funding sources
- Registering with the agencies and ensure follow-up
- Finding funding for new training opportunities
- Preparing, submitting, promoting and amending Funding Request Research proposals
- Ensuring management follow-up for research activities and that requirements of the funding agency are meet
- Maintaining quality control with Forestry Department personnel
- Implementing and maintaining a feedback system with funding agencies

### **2.5.2 Better Knowledge of the Wood Converting Sector and Protection of the Nation's Forest Resources Against External Pests and Insects**

In spite of being small, the commercial circuits of the wood-based sector should be measured and better known. Control gaps of this sector may be filled with a better enforcement of the Forest Act (1996). However, the sector seems to be not well known in terms of its actors, private interests, commercial circuits and also the possible occasional overlapping of illegal timber extraction activities and wood conversion.

Research priority is on forest utilisation and management but there is no real ongoing research study of the wood-based sector in Jamaica. The Forestry Department may certainly benefit from external technical assistance on the implementation of a wood product monitoring system and simultaneously, develop specific studies and analyses to better understand and control the sector (e.g. end-user research/survey furniture for example). The following proposed thematic may be advantageous for research projects on wood technology and its utilization:

- Characterization study and analysis of the Jamaican wood-based sector
- Measure of wood conversion efficiency (yield) in the various sawmills
- Feasibility of implementing a Forestry Department wood product control system

- Market study on species utilization

In addition to the above, the Forestry Department has been suffering for several years from a lack of trained personnel to address forest pathologic and entomologic issues putting at risk Jamaica's forests. The nation being on an island, it benefits from the natural protection of the Caribbean Sea, as long as the points of entry of imported forest products are well controlled. Similarly, constant vigilance has to be maintained in order to perform an early detection of both pathologic and entomologic signs.

Since there seems to be no recent training performed in this sector for some years and no entitled forester to perform this training, the Consultant suggests that some of the foresters of the Forestry Department be trained in both the entomologic and pathologic specimen collections and that a regular campaign be organized to detect pest and insect damages which may affect Jamaican forests.

The Central America experience has shown that repetitive climatic events cause stress in the forest cover putting tree species at risk to be infected by disease and insect which may spread. In the drafting for the amended Forest Act, it recommended that Forestry Department liaise with the Customs Department on the import of forest products. As of now, there is no written procedure which relates to the identification of warning signs (insect or pest damages) on imported lumber and other fresh forest products. The training of a pest/insect specimen collector would certainly help to reinforce the capabilities of the Forestry Department to accomplish its function in forest protection as stipulated in the Forest Act (1996).

### 2.5.3 Research on Restoration of Mining Sites

The natural rehabilitation of bauxite mining sites is probably the best example where the Forestry Department can do better in using native species, assuming it has acquired a master of these species in forest nursery. At the same time, mining companies such as WINDALCO, JAMALCO are conscious of their corporate image on world stock markets and they would certainly be pleased and even finance initiatives towards the integration of an ecosystemic rehabilitation on their disrupted bauxite sites.

It is certainly remarkable to also see the level of success obtained by the Forestry Department in reforesting and "regreening" former mining sites. However, the reinforcement of the knowledge of indigenous nitrogen fixators and pioneer species would certainly accelerate the implementation of natural forests on those sites. Presently, according to the research plots the Consultant have visited, the use of *Calliandra calothyrsus*, a non-indigenous Indonesian pioneer species was not showing real natural indigenous forest cover re-establishing. On the contrary, the plot visited showed that *Calliandra* was resistant to easily let indigenous species propagate on the sites. It is however evident that *Calliandra* contributes to severely reduce the effect of the erosion process.

Mining companies will certainly welcome being a business partner with the Forestry Department to finance improvement of nursery techniques *via* a pilot project, which innovates in the development of new growing media and advanced nursery techniques, making research on native species more efficient as results are obtained in the short-term.

The implementation of a pilot forest nursery and the development of growing media, including the search for locally available biomass sources, would certainly benefit from outside technical assistance. The experience of the Consultant in this matter has shown that a cycle of 8 to 12 months, depending on the progress of different working phases, might be necessary to completely test several sources of available biomass to develop the growing media and then measure the effect on the early growth of the seedlings. Results obtained abroad from this<sup>43</sup>

approach are remarkable (e.g: Tunisia Forestry Department, Nicaragua PROFOR project, Ivory Coast (SODEFOR)).

#### **2.5.4 Carbon Sinks Funding Source and Forestry**

Jamaica is a signatory of the Kyoto Protocol and Greenhouse Gas Convention which paved the way to funding sources from carbon sinks. Forestry activities being admitted as a qualifying activity (mostly tree planting and reforestation), Jamaica's Government and the private sector may benefit of the practical effects of the carbon sink trading market.

As of now, the implementing mechanism and more specifically the "compensatory mechanism" have not been implemented. The Forestry Department has a direct interest in the carbon credit mechanism being implemented as it may offer additional funding opportunities for the Forestry Department.

However, the actual position of the Forestry Department within the administration suggests it does not have enough institutional power to better address the importance of the carbon sink funding option. It should however be understood that the Forestry Department should not miss any forestry projects which could qualify as a compensatory option for the carbon market as it seems that implementation requirements for carbon credits are not among the government priorities. A better leading position of the Forestry Department to address this issue would certainly strengthen the process.

#### **2.5.5 Recap on Major Gaps and Summary of Consultant's Findings on the Forestry Department Research Function**

Hereafter is the summary of the Consultant's findings in reviewing Forestry Department research function:

- There is a need to better understand the acting factor on seed sources for native species (elimination trials) and sound propagation methods (growing media, improved nursery techniques, shading system for nursery production, etc).
- The Forestry Department's Research Unit would most probably benefit from better integrating the "ecosystemic concept" and native species in most of its research curricula in order to strategically benefit from an additional class of funding agencies.
- Forest Research should be done using state-of-the-art research protocols which have not been seen during the Consultant assignment. The Forestry Department would also benefit in improving its staff at the research level with at least one PhD.
- Capabilities of the Forestry Department in forest pathology and entomology advisory functions are inexistent at both the wood product import inspection level and forest pathology/entomology specimen collection.
- Capabilities of the Forestry Department to more adequately use international research funding organizations have not been developed over the years. The new trend to make a performance based modernized organization such as the Forestry Department more responsible about their financing suggests that they should adopt a more result-based approach.
- Despite the sector being small, the Forestry Department seems to know very little about<sup>44</sup>

its wood-based sector. There are no real research programs oriented to better understand the wood transformation stakeholders and adapt the Forestry Department structure to better control it.

- Financial implication of the mining companies to forestry seems unbalanced. The reforestation of bauxite exploitation sites realized by these companies is very little contribution to the reestablishment of natural ecosystem.
- With regards to carbon sink financing possibilities, the major constraint seems to be related to the fact the Government of Jamaica has not yet implemented the trading mechanism. This severely handicaps the Forestry Department in being a potential beneficiary of such a system.

## **2.6 Promote Agro Forestry, Social Forestry and Engage in Public Awareness and Tourism Industry**

Article 4 (h) of the Forest Act (1996) stipulates that the Forestry Department is entitled to promote both agro forestry systems and social forestry which, in the context of Jamaica, is quite important. Agro forestry has historically proven that it can significantly contribute to stabilize migrating agriculture, re-establish partial tree cover and ensure revenues to rural communities when it is fully supported and implemented.

### **2.6.1 Supporting Projects**

There are competencies developed in agro forestry at the Forestry Department since it has been accepted in the forestry community as a regulatory rural development system which integrates agriculture and forestry. However, it is since the implementation of specific projects such as the “Agro forestry Development Project” in North-Eastern Jamaica and the “Morant Yallahs Agriculture Development Project” that the Forestry Department staff has benefited from real training and acquired expertise in the development of agro forestry promotion.

As for social forestry, the CIDA funded “Trees for Tomorrow Project” and UNDP funded “Forestry Capacity (Bridging) Project “ substantially enhanced the capacity of the Forestry Department in organizing communities and stakeholder associations as essential leverage to locally implement forest management plans and educate the population in sustainable forest management and watershed protection.

### **2.6.2 Integration into Forest Research Activities**

The NFCMP included an agenda for agro forestry activities to be programmed during the five-year management plan. As part of these activities is the agro forestry oriented forestry research programme, which focuses on the integration of agro forestry and social/participatory forestry practices into forest management.

However, in terms of research, agro forestry is not very present in the current research program as it was probably limited to project based activities from lessons of several agro forestry trials conducted with stakeholder groups. However, it would be suitable that, in conformity with the forest management plan, agro forestry research activities be maintained in order to better implement the systems and be aware of what is done elsewhere.

### **2.6.3 Visit of Integrated Agro Forestry Sites**

Visits have been conducted at the Ginger River water catchments watershed and surrounding Crown lands where agro forestry systems have been successfully promoted. The Forestry Department has certainly cumulated an expertise from various projects it conducted as the Executing Agency. This explains why project follow-up and research extension can serve to better develop community projects. There is no doubt that the Forestry Department has a good mastery of which agro forestry systems work and those which would necessitate improvement.

That is the reason, from an outside perspective, it seems that the improvement of the Department's performance has to be more concentrated at the research/extension level, be more in proximity to the communities and have a better presence of regional/district structures.

#### **2.6.4 Use of Agro Forestry as an Investment Incentive**

Through the tree growers associations, LFMC and other stakeholders, the Forestry Department promotes agro forestry systems to be used as investment incentives for the private sector such as long-term conditional leasing at competitive rates for reforestation and agro forestry uses. The Forestry Department is also conducting surveys of suitable Crown lands to lease for forestry or agro forestry uses but again, one of the major constraints is the overlapping responsibilities of several government agencies on Crown lands which makes it difficult to convince farmers to implement agro forestry systems instead of agricultural ones.

#### **2.6.5 Social and Agro Forestry Activities**

There is one entitled Forestry Department staff assigned to agro forestry activities. This person is however on training pursuing a MSc. degree abroad. Most of the foresters have been associated and/or trained in agro forestry practices to interact with stakeholders. However, for research and extension purposes, it seems that there may be a gap in the nomination of a person in charge of the development of new agro forestry systems implemented within the sub region to participate from time to time in an agro forestry advising committee.

As mentioned earlier, the Forestry Department is promoting agro forestry *via* stakeholders, such as tree grower associations and LFMC. It also interacts individually with farmers but its real impact capacity is its ability to work with communities. Strong community liaison to provide extension services in agro forestry is probably the best way to define the function of the Forestry Department in agro forestry promotion.

Again, from the opinion of the consultant, to better achieve this function, it is essential to participate within the community; regional staff needs to be in the field and be accountable for the goals to be achieved, the best measure of success being the adherence of the farmers/stakeholders to agro forestry systems.

### **2.6.6 Tree Cover Restoration and Impact on Privately Owned Watersheds**

The most beneficial impact the integration of forestry and agriculture may have is the protection of watershed and fight against erosion. The Forestry Department's capacity to intervene on private lands is very limited and the integration of agro forestry systems is maybe the only way to act in the reestablishment of tree covers on private land, where the Forestry Department has no power. So the only way to measure the level of success of the Forestry Department in the partial protection of privately owned watershed is the reestablishment of tree cover by implementation of agro forestry techniques. This is another area where the promotion of native tree species and improvement of seedling quality may find better results. Improvement of forest seedling approval and distribution system may also improve the rate of success of the Forestry Department towards the farmers.

### **2.6.7 Integrating Agro Forestry within the School Curricula**

Again, the Forestry Department has significantly benefited from the CIDA funded "Trees for tomorrow" program which focused on public awareness and integration of communities via agro forestry. So the activity in public awareness of the Forestry Department is quite functional and well integrated to address forestry conservation and agro forestry issues in schools and educational medium.

Forestry Department and NEPA are the only governmental entities which have developed a sound public awareness program on the protection of watershed. Both are maintaining a high level of proximity with the mass media (newspaper, TV, radio). The Consultant considers however that the Forestry Department is probably the entity which is the most present within the field.

The Public Awareness Section of the Forestry Department has also established interesting contacts with the tourism sector. At this level, the Sandals Resort Group has collaborated with the Forestry Department on a natural resource education program. The section also maintains contact with governmental tourism agencies in order to integrate the documentation and media information developed by the Forestry Department.

It would be suitable to expand this type of collaboration with the private sector and that the Forestry Department be more business oriented to support projects.

### **2.6.8 Development of Investment within the Tourism Sector**

Jamaica's main tourism comes from North and Latin America as well as from Europe. However, contrary to other Caribbean states, "off beach" tourism has not been developed very much and the FD may have a lot to offer to ecotourism promoters in both forested Crown land and in forest reserves under certain restrictions. While some infrastructures have been installed in the Eastern region, more opportunities should exist in the Western region (in addition to Gourie) as well as in the Central region (in addition to Bullhead and Moneague Arboretum).

However, to properly plan and monitor investment in this sector, end-user needs have to be properly identified. (e.g.: maximum travelling distance, interest, short stay or over night stay in forest reserves, costs for tourists, level of comfort, etc). To develop such projects, the Forestry Department must have defined agendas and projects to be presented to the private sector for partnership and development. Various forms of joint-venture agreement can be developed between the State and Tourism and Recreational Holdings including Public Private Partnership, Crown Land leasing to jointly develop conservation and recreation. Such types of partnership<sup>47</sup>

could integrate several forest management activities such as forest reconstruction silviculture, reforestation, enrichment planting, monitored agro forestry etc.

Some technical services of the Forestry Department can also be retained on a contract basis by developers who want to plan ecotourism development on Crown land or even on private lands as the Forestry Department has a good expertise in bio physical inventory and GIS capabilities in mapping and landscape management.

### **2.6.9 Gaps and Consultant's Findings on Agro Forestry and Social Forestry Functions**

Hereafter is the summary of the Consultant's findings in reviewing Agro Forestry and Social Forestry functions:

- There is a need for the Forestry Department to integrate an "observatory function" within its research activities in order to be constantly aware of agro forestry systems tested within the sub regions and in the world.
- The lack of mobility and communication tools in the regions limits the Forestry Department's staff capability to be close to communities.
- There are overlapping roles of the Forestry Department on leasing Crown land for forestry purposes.
- Despite real efforts to integrate the private sector in public awareness activities (eg: activities of the Forestry Department in approaching the tourism sector), there is a need for the Forestry Department to develop a real strategy with a goal to better integrate business oriented activities and investment in the forest conservation aspects (eg: investment and "pay to the user" fee systems in forest territories).

## **2.7 Technical Assistance and Training**

Summarizing the needs in reinforcement and technical assistance of the new Forestry Administration, table 7.1 provides the type of assistance and training the new institution might need to face the new challenge of being a Performance-Based Institution.

The most critical reinforcement and training required will be at the level of Forestry Department Management level. Because it will be the commanding entity of all the changes which will occur, top management must need to be better informed of the new approach in decentralization as well as to be technically supported in order to implement the performance-based process. This overall internal management phase, which can be called "implementation phase", will be a critical point.

The Consultant also suggests reinforcing and specializing the new Forestry Administration in its function of application for international funding which should serve the overall Forestry Department activities including Research & Development Programs. Similarly, considering the opportunities the ecotourism and recreational forestry sector offer in Jamaica, the existing staff might have to be better supported and strengthened in taking initiatives and developing project concept of joint-venture and partnership with the private sector for the promotion of ecotourism and conservation activities.

Other various technical functions for which gaps have been identified by the Consultant are also recommended to be reinforced especially the major shift to be taken in the master of native<sup>48</sup>



species in order to adopt an “ecosystemic approach” and better meet the requirements of international funding institutions such as ITTO and IUCN. Jamaica must also take steps in better controlling and inspecting its arrivals of timber and non-timber forest products from overseas. As an island with no common borders, the country may appear less vulnerable to be contaminated by pest and insects. However, once entering and spreading in the country, a pest or an insect has the potential to invade the overall island.

### **2.7.1 Staffing of Forestry Administration**

In staffing and managing human resources at the Forestry Department, it has to be highlighted that there is a clear distinction to make between forestry administration of continental countries with industrial timber production and island countries such as Jamaica with a small timber sector.

In general, it is true to say that the smaller islands have by far many more foresters per 1000 ha of forest than the continental countries especially because of watershed protection.

The following table provides a comparison of professional forestry staffing between countries of the sub-region. Some of these countries possess a quite active commercial timber processing sector and/or plantation sector; this is the case of Trinidad and Tobago. While it is difficult to precisely make a comparison, the Jamaican Forestry Department appears understaffed in terms of Forest Research staff with PhDs and MScs at the date the survey was conducted in 2002. The Department is now reported to have 4 MSc/PhD, 20 BSc/BA, 19 Diplomas and 9 Certificates which improve the Research trained staff capabilities. However, there is still a lack of Research Protocol approach which was highlighted when the Consultant reviewed the Research function at the Forestry Department.

A more business oriented “research fund raising” will necessarily need the Research Section to be proactive in preparing research protocol and curricula and render research plots and trials more convincing.

**Staff employed by Forestry Administration in various Caribbean countries<sup>7</sup>**

**Table 7.1**

Country	Forest areas (ha)		Specialized Forestry Staff in various forestry Department			
	Forest cover	Protected areas	PhD/MSc	BSc / BA	Associate Degree or Diploma	Certificate
Belize	1,65	0,612	7	2	8	n.i.
Guyana	15,10	0,151	3	8	1	n.i
Suriname	14,78	1,887	3	2	1	4
Trinidad & Tobago	0,226	0,044	4	9	70	1
Jamaica	0,330	0,116	1	12	9	9
Saint-Lucia	0.017	0	4	4	4	3
St. Vincent & the Grenadines	0.011	0	1	2	9	2

<sup>7</sup> Eckelmann C-M and Clarke G C Regional expert consultation on forestry education and training in the Caribbean, Georgetown, Guyana , 2002.

**Recommendations for Technical Assistance and Training  
Modernized Forestry Administration**

**Table 7.2**

Major function	Expertise/speciality	Technical assistance/ training required
Forest Management and Planning	Forest Inventory Design (biometry and statistics)	The Forestry Department experienced some difficulties in training/recruiting a biometrician specialized in the design of forest inventory and treatment of forestry statistics. Despite efforts made in the past, it seems that there is no forester actually in function who is interested in replacing the present “Forest Inventory Design” specialist who will retire within the coming years. One of the Consultant recommendations would be to extend the recruitment beyond the current expertise and include mathematicians, statisticians and even economists with an evident interest in applied statistics. It is urgent that the Forestry Department benefit from the competency of a biometrician as soon as possible.
	Watershed Management	There is one person from the Forestry Department actually in training in watershed management.
Forest Operations	Wood processing and wood products monitoring related aspects	Various technical strengthening aspects such as sector studies and mid term international assistance should be regrouped in order to reinforce the Forestry Department’s capacity to better monitor timber and non timber forest products as well as acquire a better knowledge of the wood product sector. This could be achieved through international technical assistance via international funding (ITTO, EU, OAS, IDB, CDB, IBRD, etc). At least one FD person could be trained as an internal trainer and simultaneously train other Forestry Department staff.

**Recommendations for Technical Assistance and Training  
Modernized Forestry Administration**

**Table 7.2**

Major function	Expertise/speciality	Technical assistance/ training required
	Seedling production	There is a need to significantly improve the quality of seedlings produced within the various nurseries operated by the Forestry Department. Introduction of biomass based growing media, utilization of root trainers, proper design and use of shade house systems and modern forest nursery techniques would have a significant impact on cost reduction and plantation efficiency. Internationally funded, mid term international technical assistance in forest nursery improvement and the use of pilot forest nursery as a training medium would be suitable.
Forest Operations (continued)	Reforestation and tree planting	Simultaneously with forest nursery improvement, there would be a need to render reforestation activities more professional and effective especially in the rehabilitation of bauxite mine sites and enrichment planting on Crown land and forest reserve. Investment in small equipment and development of procedures is needed.
Research & Development	Forest pathology and entomology related fields including phyto-protection	The Consultant has identified a major gap in forest entomology / pathology. There is a need to train a Forestry Department staff in pathologic and entomologic specimen collection to be integrated into the national forest inventory. Short term training at Puerto Rico USDA - Forest Service Laboratory and/or any clinics, seminar and workshop are needed.
	Tree improvement and natives species	Should be conducted concurrently with improvement of forest nursery techniques. There is a need for Forestry Department staff to be updated to perfect their techniques to conduct elimination trials, phenotypic selection, native tree seeds, in-depth analysis and selection / conditioning of native species.

**Recommendations for Technical Assistance and Training  
Modernized Forestry Administration**

**Table 7.2**

Major function	Expertise/speciality	Technical assistance/ training required
	Forest Economics / Project preparation	Since the new structure of the modernized Forestry Administration may require to better address proposals for funding, the Consultant proposes that a forest economist be attached to the Research & Development Unit and/or any other entity of the Forestry Department to better access opportunities to apply for international funding. This person should be solely in charge of providing advice and preparing proposals for internationally funded projects to the benefit of the new modernized Forestry Administration.
Public Awareness	Recreational / ecotourism and investment	Any short term clinics, training courses may benefit Forestry Department's Upper Management and Public Awareness staff better promote the concept of eco-tourism and recreational forestry projects to tourism investment corporations. The core of the training should be oriented on how to develop tourism projects and sell it to promoters from its feasibility phase to its implementation.
Administration and Upper Direction	Decentralization	During the implementation phase of the new modernized institution, Upper Management of the new Forestry Administration will be confronted to a decentralization challenge. A long term technical assistance support is strongly recommended but simultaneously a short term specialized training in decentralization management may also be beneficial.
	Process driven management approach	Simultaneously with the above, the appointed international Consultant may assist on how to implement process driven management for all/new functions of the modernized Forestry Administration. This may impact at all levels of activities.

## 2.8 Strategic Organisation Review

This second part of the report covers the strategic organizational review proposed by the Consultant. The following topics are intended to answer to a part of the scope of work and terms of reference of the “**Public Sector Modernization Expert**”, as well as the “**Public Sector Finance Expert**” who will follow the Consultant’s assignment in the context of the present report.

The proposed topics take into account the gaps previously identified within the diagnosis phases as well as the result of a consensus obtained from stakeholders during the workshop held in April-May 2005 as per Daley, A and Jarret, J-M Strategic Review Report <sup>8</sup> and the results obtained at the December 5 2006 Workshop on the transformation of the Forestry Department<sup>9</sup>. Finally, the strategy design also raises the pertinent topics Excell, C and Desai, K<sup>10</sup> expressed on the additional functions recommended for the forestry administration.

The proposed structure of a Performance Based Institution for the Forestry Administration is an Executive Agency in conformity with the consensus obtained from two working groups at the December 5, 2006 Workshop. Being aware that most of the stakeholders wish to be more informed on the functioning of Executive Agencies, the workshop of December 5, 2006 resulted in recognizing that from other structures including the status quo, an Executing Agency is the best structure for forestry to become an autonomous and decentralized administration.

### 2.8.1 Mission of the Executing Agency

Based on the various roles of the Forestry Department and the positions expressed by the stakeholders, the Consultant believes that the mission of a Forestry Executing Agency and the formulation of the future Forestry Administration mission as stated in the (Daley, A, *et al*) report is quite relevant as it has received the consensus of the stakeholders. However, as the Forestry Department had and still maintains an important role in watershed management, it would be important that this aspect be a part of the mission statement as per the following:

***“To provide efficient and effective technical and professional leadership in the conservation, protection, management and development of forest resources and associated watershed in Jamaica.”***

### 2.8.2 Proposed Fundamental Principles Governing the Performance Based Institution

The future Performance Based Institution has to be guided by fundamental principles that are in line with its mission but also with the performance and type of actors which whom it will interact. For this purpose, the Consultant has retained the agreed value statement of the 2005 strategic review as the fundamentals guiding the future institution. As mentioned, this statement was addressed with the various stakeholders present at the workshop:

- Respect the sustainability principle in managing forest resources for posterity and the wellbeing of future generations
- Respect accountability, equity and fairness to its customers

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<sup>8</sup> Daley.A, Jarrett J-M., Report on Strategic Review and SWOT/Current Realities Analysis, Forestry Department, Ministry of Agriculture, September 2005.

<sup>9</sup> Stakeholders Workshop – Transformation of the Forestry Department of Ministry of Agriculture & Lands, Eden Gardens, December 5 2006.

<sup>10</sup> Excell.C and Desai.K., Review of the Forest Act 1996, Jamaica. Legal Consultancy prepared for the Forestry Department, Forestry Department.

- Respect teamwork in its approach and intervention strategies
- Maintain integrity and ensure efficiency in the quality of services to be delivered

The first statement refers to the sustainability notion as a fundamental principle in forestry and the perennial characteristics of a sound management of forest resources. The second statement integrates accountability as a fundamental mostly associated to a decentralized administration. Similarly, equity and fairness should be guiding principles associated with a “customer responsive Performance Based Institution” and entails that all customers and stakeholders be treated fairly, a value the Consultant believes the Jamaican society wants to uphold.

By its participatory initiatives, the Public Sector Reform Unit clearly promotes a widely expanded stakeholder and multi-sectoral consultation approach. Since it has been pinpointed by the stakeholders as a guiding principle in the Strategic Review, the respect of teamwork in the intervention strategies has to be a guiding principle in the future Performance-Based Institution.

Finally, the last statement takes into account the value of integrity retained in the Strategic Review and the notion of efficiency which is associated to a performance based organization.

### **2.8.3 Strategic Objectives**

Strategic objectives have been formulated taking into account the initial objectives agreed at the Report on Strategic Review and SWOT/ Current Realities Analysis of September 2005.

Since several strategic objectives seem to be convergent within common orientations to be given to the future modernized institution, the Consultant proposes that such objectives to be condensed and recentred. Table 8.1 presents the strategic objectives as they were presented during the SWOT review of 2005 with a corresponding thematic. The right column corresponds to a condensed and reformulated statement of such strategic objectives. From 18 statements, the proposed reformulation contains seven (7) statements.

This table provides the rational of strategic objectives correspondence between those obtained by consensus of the stakeholders and what the Consultant considers a more practical way to formulate.

## Proposed Strategic Objectives

**Table 8.1**

Thematic	Agreed Strategic objective and corresponding output (SWOT and option review)	Proposed reformulated strategic objectives
Staff Management	Develop and implement output – based management system	<u>Objective 1:</u> Develop and implement participatory driven output based management systems.
	Develop and implement training program for staff	<u>Objective 2:</u> Develop and implement human resources development programs within all pertinent sectors.
	Establish priority watershed	<u>Objective 3:</u> Maintain water quality within designated upper watershed in collaboration with LFMC.
	Establish LFMC within priority watershed	
Technology	Develop a cadre of GIS service professionals with technical skills to provide GIS related technical services	<u>Objective 4:</u> Maintain and develop Geographical Information Systems (GIS) and mapping technology capabilities to meet institutional needs and provide extended technical services
	Identify and map resources in priority watershed	Meet by objective 3) and 4) above
	Establish and maintain forestry research programmes to enhance forest management output and create forest resource data bank	<u>Objective 5:</u> Establish and maintain performance-based forest research program within strategic key sectors (see strategy).
Governance	Develop harmonized policies	Met by objective 1) above
	Training Programme developed and implemented	Met by objective 2) above
	Develop a Forest Management System	Met by objective 1) above
Governance	Public awareness and education	<u>Objective 6:</u> Develop a responsive public awareness and education program reaching all major educational and communication mass media.
Resource management	Establish framework for collaboration and partnership to achieve sustainable forest management	Met by objective 1) and 3) above
Customer service	Public Awareness Programmes that reach 50% of the public system	<u>Objective 7:</u> Build a user friendly customer service programme.
	Develop User Friendly Customer Service Programme	
Sustainable development	Develop Natural Forest Management & Conservation Plan	Met by objective 1) above



## Proposed Strategic Objectives

**Table 8.1**

Thematic	Agreed Strategic objective and corresponding output (SWOT and option review)	Proposed reformulated strategic objectives
	Formulation of Forestry Department Laws and Policies	Met by internal organizational framework during reorganization (legal services).
	Training plans to support the arrangement and use of forest reserves	Met by objective 2) above

### 2.8.3.1 Proposed Formulation of Strategic Objectives

Strategic objectives can thus be formulated as follows:

- Develop and implement a participatory driven output based management system
- Develop and implement human resources development programmes within all pertinent sectors
- Maintain water quality within designated upper watershed in collaboration with Local Forest Management Committees
- Maintain and develop Geographical Information Systems (GIS) and mapping technology capabilities to meet institutional needs and provide extended technical services
- Establish and maintain a performance-based forest research programme within strategic key sectors
- Develop a responsible public awareness and education program reaching all major educational and communication mass media
- Build a user friendly customer service programme

It should be noted that the Consultant is proposing to replace “Public Awareness Programmes that reach 50% of the public system” by building a “user friendly customer service program” as the notion of reaching 50% of the population is difficult to measure. Similarly the “formulation of Forestry Department Laws and Policies” is a matter of internal organizational structure. The Forestry Department has already a legal department which should stay within a reorganized Performance-Based Institution.

Finally, in order to meet its fundamental mission and proposed institutional performance indicator, the Consultant proposes to add the following objective:

**Maintain the natural forest cover of Jamaica above the level of 330 100 hectares and ensure the reconstitution of this natural forest cover at a rate of 300 hectares per year.**

### 2.8.3.2 Proposed Corresponding Strategy

The table in Appendix 1 presents the correspondence between original strategic objectives and the following proposed strategy, which are in line with the formulated objectives. The new modernized Forestry institution will achieve its mission by :

- implementing a Performance Based Organizational structure and process management driven systems meeting performance and quality criterion;
- implementing and developing technical as well as human resources development and operational capabilities in the following sectors of expertise, which include sectors not to be interpreted as limitative and/or restrictive for the efficient functioning of the Agency:
  - ❖ Forest inventory, forest mapping integrating Geographical Information System (GIS) database management and related remote sensing system applications capabilities
  - ❖ Watershed management, reforestation including forest nursery operational techniques, tree improvement, silviculture, forest pathologic and entomologic specimen collection competences
  - ❖ Timber and non timber forest products harvesting monitoring systems, research and innovative techniques in agro forestry
  - ❖ Fire protection management, forestry education, public awareness integrating competence in promoting eco tourism
  - ❖ Forestry legislation, forestry funds and external funds application expertise
- adopting and implementing a decentralized management structure in such a way that it can maintain, serve and develop capacities in all regions of Jamaica especially in those watershed and other forestry territories designated under the jurisdiction of the Agency;
- implementing and developing within its structure, a Forest Research Division which would be managed on a performance basis and which would be authorized to apply external funding for the benefit of the new modernized Forestry Organization;
- implementing and developing within its structure, a Community and Public Awareness Division with a decentralized participatory approach. Such decentralized structure being in regions where the Agency is to be responsible for results with its stakeholders and in a better leadership position to address fundamental issues;
- implementing and developing a Watershed Management Division which would regroup the technical expertise sectors in order to respond to the various functional aspects of Forest Management & Watershed Management under the responsibility of the Agency;
- implementing and developing a Forest Operation Division with a decentralized structure in the region in order for the Agency to duly accomplish its regulatory and operation monitoring functions;
- implementing and developing a quality control system of the services delivered integrating a “customer responsive approach” and “performance indicator concept”, to be managed by an Advisory Committee to be formed by the Agency, reporting annually to the Board of Director;

- adopting an ecosystemic approach in the management of its forest which would integrate and prioritize the utilization of native species in the restoration of the forest cover; and
- being confirmed as exclusive authority to enforce the Forest Act (1996) on its own lands with the appropriate texts of laws.

#### **2.8.4 Proposed Organization Chart of the Forestry Administration**

Figure 1 hereafter presents the revised general organization chart of the proposed new performance-based organization. Among the change proposed is the integration of a new Quality Control Advisory Committee who should provide feed back to the future organization on adequacy and performance of Forestry Department's achievement. Along with this Committee, should be a Project Preparation Coordinating Unit which should be in link with the Forest Research Division in other to develop better outsource funding for forest research projects.

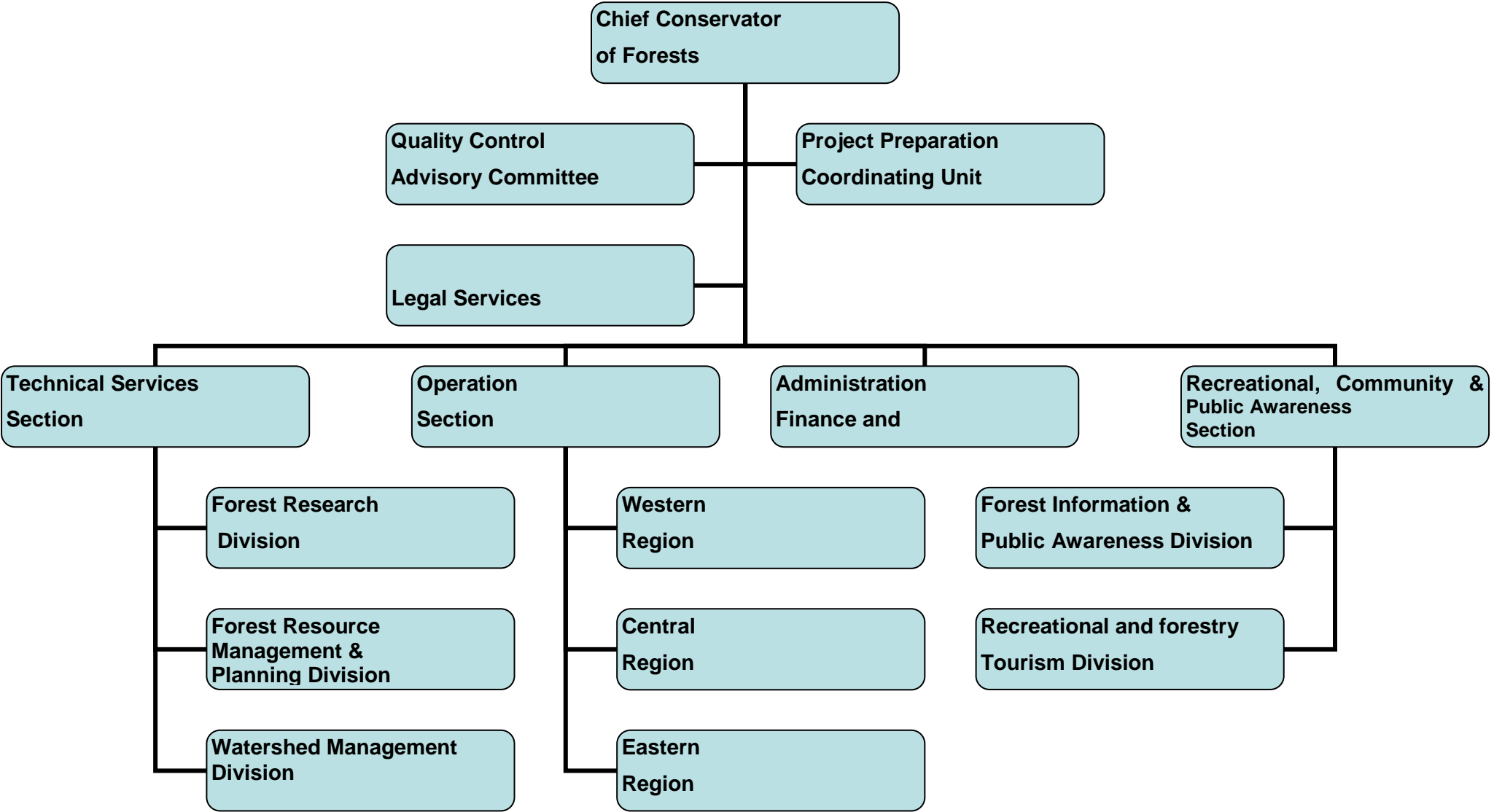
The Consultant also proposes that the Forest Research Division along with the Forest Resources Management & Planning, as well as Watershed Management Division, be the core of the Technical Service Section. Each Division shall have a Division Chief, who should respond to the Chief Conservator and Quality Control Advisory Committee. The internal organization of each Division shall be however, the result of a reengineering exercise which is beyond the mandate presently awarded to the Consultant actually.

Similarly, each Region shall be considered as a decentralized division of the Forestry Department with the necessary autonomy (law enforcement, licence award, permit delivery) to adequately perform their duty.

As mentioned in section 8.3.2, there is a necessity to reinforce the public awareness and recreational forestry function in order to consolidate the competences developed from the "Trees for Tomorrow" project and further develop "business oriented recreational forestry function" in Jamaica. The Recreational Community & Public Awareness Section shall, have two Divisions; one related to the forest information and public awareness function of the FD. The second Division "Recreational and Forestry Tourism Division" is being devoted to develop Joint Cooperative activities between the recreational and tourism sector of Jamaica and the Forestry Department. This Division shall works in close link with the Project Preparation Coordinating Unit.

Finally, there will be advantage to merge Human Resources Management and Finance and Account Department into one Section called "Administration Finance and Human Resources". Again, the internal organization of this Section shall be the result of a reengineering exercise.

**Forestry Administration  
General Proposed Organization Chart  
Figure 1**



### 2.8.5 Activities of the Agency

The following section proposes a formulation of functions for the modernized institution and is the result of the integration of several sources of information and consensus obtained:

- Strategic Review and SWOT/Current Realities Analysis, Forestry Department, Ministry of Agriculture, September 2005.
- Workshop on transformation of the Forestry Department of the Ministry of Agriculture & Lands, Eden Gardens, December 5 2006.
- Review of the Forest Act 1996, Jamaica. Legal Consultancy prepared for the Forestry Department, Excell.C and Desai.K, Forestry Department.
- Forestry Department staff consultation on core/non core functions.

The functions of the entity will comprise the following:

- 1) *As exclusive Forest Management planning institution in Jamaica:*
  - a) Ensure sustainable management and conservation of forests located on Crown Land, Forest Reserves, designated protected areas and watershed as well as all forest placed under sustainable management by declaration of the Minister and/or its nominee.
  - b) Prepare the National Forest Management and Conservation Plan and promote its implementation by enhancing forest management developmental activities;
  - c) Promote and make possible the utilization of state-of-the-art silviculture practices in respect of the sustainability principle of forests and the rational utilization of its timber and non timber forest products.
  - d) By applying the principle of reforestation, ensure the restoration of tree cover of any land under its jurisdiction including those lands which are considered to be susceptible or in the process of soil erosion.
  - e) Prepare, conduct, supervise and if required contract all works related to forest and bio physical inventory including the demarcation and maintenance of forest boundaries.
  - f) Maintain and update all technical and biophysical data in such a way as to have a clear and precise evaluation of the state of the forest in Jamaica.
  - g) Develop and maintain systems to build yield tables and incremental database for timber and non-timber forest products to apply the principle of sustainability in the economic exploitation of such forest resources.

2) *As an institution monitoring operations conducted in forests on the territories of its jurisdiction:*

- a) Control and supervise the harvesting and exploitation of timber and non timber forest resources in a rational manner so as not to affect the natural renewal of those resources.
- b) Develop, implement and maintain forest resources renewal systems using state-of-the-art silviculture and forest plantations practices.
- c) Determine and collect the various fees applicable for licences and permits to be granted and any services rendered by the Agency.
- d) Monitor and acquire information on the harvesting, transformation and sale points of timber forest products and implement a registration system for wood transformation units.
- e) Grant licences and issue permits as defined under the Forest Act (1996).
- f) Maintain and develop forest nursery production facilities and forest seed banks in order to develop leadership and availability in the production of tree seedlings for reforestation and private planting programs.
- g) Manage the development and the maintenance of all infrastructures located on the territory under its jurisdiction including roads, trails, fire breaks and boundaries.
- h) Protect and preserve watersheds in forest reserves, protected areas and forest management areas.

3) *As an institution promoting forestry research in Jamaica:*

- a) Establish, maintain and develop a Forest Research Program which would integrate the following priority thematic, including but not limited to:
  - i) Forest management and development
  - ii) Native species silviculture and utilisation
  - iii) Forest nursery and reforestation techniques, seed collection and tree improvement
  - iv) Forest protection including entomology and pathology
  - v) Agro forestry techniques and integration within communities and the private sector
  - vi) Forest products including fuel wood and yam stick and traditional utility timber and non timber forest products;
  - vii) Forestry economics
- b) Promote, diffuse and inform the results of such research to the various stakeholders.

- c) Collaborate with local and international agencies and organizations and apply for funding.
- 4) *As an institution promoting Forest Public Awareness in Jamaica:*
- a) Establish and promote public educational programs to improve the understanding of the contribution of forests for the wellbeing and development of the nation.
  - b) Conduct forestry education information presentations in schools and various institutions and organizations.
  - c) Participate in open days and exchange events as well as all events suitable to publicly address forest conservation issues defended by the Agency.
  - d) Produce information material destined to the public.
  - e) Integrate public awareness activities into Local Forest Management Committees.
- 5) *As an institution integrating community and private forestry:*
- a) Promote and make possible the implementation of agro forestry and social forestry programs for the benefit of private farmers, schools and stakeholders.
  - b) Favour the implementation and technical strengthening of Local Forest Management Committees and other pertinent associations as partners in the implementation of Local Forest Management Plans.
  - c) Provide extension and technical services to enhance the development of private planting programs or other activities to increase tree cover on private lands.
- 6) *As an institution promoting the development of ecotourism and forestry recreational functions:*
- a) Maintain current recreational facilities in forest estates.
  - b) Promote and enable private investment in ecotourism and recreational forestry in various forms including joint ventures and joint cooperation agreements on the territories under the jurisdiction of the Agency.
  - c) Develop and present ecotourism concepts and recreational forestry projects and participate in site selections and feasibility studies.
  - d) Ensure by taking action that ecotourism and forestry recreational projects integrate the principle of conservation and sustainability of the forest including those classified as mangrove areas.

- e) Be authorized to collect fees, royalties and other financial benefits originating from such projects.
- 7) *As an institution responsible for enforcing compliance with the provisions of the Forest Act (1996):*
- a) Develop legal and administrative policies instruments to improve the enforcement of the Forest Act (1996) including modalities of permit allocation and licences.
  - b) Evaluate forestry lands and supervise any contracted legal surveys.
  - c) Enforce land management protection policies including leases and be entitled to act on any form of illegal settlement such as squatting and encroachment.
  - d) Be entitled to delegate any form of its functions and duties.
- 8) *As an institution collecting funds and other financing sources:*
- a) Properly define and manage activities financed by the Jamaica Forest Management and Conservation Fund to the benefit of the forestry of Jamaica.
  - b) Promote the creation of additional non governmental funding in conformity with the laws of Jamaica.
  - c) Provide the conditions for implementation of funding for the agency as a result of international agreements and protocols signed by the Government of Jamaica.
  - d) Be authorized to enter into interagency agreements which would enable the Agency to collect fees, funds and taxes for its own functioning.
- 9) *As an institution managing and developing human resources:*
- a) Select, recruit, evaluate and manage human resources necessary for the functioning of the Agency.
  - b) Implement and manage a human resources development program to maintain a level of excellence in the accomplishment of its duties.



## **2.8.6 Proposed Performance Criterion and Level of Quality**

The Consultant has been asked to recommend a certain level of quality of services and performance indicators for the future institution. To be in a position to provide a certain level of quality in services rendered, we have to be able to measure the quality and/or be able to compare the level of quality obtained against comparable standards. So, what is acceptable and what is not acceptable or what is success or failure in the accomplishment of a task?

From the Consultant's perspective, to propose a standard for each function performed by the Forestry Department would have been irrelevant or unrealistic. Determination of these standards are normally the result of an internal management process which has to take into account multiple factors such as the quality and the quantity of resources available to the institution, the fair expectation of its customers or stakeholders, the complexity and difficulty of the task, its variability, etc. Again, without determining the limits of acceptability, the table presented in Appendix 1 suggests a series of performance indicators for the future Forestry Performance Based Institution to take into account in establishing the quality level of its services.

These indicators shall not only serve as a measurement of the quality level of services required but also as an instrument for continuous quality improvement.

### **2.8.6.1 Proposed Performance Indicator Criterion**

Despite the difficulty to determine a precise standard of achievement for each functional operation of the institution, it is however possible to find an overall indicator that globally reflects how the modernized forestry institution is performing.

The state of the natural forest cover in Jamaica might be a useful tool to indicate if the institution is performing, under-performing or over performing in its mission of conservation, protection, management and development of forest resources and associated watershed. The natural forest cover is an expression of forest resources and associated watershed.

The state of the forest cover is measured at regular intervals in Jamaica and obtained using remote sensing techniques submitted to international institutions such as FAO and ITTO, for comparable yearly analysis to know if the forest cover has regressed, remained untouched or progressed. The Consultant considers that it would be an interesting way to generally measure how the new forestry institution would perform in the long term.

**Reported State of Natural Forest Cover in Jamaica<sup>11</sup>**  
**between 1989 and 2005 (Note 1)**

**Table 8.2**

Type	1989	1990	1998	2000	2005
Forest Land Use (000 ha) (Note 2)	335.1	335.5	332.0	332.1	330.1
Comparative evolution (%)		+0,12%	-1,04%	+0,03%	-0,60%
Annual average gain (+) loss (-) in (%)	- 0,09%				
Annual average gain (+) loss (-) in (ha)	312,5 ha				

- (1) As mentioned in the report source (FAO), some figures have been obtained/adjusted by interpolation.
- (2) Assimilated to natural forest cover; excluding mixed land used and pine plantation but including bamboo, mangrove, close broadleaf, disturbed broadleaf, short open dry, swamp, and tall open dry forest types.

Why would the state of the forest cover be an interesting indicator?

- It is measurable
- Its measurement is recognized by international institutions (FAO, ITTO..etc)
- Natural tree cover reflects a certain level of success/failure in the achievement of protection and conservation of natural forest resources
- It is a good measurement of general effectiveness of watershed protection.

i) Long-term Objective

The long term performance indicator for the modernized performance-based forestry institution could be formulated as follow:

**“Maintain the natural forest cover of Jamaica above the level of 330,100 hectares which corresponds to the level measured in 2005 by the Forestry Department of Jamaica and confirmed by the Global Forest Resource Assessment Report (no 178) of the FAO.”**

This of course assumes that the future modernized Forestry Administration has full control of its lands.

<sup>11</sup> Global Forest Resource Assessment 2005, Jamaica Country Report, Report no178, Food and Agriculture Organization of the United Nations (FAO), Rome.

ii) Short-term and Intermediate Objectives

In addition to long term objectives, the future Forestry Administration may focus on annual targets which correspond to its current performance in increment of tree cover via the various implementation activities of the National Forest Management and Conservation Plan.

However, from the 3,251 hectares planned to be reforested in hardwood from the Private Planting Program between 2001 and 2005<sup>12</sup>, it is difficult to assume how much of this reforestation was done in fact with native species. On the contrary, it may be logical to assume that a large part of the hardwood planted by the Government between 2001 and 2005 targets native species enrichment planting and forest restoration such as bauxite mine rehabilitated lands. Consultations with Forestry Department's forest management staff seems to indicate that an annual target of 300 hectares in terms of native forest reconstitution and or re-establishment may be achieved with the current forest management strategy. So an annual target as follows may be realistic:

**“The Forestry Administration shall be entitled to take the necessary measures to favour the reconstitution of the natural forest cover at a rate of 300 hectares per year using state-of-the-art forestry and silviculture techniques in order to help Jamaica recover its lost tree cover”.**

Similarly, although the role of the Forestry Administration in the protection of watershed may be reflected by the maintenance of the natural tree cover, the real measure of performance in the efficient protection of watershed is water quality. It can thus be expressed as follows:

**“Considering the mission and the associated role of the Forestry Administration in the protection of forested areas within watershed, it should maintain upper watershed in such condition that water quality, at water catchments point, meets North American standards (eg: Environmental Protection Agency of United States-EPA) normally recognized for human consumption”.**

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<sup>12</sup> Forestry Department. Ministry of Agriculture, Kingston National Forest Management and Conservation Plan Jamaica, 2001, Table 14 page 71.

## **2.9 Conclusion of Strategic Review**

In order to provide efficient and effective technical and professional leadership in forest resources management, the Forestry Department shall have the control of its own land which includes Forest Reserves and Crown lands. The competitive environment faced by the Forestry Department towards the economic pressure for alternative land use suggests that the Forestry Department can no longer be under the jurisdiction of a Ministry promoting agriculture and, at the same time, be an organization trying to conserve and protect the natural vocation of a territory. For its role in the protection of forest resources and watershed, this Department must be autonomous and in line with environmental concerns in order to be in a leadership position to defend forestry conservation. Since forestry, land use and watershed protection are so integrated, it would be however logical that the modernized Forestry Department maintains an “institutional link” with a land entity.

As stated in the introduction, it is in this competitive environment of interaction between land users that the Forestry Department has to enforce its role of “Conservator of the forest cover”, a complex and multifunctional role which has to be conducted with stakeholders and socio-economic actors.

Decentralization would also be a feature the Consultant believes the new performance based organization might have and an accountability of people meeting with the transfer of power to decide. A sound process driven decentralized management system with improved communication would certainly help the Forestry Department to face the challenge of becoming performance based with specific targets to achieve. However, this supposes that as a Performance-Based Institution, the new organization converts its operation and functions into “process” similar to a manufacturing operation, with input resources, output delivery and standards of quality to maintain. For this reason, it is highly suitable that the new organization be responsible and proactive with its stakeholders by effectively adopting a customer approach.

The needs in technical assistance and immediate training required are presented above [Section 2.7]. The most critical seems to be related to decentralized management skills and recruitment of a forest biometrician in order to maintain the present capacities to conduct the various forest inventories and implement the PSP program. The Administration would also highly benefit from improving its forest nursery techniques and more professional reforestation activities. Following are the recommendations the Consultant proposes in order to re-centre several operations. These recommendations are in line with the strategy proposed [Section 2.8].

### 3. OPERATIONAL REVIEW

#### 3.1 Diagnostic Review


In addition to the strategic review, an operational review was carried out to examine the present business processes employed by the Forestry Department to achieve its performance targets using a BPR template. It also includes some of the weaknesses identified with the major processes, highlights possible changes and seeks to identify other measures that will enhance the new processes indicated. The report concentrates mainly on the short term perspective which will form the basis for discussion to further outline the processes towards transformation to a performance-based institution.


This review is however subject to further assessment of the Forestry Department and its operations.

#### 3.2 Present Weaknesses Identified in Business Processes

##### 3.2.1 Regional Operation

PRESENT BUSINESS PROCESS	
REGIONAL OPERATIONS - HIGH LEVEL TASKS	
FORESTRY DEVELOPMENT – PUBLIC LANDS	Determines sites, prepares site, establishes plantations
FOREST MANAGEMENT – PUBLIC LANDS	Maintains Plantations, protects forests, maintains roads, thins and prunes seedlings, develops recreation sites
PRIVATE PLANTING PROGRAMME	Processes applications, assess sites, provides on-going technical advice.
SOCIAL FORESTRY	Advises forestry management committee on forest related issues, provides information to schools, community groups etc.
FOREST PROTECTION	Identifies offence/offender, investigates offence, reports offence to police

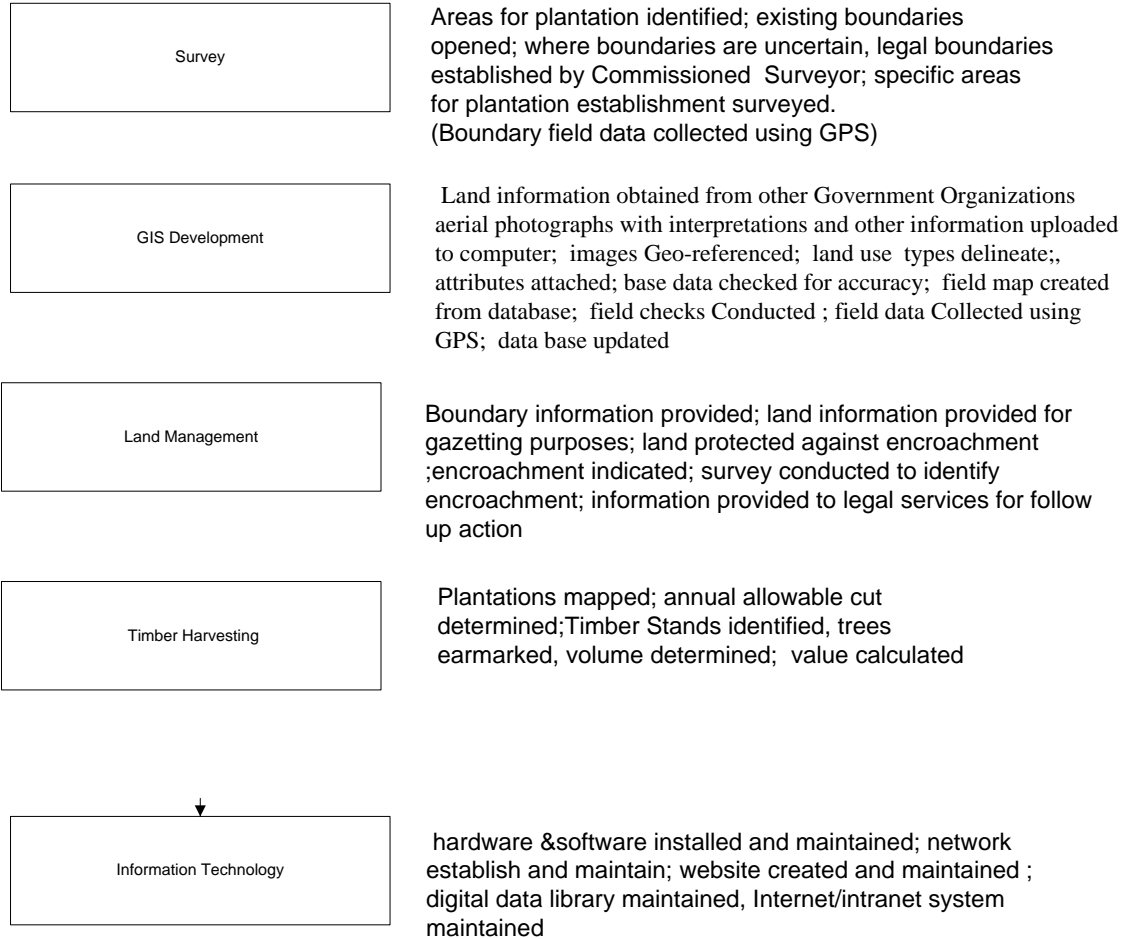
<p><b>What are the key weaknesses in the processes used in the section?</b></p>	<p>The main problems with the current processes in the Regional Operations are as follows:</p> <ul style="list-style-type: none"> <li> <b>Insufficient protection of forest reserve boundaries</b></li> </ul> <p>Encroachment and consequent degradation have occurred on much of Jamaica’s forest reserve. It has been estimated that over one-third of all forest reserves and other protected areas have been significantly disturbed by human encroachment and over-cut by commercial wood-cutters and fuel wood collectors. This illegal exploitation of the forest leads to depletion of the natural resource and grave long-term environmental and human consequences.</p>
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	<p>The Forestry Department (FD) manages approximately 250,000 acres of Forest Reserve. The present staff complement of forestry officers is not adequate for the proper monitoring of the forest reserve.</p> <p>Comprehensive information on boundary lines is not available to the FD and this has an impact on boundary protection. Over the years, portions of forest lands have been leased for non-forest farming activity but it is not all of the lease agreements that have clearly delineated boundary lines. In the absence of such information the forestry officer has no way of knowing whether land is being encroached or not.</p> <p>Where boundaries have been delineated and fire lines established, there is no consistent programme of maintenance and these landmarks disappear overtime.</p> <p>Access to forest lands is difficult. The roads leading to the forest reserves are poorly maintained and do not facilitate ease of access. Foresters have great difficulty in getting to areas of the reserve in order to monitor and protect. On one hand, in some instances, this serves as a deterrent to illegal practices. On the other hand, it poses serious threats in case of fires and offer challenges to the protection and monitoring efforts.</p> <p> <b>Seedling production does not satisfy demand.</b></p> <p>Nurseries are not producing to full capacity. The nursery operations and practices are carried out using very basic tools and methods which do not facilitate efficiency and high productivity.</p> <p>The supply of seedlings must harmonize with the demands of the two major planting seasons of the year. The Nursery Committee makes a projection of the annual seedling demand which is reviewed quarterly. With the present process of ascertaining demand the FD experiences levels of under supply in some species and oversupply of others.</p>
<p><b>What are Business process change objectives (improve what?)</b></p>	<p>Based on the weaknesses identified above, the objectives are to:</p> <ol style="list-style-type: none"> <li>1. Improve the ability of the Forestry Department to protect and conserve forest reserves.</li> <li>2. Restore and increase forest cover.</li> </ol>
<p><b>Key proposals for change</b></p>	<p>The proposals to meet the objectives identified above are as follows:</p> <p><b>1. Determine most economical method of seedling production</b></p> <p>Conduct study to determine whether the production of seedlings should be privatized or be retained as a function of the FD.</p>

	<p><b>2. Update the boundary information available to Forest Officers.</b></p> <p><b>3. Improve the process for monitoring private plantations and providing technical advice to private planters</b></p>
<p><b>What other measures will be needed to support the revised process?</b></p>	<p><b>The major measure that must be dealt with to support the new process is</b></p> <ul style="list-style-type: none"> <li>✓ Implement change management techniques to enable staff to make the transition from the old to a new way of doing things.</li> <li>✓ Redefine the role of Regional Office staff, emphasizing performance management.</li> </ul>
<p><b>What are the information systems requirements for the revised processes?</b></p>	<p>The Regional Offices will need to use information systems which will assist them in planning and managing the field work- load.</p> <p>Most specifically the regions will benefit from project management system. The system will need to :</p> <ul style="list-style-type: none"> <li>❖ be capable of generating regular reports;</li> <li>❖ Be capable of providing information on staff assignments and output achievement.</li> </ul>




### 3.2.2 Technical Services

#### High Level Diagram for Resource Management



<b>What are the key weaknesses in the processes used in the section?</b>	<p>The main problems with the current processes in the Technical Services are as follows:</p> <p style="text-align: center;"><b>✚ Lack of resources to apply the processes in completing inventory information on Jamaica's Forest</b></p> <p>The processes are well documented and followed to produce the current inventory information. The operations are presently assisted by the <i>Trees for Tomorrow</i> Project. 1991-1992 aerial photographs are used to determined land use. field data is collected through a biophysical inventory to construct/update the base data and maps. The Department has not been able to keep pace with the targets it set itself largely because of the lack of adequate resources The most current collection of aerial photographs, produced under the project, are presently in the custody of the National Land Agency. The process of</p>
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	<p>obtaining them for use in the inventory processes is long and bureaucratic resulting in lengthy delays. To date the FD has completed the national inventory and is working to complete the regional and operational levels in keeping with the prioritization of the watersheds.</p> <p>In the past, not all forestry data was collected and reported by the Forestry Department. Various other environmental organizations collect and map forestry data. Consequently, significant variation existed in information available for the forest cover estimates and rate of deforestation. In more recent times, all the data is being analyzed and reported by the FD which facilitates standardization and greater accuracy. Estimates on the total timber and biomass volumes of Jamaican forests are still to be established.</p> <p> <b>Geographic Information System</b></p> <p>Work has been done under the Trees for Tomorrow Project to survey and digitize forest reserve boundaries. However; there is still a significant backlog in the creation and updating of the LIS/GIS data base. This hampers the provision of sufficiently up-to-date information to inform the forest planning and management process.</p> <p> <b>Inadequate Management of wood resources</b></p> <p>Presently request to harvest trees for timber are made primarily by long standing customers of the Forestry department. Sales are being done only on a small scale. The processes of assessing forest stands to identify timber and other wood products available such as fuel wood, yam sticks, fence posts, and the marketing of these are not now being carried out by the Department on a consistent basis. Although quantity of timber produced legally can be estimated from licenses issued by the FD, it appears that significant volume of timber is reaped illegally but for which no estimates are available.</p> <p> <b>Lack of assessment of minor forest products</b></p> <p>Minor forest products exist which form the basis of raw material for manufactured products. However, the value of the products removed from the forest and their relative social and economic importance cannot be adequately determined. This puts the Department at a disadvantage to fully assess forest management options.</p>
<p><b>What are business process change objectives (improve what?)</b></p>	<p>Based on the weaknesses identified above, the objectives are to:</p> <ol style="list-style-type: none"> <li>4. Improve the ability to determine and take into account the economic contribution of the forest</li> <li>5. Improve the sustainable management of forest resources</li> <li>6. Protect the forest resources</li> </ol>
<p><b>Key proposals for change</b></p>	<p>The proposals to meet the objectives identified above are as follows:</p> <ol style="list-style-type: none"> <li><b>1. Lobby the relevant authority and/or collaborate with the related MDAs for the establishment of a cross cutting system to allow for the sharing of key land related information/data.</b></li> </ol>

	<p>2. Collaborate with Legal Services in the development and implementation of a process of registration or accessing existing registers for saw mill operations/operators.</p> <p>3. Work closely with sawmill operators in improving the process of determination and use of stumpage rate to allow for fair, competitive value being paid by users for all wood harvested on Crown Lands.</p>
<p><b>What other measures will be needed to support the revised process?</b></p>	<p>The major measures that must be dealt with to support the new process are:</p> <ul style="list-style-type: none"> <li>✓ Establishment of financial and economic values for forest services.</li> <li>✓ Further implementation of proper management system of the forest reserves for recreational and eco-tourism purposes.</li> <li>✓ Steps be taken to allow for increase use of particularly earnings from the sale of forest products in the management of the resources.</li> </ul>
<p><b>What are the information systems requirements for the revised processes?</b></p>	<ul style="list-style-type: none"> <li>❖ Increase in the use of the GIS in the collection of field data.</li> <li>❖ Upgrade in the technological capabilities in the regional offices to allow for data entry, storage of information, appropriate access to relevant data base.</li> </ul>

### 3.2.3 Technical Services Research

Seed Collection & Storage

Literature review conducted ;methodology for collection storage of seeds identified Tests undertaken; data collected; information documented; new /revised methodologies communicated to nursery for imllementation.on seed collection

Species Trials

Site assessment conducted on land land mined for Bauxite ; seedlings of fast growing species produced; land prepared ;experimental plots established data collected survival rates determined; Tree species for forest cover planted; trial plots established and monitored; database of growth characteristics developed

<p><b>What are the key weaknesses in the processes used in the section?</b></p>	<p>The main problems associated with the current processes are as follows:- Lack of adequate research to support the forestry management and planning processes. Minimal Research activities are being undertaken by the Department presently. These include upgrading and standardizing the procedures used in  <ul style="list-style-type: none"> <li>(1) procuring storing and dispatching local forest tree seeds</li> <li>(2) nursery propagation of seedling.</li> </ul> The nursery also oversees the processing of private land owners for tree planting programme.</p>
<p><b>What are business process change objectives (improve what?)</b></p>	<p>Based on the weaknesses identified above, the objectives are to:  Strengthen the Research Division to implement the research programme</p>
<p><b>Key proposals for change</b></p>	<p>A detailed assessment of the research needs of the department has been undertaken and the five broad priority areas identified are-  <ul style="list-style-type: none"> <li>(i) Maximising survival rates. It is aimed at developing techniques for the efficient production of field hardy seedlings for reforestation,</li> <li>(ii) To build up silvicultural knowledge of native trees and increase the diversity of tree species used for reforestation</li> <li>(iii) Document information on the traditional and non traditional utilisation of forest resources by communities to design systems of management for Public/Private forests to achieve sustainable balance between usage and biodiversity</li> <li>(iv) Forest Protection</li> <li>(v) Forest Valuation</li> </ul> </p>

<p><b>What other measures will be needed to support the revised process?</b></p>	<p><b>The major measures that must be dealt with to support the new process are</b></p> <ul style="list-style-type: none"> <li>. Capacity building of the research division to undertake the priority programme</li> <li>❖ Continued collaboration with Public and private sector and international organisations in research programmes of mutual interest</li> <li>❖ Training of more technical forestry personnel in the use of the GPS and other equipment</li> </ul>
<p><b>What are the information systems requirements for the revised processes?</b></p>	<p>No new requirements identified at present but the Department should expand the use of technology in the collection and analysis of data.</p>

### 3.2.4 Human Resource Management & Administration

#### Administration

Procurement

Goods/service requisition received & processed  
Master lists compiled; availability of funds ascertained  
Approved suppliers quotations requested & received  
Quotations processed by Contracts Committee where necessary  
Invoice zero-rated; cheques received; goods purchased, inventoried and distributed

Asset Management  
Furniture & Equipment

Inventory card created & maintained  
Location records created and maintained

Asset Management  
Vehicles

Vehicle log book maintained & monitored  
Vehicle servicing schedule developed and implemented  
Insurance and licensing kept current  
Assignment and monitoring of fleet vehicles

Asset Management  
Buildings

Repair needs identified & assessed  
Repair contract awarded and monitored  
Invoice certified for payment

Security

Gate manned; movement of vehicles in & out of premise recorded and monitored using gate pass system  
Visitors received, recorded & directed to appropriate location/Officer

### 3.2.4.1 Administration: Records Management


Incoming Mail Processed by registry	<p>Mail received and recorded Correspondence addressed to the Forest Department, or attention an officer by title, opened, read, stamped, placed in a folder Mail address to the Conservator by name, place in the folder unopened Folder sent to Conservator for processing All mail addressed to individual officer by name forwarded to the individual Monies received recorded in value book; value book signed by two permanent officers; cheque received and acknowledged in value book by cashier.</p>
Mail Assigned for Action	<p>Correspondence assigned for action to relevant officer(s) by Conservator. All correspondence logged. Folder received; all correspondence noted by Director HR&amp;A Correspondence enclosed on respective file; file /copy of correspondence distributed to relevant Officer(s)</p>
Responses Prepared	<p>Reply to relevant correspondence prepared by officer; drafted/finalized by secretary; copies made ;signed by officer; where urgent faxed /e-mailed to recipient; file with mail forwarded to the registry for delivery along with copy for filing.</p>
Filed Updated & Stored	<p>File with letters received by registry; mail prepared for delivery; copy of correspondence enclosed on file(s), new file created where appropriate; file index updated; file stored</p>
Out -going mail delivery	<p>Delivery book with mail collected from registry by the messenger Messenger transported to respective organization; mail delivered ; delivery book signed Delivery book returned to the registry</p>

Administration

<p><b>What are the key weaknesses in the processes used in the section?</b></p>	<p>The main problems with the current processes in the Administration Section of the HR&amp;A Division are concerned with how records are managed and stored:</p> <ul style="list-style-type: none"> <li>✚ <b>The present classification system needs to be expanded to include new categories and subjects.</b></li> <li>✚ <b>Some Correspondence placed on the wrong file</b></li> <li>✚ <b>There is lack of adequate space for proper storage of files.</b></li> </ul> <ul style="list-style-type: none"> <li>• <b>The Information Management System is fragmented.</b></li> </ul> <p>In the present process there is lack of connectivity between the registry, the library, and the technical services information system. Not all useful information is brought to bear for efficient management and planning or for client information.</p> <p>The room which houses the registry is in disrepair and in its present state is unsuitable for registry operation. Layout of the registry does not facilitate the workflow and hampers communication between the Registrar and the Registry Clerk</p>
<p><b>What are business process change objectives (Improve what?)</b></p>	<p>Based on the weaknesses identified above, the objectives are to:</p> <ul style="list-style-type: none"> <li>✓ To strengthen the information management system; develop/expand the classification system to accommodate additional subject areas; ensure that each piece of correspondence is appropriately classified and placed on the correct file(s) to facilitate quick and easy retrieval of information.</li> </ul>
<p><b>Key proposals for change</b></p>	<ul style="list-style-type: none"> <li>❖ In the short term, develop and implement an appropriate manual registry system</li> <li>❖ For the medium long term, identify and install a suitable electronic information management system which will capture all information within the organisation, store and provide the right access to users.</li> <li>❖ Reorganise the registry in keeping with the work flow</li> <li>❖ Effect needed repairs to the accommodation</li> </ul>
<p><b>What other measures will be needed to support the revised process?</b></p>	<p><b>The major measures that must be dealt with to support the new process are</b></p> <ul style="list-style-type: none"> <li>❖ Train registry staff to properly manage and apply the new system</li> <li>❖ Further computerisation of the operations of the department with the right interfaces of the head office with the regional operations</li> </ul>

<b>What are the information systems requirements for the revised processes?</b>	<p>The appropriate hardware and software application for the implementation of an information management system in the Forestry Department.</p> <p>It is anticipated that the Specialist will determine what will be needed in this regard</p>
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Human Resource Management

<b>What are the key weaknesses in the processes used in the section?</b>	<p>The main problems with the current processes in the Human Resource Section are as follows:</p> <p> <b>In the present situation the human resource function is partially processed by the Department but finalized in the Office of the Services Commission.</b></p> <p>The organization does not have the capacity to assume the additional role and responsibilities for:</p> <ul style="list-style-type: none"> <li>recruitment</li> <li>selection</li> <li>appointment</li> <li>discipline</li> <li>benefits administration</li> <li>separation</li> <li>training</li> <li>Performance management</li> </ul> <p>with the delegation of responsibility by the Office of the Services Commission under the Executive Agency.</p>
<b>What are business process change objectives (improve what?)</b>	<p>Based on the weaknesses identified above, the objectives are to:</p> <ul style="list-style-type: none"> <li>✓ position the HR Division to assume the delegated functions associated with the EA status; and</li> <li>✓ ensure that the staff is sufficiently trained and competent to perform in the new and expanded role.</li> </ul> <p>Implement and maintain a rigorous performance management system</p>
<b>Key proposals for change</b>	<ul style="list-style-type: none"> <li>✓ .Redefine the mandate of the Human Resource Department within the new entity</li> <li>✓ Assess the gap in the skills and competencies of the present staff and take the appropriate steps to fill these gaps.</li> </ul>

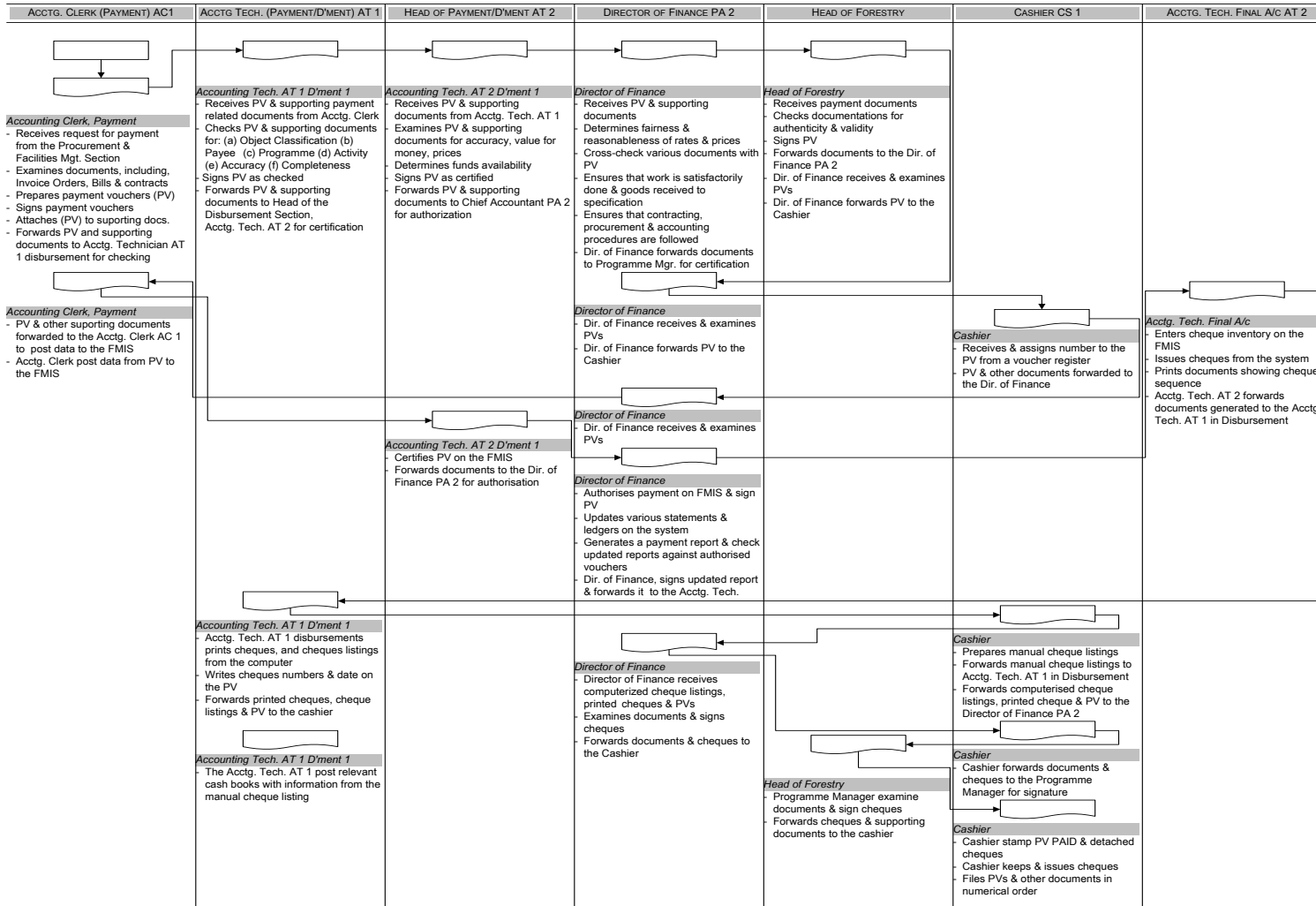


<p><b>What other measures will be needed to support the revised process?</b></p>	<p><b>The major measures that must be dealt with to support the new process are</b></p> <ul style="list-style-type: none"> <li>❖ Develop HR policies and procedures manual modelled on the manuals of existing Executive Agencies, but tailored to meet any unique needs of the new entity.</li> </ul>
<p><b>What are the information systems requirements for the revised processes?</b></p>	<p>Identify and implement an appropriate computerised Human Resource Management Information System. This system should have appropriate interface with the payroll application.</p>

### 3.2.5 Finance and Accounts

#### High Level Flow Diagram Present Payment Procedure

March 13, 2006

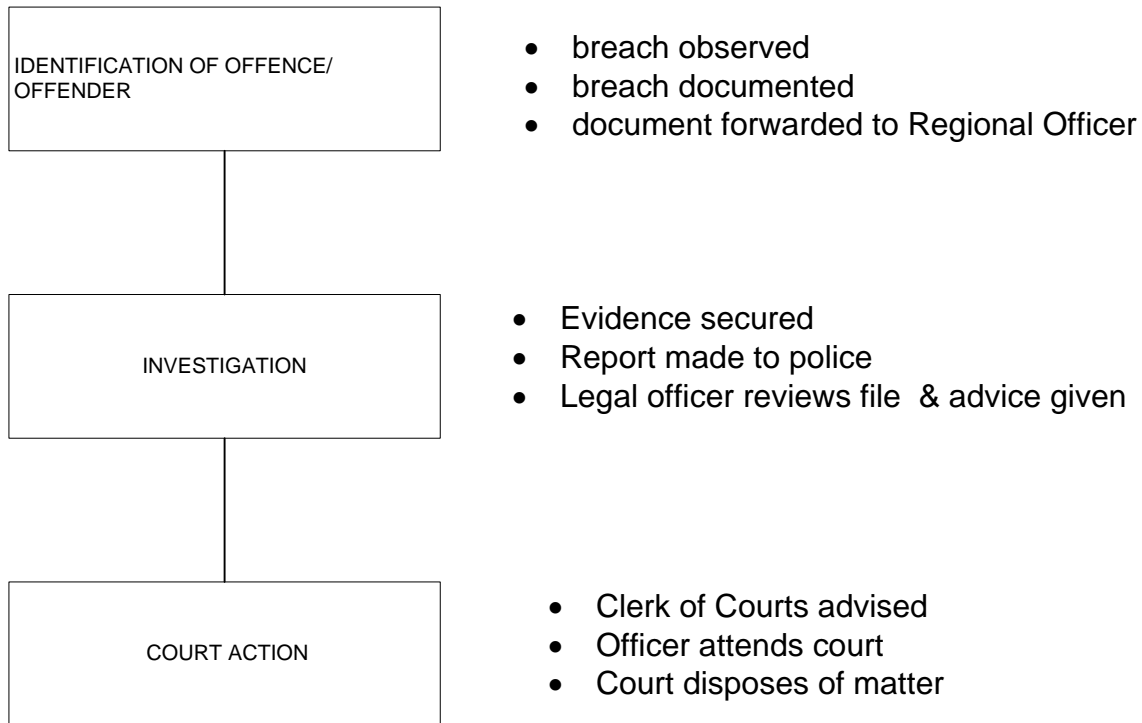


<p><b>What are the key weaknesses in the processes used in the section?</b></p>	<p>The main problems with the current processes in the Finance and Accounts Section are as follows:</p> <ul style="list-style-type: none"> <li>✚ <b>Department is presently on the cash accounting system.</b></li> </ul> <p>This system does not allow the Forestry Department to account for expenses as they are incurred, but only after payments have been made. Revenues are recognised when received and deposited, expenses are recorded in the accounting period when bills are paid.</p> <p>This method of accounting does not give a complete picture of the financial condition of the Forestry Department at any given point in time. It therefore does not provide the sufficient information to allow for efficient planning and management.</p> <ul style="list-style-type: none"> <li>✚ <b>Manual and computerised accounting systems operating parallel to each other</b></li> </ul> <p>Payment for goods and services is first processed through the manual system, where it is checked, certified, cross-checked, checked, reviewed and examined before the data is posted to the computerised system. Once placed on the system, the data is certified and payment authorised. The cheque disbursement portion of the process is also partially computerised.</p> <p>This process, as it now stands, does not take full advantage of computerisation and thus time is spent and systems are being inefficiently used.</p> <ul style="list-style-type: none"> <li>✚ <b>Budget is approved by the GoJ, but the amount released by the MoFP does not cover all monthly budgeted expenditures.</b></li> </ul> <p>The ability of the organisation to achieve its planned objectives is stymied by uncertainty in the availability of funds. Currently project and programme development is highly dependent on external funding.</p>
<p><b>What are business process change objectives (improve what?)</b></p>	<p>Based on the weaknesses identified above, the objectives are to:</p> <ul style="list-style-type: none"> <li>✓ Implement appropriate financial Systems including accruals-based financial accounting</li> <li>✓ Improve the corporate and business planning process</li> </ul>
<p><b>Key proposals for change</b></p>	<p>The proposals to meet the objectives identified above are as follows: The department presently has responsibility for its Finance and Accounts functions. It prepares its budget which is submitted to MoFP through the MoA. Likewise approval and allocations of funds come through the MoA. The department operates its own bank accounts and undertakes its own disbursement and final accounts functions. However, it is necessary to make the following changes:</p>

	<ol style="list-style-type: none"> <li>1. Put in place the appropriate computerized system to allow for the implementation of accruals-based accounting.</li> <li>2. Integrate the manual and computerised systems employed in the accounting operations.</li> <li>3. Implement a cash and management accounting system that will allow for the establishment of the full cost for all goods and services provided.</li> </ol>
<p><b>What other measures will be needed to support the revised process?</b></p>	<p>The major measures that must be dealt with to support the new process are:</p> <ul style="list-style-type: none"> <li>✓ Staff trained in the use of the proposed FMIS</li> <li>✓ An assessment of the existing computer hardware to address any deficiency implementing the new system</li> </ul>
<p><b>What are the information systems requirements for the revised processes?</b></p>	<p>The appropriate hardware and software application for the implementation of accrual accounting, planning and budgeting. This is usually decided in conjunction with the MoFP.</p> <p>It is anticipated that the proposed specialist will determine what will be needed in this respect.</p>

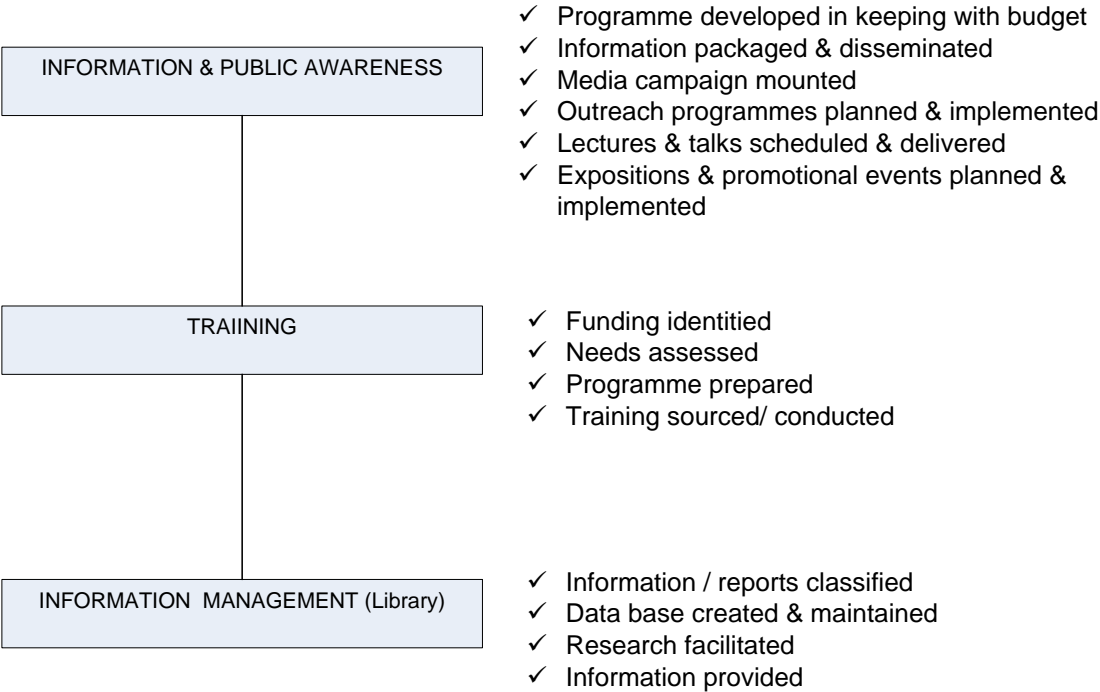
### 3.2.6 Legal Services

#### High Level Flow Diagram for Enforcement



Several challenges with the present systems of operations that require legal intervention were articulated some of which were identified in earlier sections of this report. Consequently the Act and regulations governing the operations of the department are currently under review to make them more applicable to the operations of the department. It is also intended that appropriate changes will be made to satisfy the Executive Agency requirements.

3.2.7 Forest Information and Public Awareness



## **4. MODERNISATION STRATEGY FOR THE NEW FORESTRY DEPARTMENT**

This section covers the modernisation strategy for the new Forestry Department. As previously mentioned, the Forestry Department will maintain this name on being granted executive agency status. As an executive agency however, the new Forestry Department will be completely enhanced in its staffing, infrastructure, tools and methodologies. This will enable the new agency to meet the service needs of the forestry sector, as a result of its greater organisational capacity, capability and accountability.

### **4.1 Mission**

The mission of the new Forestry Department will be:

***“Manage all the Jamaican forest ecosystems according to national environmental policies.”***

### **4.2 Vision**

The vision of the new Forestry Department will be:

***“To become an effective Executive Agency in Jamaica; protecting and improving the forests of Jamaica and the first to ensure technology transfer to other Caribbean territories.”***

### **4.3 Goal**

The Goal of the new agency will be:

***“Manage and conserve the forest resources of Jamaica for the benefit of present and future generations.”***

### **4.4 Mandate of the Forestry Department**

The mandate of the new agency was established from the results of the reviews and work done on the sector, current environmental challenges and considerations, Jamaica’s forestry profile and issues, and international best practices. These will guide all other objectives and policies and procedures of the agency.

- Maintain the forest cover at not less than 30% of the country
- Increase forest cover to at least 2% over the next 10 years
- Transfer the local experience and technology to two other territories in the region in the first five years

### **4.5 Strategic Objectives**

The agency’s strategic objectives will be:

- Develop and implement updated National and Local Forest Management and Conservation Plans
- Maintain forest cover on the Forest Estate
- Increase the participation of private sector and non-government organisations in conservation and reforestation

- Encourage well-informed and participative stakeholders
- Ensure that appropriate forestry activities are properly authorised
- Achieve compliance with forestry legislation
- Provide policy and technical advice of a high standard
- Build an efficient and effective service delivery organisation, with well trained and customer-focused staff

## 4.6 Core Functions

The core functions of the Forestry Department, as agreed during the Strategic Review, are set out below:

### *Core functions of the Forestry Department*

- National and Local Forest Management and Conservation Planning
- Management of the Forest Estate
- Authorisations – applications management
- Legal services and enforcement
- Communications
- Strategic Planning, policy guidance and project development
- Provide technical forestry/forestry related information and services
- Corporate Management
- Internal audit

Some core functions are standard across all executive agencies, for example *Internal Audit*. Other functions however, pertain strictly to forestry management, for example *Management of the Forest Estate*.

## 4.7 Proposed Institutional Arrangements

### 4.7.1 Underlying Principles

While it is evident that there was more than one option for suitable institutional arrangements to support the statutory functions of the Forestry Department, the underlying assumption was that it should operate as a Performance-Based Institution in future. This means that the following principles will be adhered to:

- Clearly stated performance indicators will be set against which the quality, timeliness and efficiency of service delivery will be measured.
- Senior managers will be employed under performance contracts, which will be renewed only if the agreed performance standards have been met.



- A performance appraisal system will be implemented in keeping with the Government of Jamaica's Performance Management and Appraisal System (PMAS), and clear output-based performance standards will be documented in every employee's job description.

The institutional arrangements will be led from and encapsulated at the top with a CEO's Performance Agreement. This Performance Agreement will primarily be the instrument that assists the CEO/Conservator of Forests and the Honourable Minister of Agriculture to reach a consensus on the CEO's individual performance requirements, with coverage on personal responsibilities, assessment and evaluation.

#### **4.7.2 Contractual Arrangements and Technical Assistance**

It is highly probable that the agency will be challenged in terms of having all required technical resources and/or capacity available in-house. The agency therefore may need to contract for these services in order to ensure that it delivers on service. The Forestry Department along with its parent ministry and the Ministry of Finance and the Public Service will need to review any such challenges on an ongoing basis and agree corrective measures during the transition period and beyond.

The modernisation team has identified specific critical technical assistances that will be needed in the transition phase. These will be consultancies which will be managed by the Forestry Department's executive team lead by the Chief Executive Officer. The consultancies are:

- The implementation of the information technology network
- Information technology scoping and implementations in finance, for the Geographical Information System, human resources and the registry/library
- Implementation of the Biophysical Information System
- Agency development
- Tropical forestry management
- Nursery management
- Development of research programme and
- Development of forestry training programme

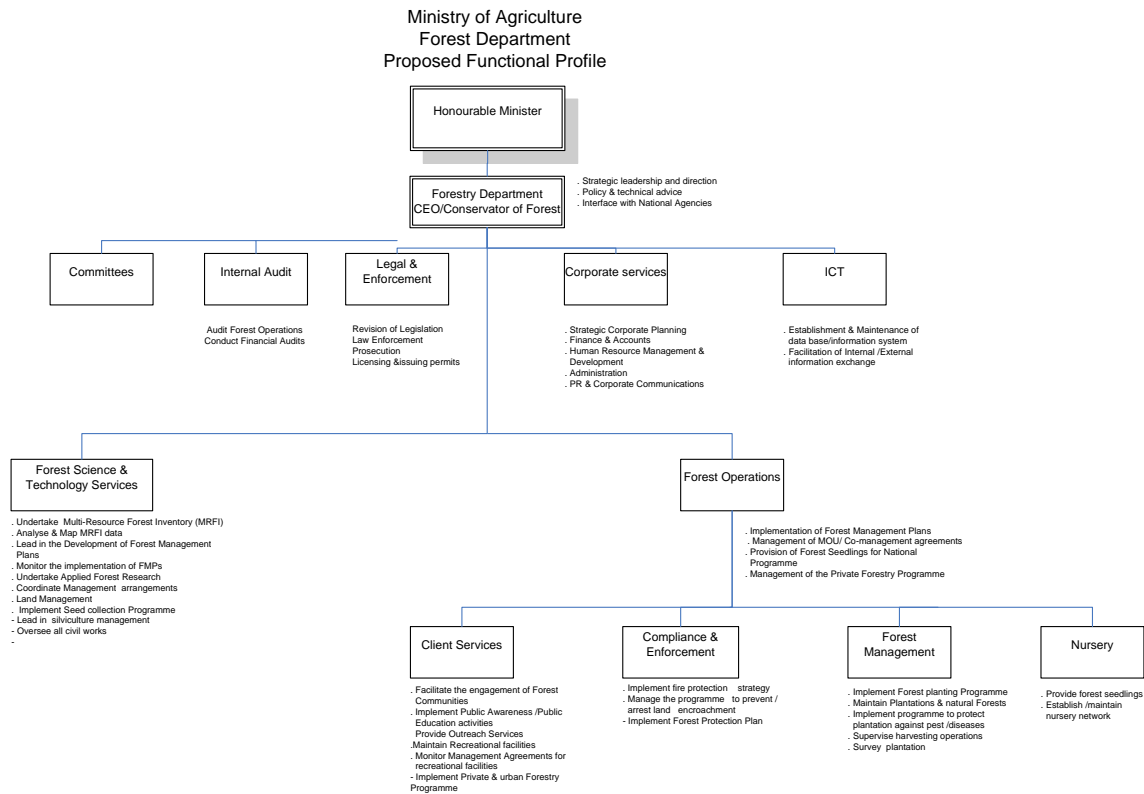
The duration and costing of these consultancies have been ascertained and are outlined in the Medium Term Financing Plan (MTFP). Consultancies are projected to range from a minimum duration of four days for the Registry/Library technical scoping and implementation to a maximum duration of forty days; this applies to the tropical forestry management consultancy.

## 4.8 Organisational Structure

### 4.8.1 Functional Profile and Top Management Structure

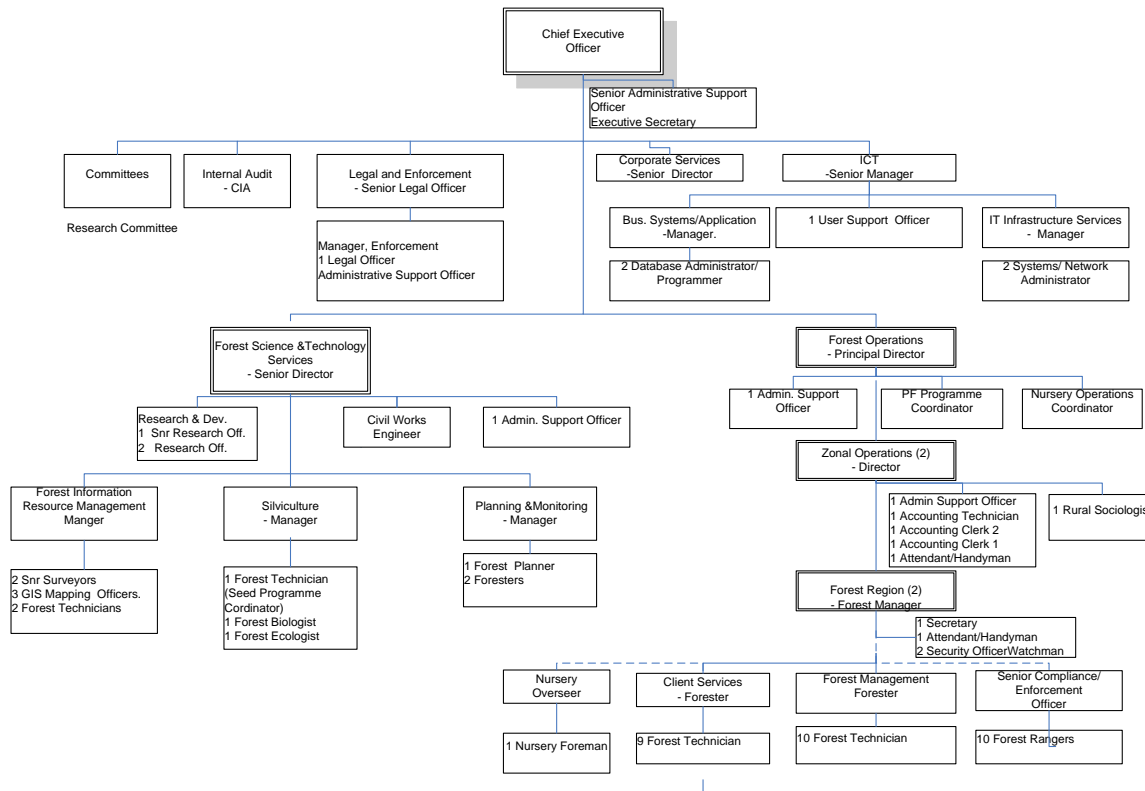
All organisation structures for the agency, inclusive of a functional profile, top management structure and unit structures have been agreed with the Ministry of Agriculture. They are shown below.

#### 4.8.1.1 Functional Profile



#### 4.8.1.2 Organisational Profile

### Forestry Department Proposed Organisational Chart 1/29/2008



#### 4.9 A Phased Approach

The intention is that during 2008-09 the Forestry Department will become a Transition Agency, as defined in the Executive Agencies Act. This will entail implementing the systems and controls that will facilitate quality service delivery whilst being compliant with the requirements of the Financial Instructions to Executive Agencies (FIEA) and other relevant regulations and legislation.

It is anticipated that the amended forest legislation will be enacted while the implementation of the Modernisation Plan is being completed. The CEO and the Minister will need to agree on any changes to the Modernisation Plan that may be necessary.

#### 4.10 The Role of the Ministry of Agriculture

The Forestry Department, as an executive agency, will remain in the portfolio of the Ministry of Agriculture and will report to the Minister in keeping with the provisions of the Executive Agencies Act. The Ministry of Agriculture will provide policy direction to the operation of the agency but is expected to arrive at these policy positions through a process that allows input and due consideration from the CEO of the agency.

The CEO is the Accounting Officer with responsibility for the management of the Forestry Department's finances in accordance with the FIEA. The Permanent Secretary of the portfolio Ministry, as the Accounting Officer of the said portfolio ministry, still has a due diligence and

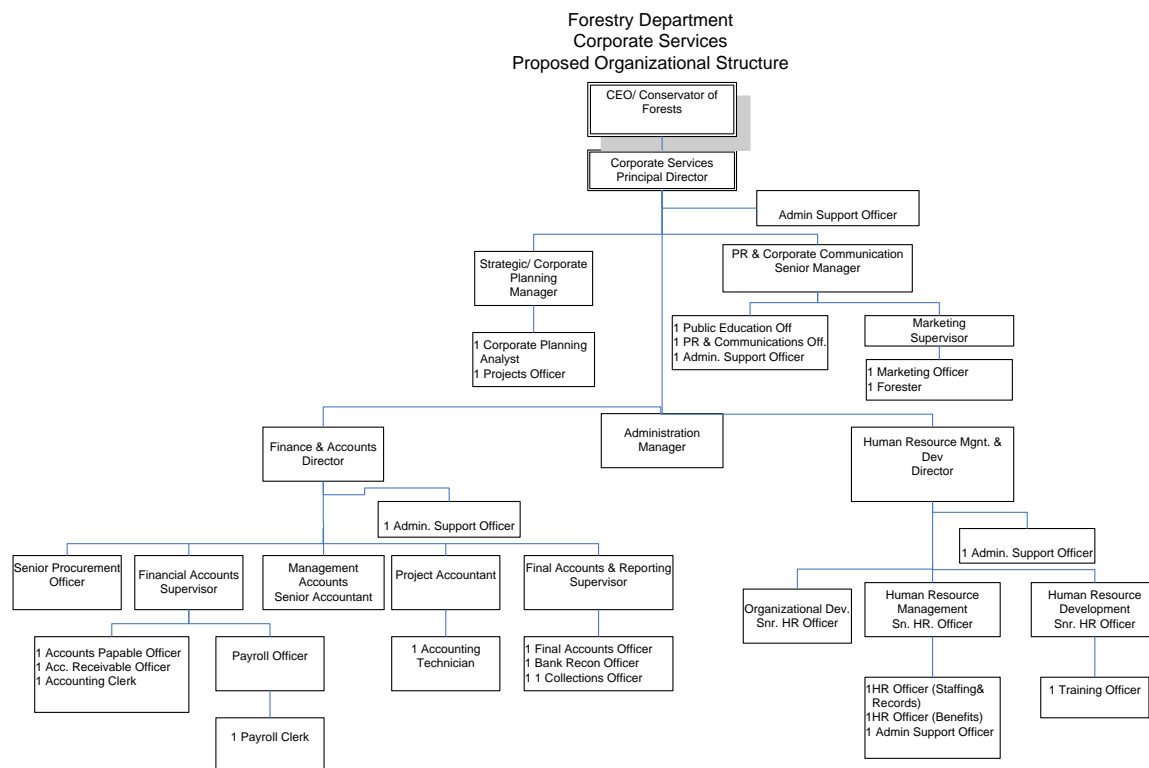
oversight function however with respect to the operations of the agency, to ensure statutory and other requirements are met by the agency. The Framework Document and the CEO's Performance Contract will provide further insights as to the role of the Ministry of Agriculture and governance arrangements. Both documents form annexes to this Modernisation Plan.

## 4.11 Recommended Staffing Strategy

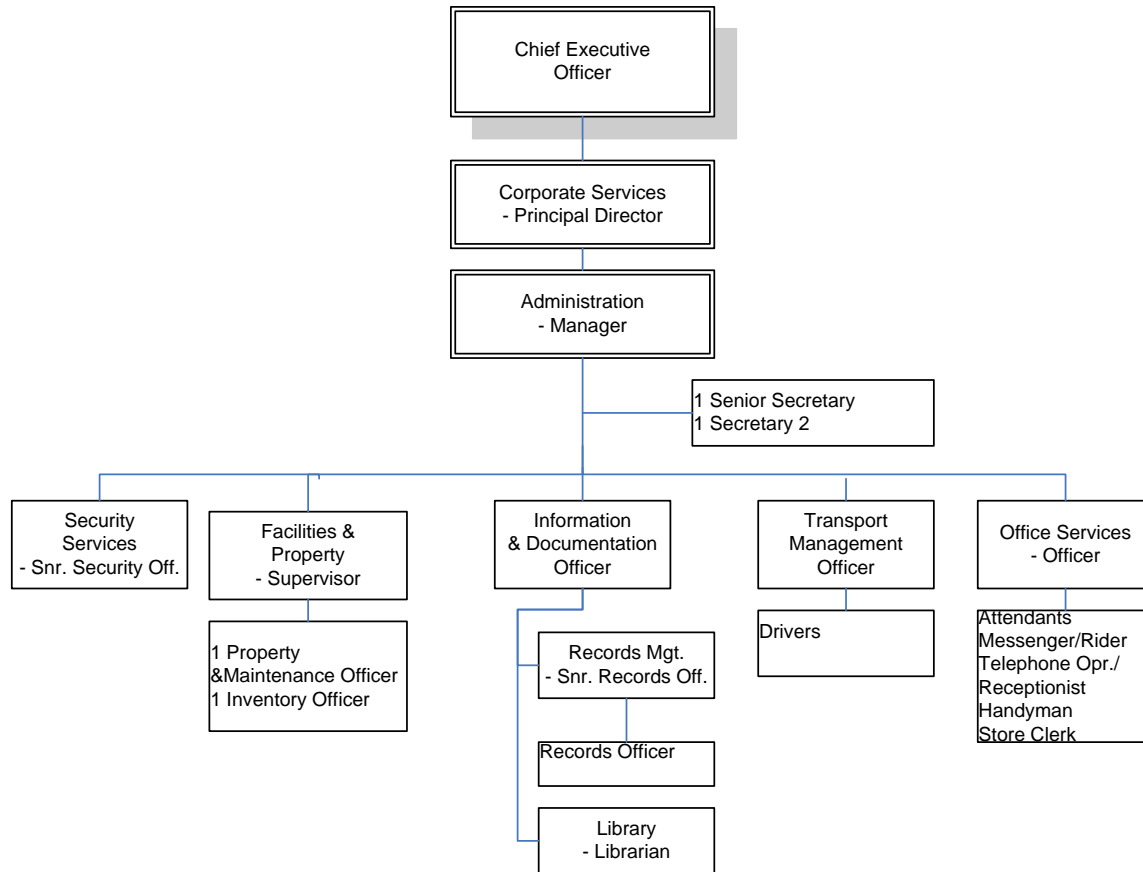
### 4.11.1 Corporate Services

The Forestry Department currently has a corporate service structure, but this will need reinforcing in readiness to take on the delegation of functions that come from being granted executive agency status. This investment will include not only additional staff but also support from the Ministry of Agriculture and external consultants.

An organisation chart showing proposed staffing levels, including new positions, is below.



Forestry Department  
Administration Branch  
Proposed Organisational Structure  
2/15/2008



**4.11.2 Operational Staff**

The Forestry Department is still considering the need for additional operational staff to achieve the work programme it envisages. The CEO and his or her senior management team will need to confirm the actual operational staffing requirements following a grading and loading review during the transition period.

### 4.11.3 Human Resource Management Strategy

The Forestry Department will need to begin developing a comprehensive human resource management strategy during the transition period. At a minimum, it will need to review its existing pay and grading arrangements and obtain agreement to a new Agency-based system; fill all posts, using open competition wherever appropriate; implement procedures for improving individual performance; and agree new terms and conditions of service. These changes will need to be incorporated into an HRM Manual as a pre-condition of full executive agency status.

The existing and proposed staff schedules are as follows. The details indicate that the Forestry Department currently has a complement of 176 classified posts. Upon receiving executive agency status, the new agency will have a total of 279 classified posts; with a phased strategy to have 239 of them filled in the first year (2008/2009) and the remaining 35 filled in the second year (2009/2010).

#### *Existing Staff/Classification Schedule*

<b>NO.</b>	<b>POST</b>	<b>ORGANISATIONAL UNIT &amp; LOCATION</b>	<b>POST NUMBER</b>	<b>OLD GROUP &amp; GRADE</b>
1	CEO & Conservator of Forests	<b>Administration</b>	7687	SOG/ST10
1	Director, Forestry	" "	7688	GMG/SEG5
1	Senior Director	<b>Regional Forestry Operations</b>	7689	SOG/ST9
1	Legal Officer	<b>Administration</b>	56664	JLG/LO2
1	Deputy Director, Supernumerary	" "	7690	GMG/SEG 3
1	Forest Education Officer	" "	7691	GMG/SEG 2
1	Technical Assistant	" "	7857	SOG/ST 5
1	Forest Information & Public Awareness Officer	" "	56597	MCG/IE 3
1	Executive Secretary 1	" "	7692	OPS/SS 4
1	Senior Secretary	" "	7693	OPS/SS 3
1	Secretary 2	" "	7694	OPS/SS 2
1	Stenographer	" "	7695	OPS/SS 2
1	Professional Accounting 2	<b>Finance and Accounts</b>	7720	FMG/PA 2
4	Accounting Technician 2	" "	7722	FMG/AT2
	Accounting Technician 2	" "	7721	FMG/AT2
	Accounting Technician 2	" "	7723	FMG/AT2
	Accounting Technician 2	" "	50863	FMG/AT2
4	Accounting Technician 1	" "	7724	FMG/AT1
	Accounting Technician 1	<b>Finance and Accounts</b>	7728	FMG/AT1
	Accounting Technician 1	" "	7729	FMG/AT1

NO.	POST	ORGANISATIONAL UNIT & LOCATION	POST NUMBER	OLD GROUP & GRADE
	Accounting Technician 1	" "	50865	FMG/AT1
1	Accounting Clerk 2	" "	7731	FMG/AC2
1	Accounting Clerk 1	" "	50864	FMG/AC1
1	Cashier	" "	7725	FMG/CS1
1	Director	<b>HR Management and Administration</b>	51277	GMG/SEG 2
1	Senior Personnel Officer	" "	50867	GMG/AM 4
1	Training Officer	" "	50868	GMG/AM3
1	Administrator 2	" "	7704	GMG/AM 2
1	Facilities Manager	" "	56663	GMG/AM 4
1	Procurement Officer	" "	56598	GMG/AM 3
1	Records Officer	" "	7712	PIDG/RIM 2
2	Records Clerk	" "	7713	PIDG/RIM 1
	Records Clerk	" "	7703	PIDG/RIM 1
1	Telephone Operator	" "	7714	OPS/TO 2
1	Library Assistant	" "	51278	PIDG/LA 2
1	Driver 2	<b>HR Management and Administration</b>	7709	LMO/DR 2
2	Driver 2	" "	7708	LMO/DR 2
	Driver 1	" "	7706	LMO/DR 1
2	Driver 1	" "	7707	LMO/DR 1
1	Attendant/Messenger	" "	7718	LMO/TS 2
2	Attendant	" "	7715	LMO/TS 2
	Attendant	" "	7468	LMO/TS 2
2	Sideman	" "	7716	LMO/TS 1
	Sideman	" "	7717	LMO/TS 1
1	Handyman	" "	7719	LMO/TS 1
3	Gateman	" "	7697	LMO/TS 1
	Watchman	" "	7699	LMO/TS 1
	Nursery Assistant	" "	7698	LMO/TS 1
1	Director, Technical Services	" "	7850	SOG/ST 8
1	Senior Research Officer, Research & Development	" "	50522	SOG/ST 7
1	Senior Secretary	" "	7696	OPS/SS 3
1	Seed Collection Coordinator	" "	7754	SOG/ST4
1	Forest Research Officer	" "	7851	SOG/ST6
1	Nursery & Private Forest Coordinator	<b>Technical Services</b>	50861	SOG/ST5

NO.	POST	ORGANISATIONAL UNIT & LOCATION	POST NUMBER	OLD GROUP & GRADE
1	Research Technician	" "	7852	SOG/ST3
1	Resource Planning and Management Officer	<b>Forest Resource Management and Planning</b>	7853	SOG/ST7
1	Watershed Management & Soil Conservation Officer	" "	7854	SOG/ST6
1	Forest Inventory & Utilization Officer	" "	7855	SOG/ST6
1	Technical Officer (GIS Surveying)	" "	7700	SOG/ST5
1	Forest Inventory Officer	" "	50862	NPS 2
1	Senior Survey Technician	" "	7856	SOG/ST4
1	Survey Technicians	" "	7858	SOG/ST 3
1	Survey Technicians	" "	7859	SOG/ST 3
1	Geographic Information Systems Technician	" "	7860	SOG/ST4
1	Geographic Information Systems Technician	" "	7861	SOG/ST4
1	GIS Analyst /Network Administrator	" "	7862	MIS/IT 4
1	Regional Forest Officer	<b>Regional Office (Western Region)</b>	7732	SOG/ST7
2	Forest Supervisors	" "	7735	SOG/ST6
	Forest Supervisor	" "	7736	SO G/ST6
10	Foresters 2	" "	7741	SOG/ST4
	Forester 2	" "	7742	SOG/ST4
	Forester 2	<b>Regional Office (Western Region)</b>	7743	SOG/ST4
	Forester 2	" "	7744	SOG/ST4
	Forester 2	" "	7745	SOG/ST4
	Forester 2	" "	7746	SOG/ST4
	Forester 2	" "	7747	SOG/ST4
	Forester 2	" "	7748	SOG/ST4
	Forester 2	" "	7749	SOG/ST4
	Forester 2	" "	7750	SOG/ST4
4	Forester 1	" "	7755	SOG/ST3
	Forester 1	" "	7756	SOG/ST3
	Forester 1	" "	7757	SOG/ST3
	Forester 1	" "	7758	SOG/ST3
2	Accounting Technician 2	" "	7826	FMG/AT 2
	Accounting Clerk 2	" "	7829	FMG/AC 2



NO.	POST	ORGANISATIONAL UNIT & LOCATION	POST NUMBER	OLD GROUP & GRADE
1	Accounting Clerk 2	" "	7830	FMG/AC 2
1	Secretary 2	" "	7835	OPS/SS 2
14	Forest Warden	" "	7788	PTSG/PX2
	Forest Warden	" "	7789	PTSG/PX2
	Forest Warden	<b>Regional Office (Western Region)</b>	7790	PTSG/PX2
	Forest Warden	" "	7791	PTSG/PX2
	Forest Warden	" "	7792	PTSG/PX2
	Forest Warden	" "	7793	PTSG/PX2
	Forest Warden	" "	7794	PTSG/PX2
	Forest Warden	" "	7795	PTSG/PX2
	Forest Warden	" "	7796	PTSG/PX2
	Forest Warden	" "	7797	PTSG/PX2
	Forest Warden	" "	7798	PTSG/PX2
	Forest Warden	" "	7799	PTSG/PX2
	Forest Warden	" "	7800	PTSG/PX2
	Forest Warden	" "	7801	PTSG/PX2
1	Driver	" "	7819	LMO/DR 1
1	Nursery Foreman	" "	7822	LMO/TS 6
1	Attendant	" "	7847	LMO/TS 2
3	Watchman	" "	7838	LMO/TS 2
	Watchman	" "	7839	LMO/TS 2
	Watchman	" "	7840	LMO/TS 2
		<b>Regional Office (Central)</b>		
1	Regional Forest Officer	" "	7733	SOG/ST7
2	Forest Supervisors	" "	7737	SOG/ST6
	Forest Supervisor	" "	7738	SOG/ST6
4	Foresters 2	" "	7751	SOG/ST4
	Forester 2	" "	7752	SOG/ST4
	Forester 2	" "	7753	SOG/ST4
	Forester 2	" "	7769	SOG/ST4
2	Foresters 1	" "	7759	SOG/ST 3
	Forester 1	" "	7760	SOG/ST3
1	Accounting Technician 2	" "	7827	FMG/AT 2
1	Accounting Clerk 2	" "	7831	FMG/AC 2
1	Accounting Clerk 2	" "	7832	FMG/AC 2

NO.	POST	ORGANISATIONAL UNIT & LOCATION	POST NUMBER	OLD GROUP & GRADE
1	Secretary 2	" "	7836	OPS/SS 2
1	Driver	" "	7820	LMO/DR 1
1	Nursery Foreman	" "	7823	LMO/TS6
3	Watchmen	" "	7841	LMO/TS 1
	Watchman	" "	7842	LMO/TS 1
	Watchman	<b>Regional Office (Central)</b>	7843	LMO/TS 1
1	Attendant	" "	7848	LMO/TS 1
8	Forest Wardens	" "	7802	PTSG/PX2
	Forest Warden	" "	7803	PTSG/PX2
	Forest Warden	" "	7804	PTSG/PX2
	Forest Warden	" "	7805	PTSG/PX2
	Forest Warden	" "	7806	PTSG/PX2
	Forest Warden	" "	7807	PTSG/PX2
	Forest Warden	" "	7808	PTSG/PX2
	Forest Warden	" "	7809	PTSG/PX2
1	Regional Forest Officer	" "	7734	SOG/ST7
2	Forest Supervisors	" "	7739	SOG/ST6
	Forest Supervisor	" "	7740	SOG/ST6
8	Foresters 2	" "	7770	SOG/ST4
	Forester 2	" "	7771	SOG/ST4
	Forester 2	" "	7772	SOG/ST4
	Forester 2	" "	7773	SOG/ST4
	Forester 2	" "	7774	SOG/ST4
	Forester 2	<b>Regional Office (Central)</b>	7775	SOG/ST4
	Forester 2	" "	7776	SOG/ST4
	Forester 2	" "	7777	SOG/ST4
8	Foresters 1	" "	7761	SOG/ST 3
	Forester 1	" "	7762	SOG/ST 3
	Forester 1	" "	7763	SOG/ST 3
	Forester 1	" "	7764	SOG/ST 3
	Forester 1	" "	7765	SOG/ST 3
	Forester 1	" "	7766	SOG/ST 3
	Forester 1	" "	7767	SOG/ST 3
	Forester 1	" "	7768	SOG/ST 3
	Accounting Technician 2	<b>Regional Office (Eastern Region)</b>	7828	FMG/AT 2

<b>NO.</b>	<b>POST</b>	<b>ORGANISATIONAL UNIT &amp; LOCATION</b>	<b>POST NUMBER</b>	<b>OLD GROUP &amp; GRADE</b>
2	Accounting Clerk 2	" "	7833	FMG/AC 2
1	Accounting Clerk 2	" "	7834	FMG/AC 2
1	Secretary 2	" "	7837	OPS/SS 2
1	Driver	" "	7821	LMO/DR 1
2	Nursery Foreman	<b>Regional Office (Eastern Region)</b>	7824	LMO/TS 6
	Nursery Foreman	" "	7825	LMO/TS 6
1	Attendant	" "	7849	LMO/ TS 1
3	Watchman	" "	7844	LMO/ TS 1
	Watchman	" "	7845	LMO/ TS 1
9	Watchman	" "	7846	LMO/ TS 1
	Forest Warden	" "	7810	PTSG/PX2
	Forest Warden	" "	7811	PTSG/PX2
	Forest Warden	" "	7812	PTSG/PX2
	Forest Warden	" "	7813	PTSG/PX2
	Forest Warden	" "	7814	PTSG/PX2
	Forest Warden	" "	7815	PTSG/PX2
	Forest Warden	<b>Regional Office (Eastern Region)</b>	7816	PTSG/PX2
	Forest Warden	" "	7817	PTSG/PX2
1	Forest Warden	" "	7818	PTSG/PX2
1	Rural Sociologist	" "		GMG/SEG 2
<b>176</b>	<b>TOTAL POSTS</b>			

Proposed Staff Schedule

<b>FORESTRY DEPARTMENT PROPOSED STAFF SCHEDULE FOR YEAR 1 (2008/2009)</b>			
<b>NO.</b>	<b>TITLE OF POST</b>	<b>LEVEL</b>	<b>Organizational Unit &amp; Location</b>
1	<b>CEO/CONSERVATOR OF FORESTS</b>	10	Forestry Department
1	SNR. ADMINISTRATIVE SUPPORT OFFICER	6	" "
1	EXECUTIVE SECRETARY	5	" "
3			
1	<b>SNR. LEGAL OFFICER</b>	9	Legal & Enforcement
1	MANAGER, ENFORCEMENT	7	" "
4	SENIOR COMPLIANCE ENFORCEMENT OFFICER	5	" "
33	FOREST RANGERS	4	" "
1	LEGAL OFFICER	7	" "
<b>40</b>	<b>Sub total</b>		
1	<b>SNR MANAGER</b>	8	Information & Communications Technology
1	BUSINESS SYSTEMS APPLICATIONS MANAGER	7	" "
1	USER SUPPORT SERVICES OFFICER	5	" "
1	IT INFRASTRUCTURE SERVICES MANAGER	7	" "
1	SYSTEM/ NETWORK ADMINISTRATOR	5	" "
1	PROGRAMMER/DATABASE ADMINSTRATOR	5	" "
<b>6</b>	<b>Sub total</b>		
1	<b>PRINCIPAL DIRECTOR</b>	9	Corporate Services Division
1	SNR MANAGER	7	Strategic/ Corporate Planning
1	SNR MANAGER,	8	Public Relations & Corporate Communication
1	PUBLIC EDUCATION OFFICER	5	" "
<b>4</b>	<b>Sub total</b>		
1	<b>DIRECTOR</b>	8	Human Resource Management & Development Branch
1	ADMIN SUPPORT OFFICER	4	" "
1	HUMAN RESOURCE MANAGER. - SNR. HR OFFICER	7	" "
1	HR OFFICER (STAFFING & RECORDS)	5	" "
1	HR OFFICER (BENEFITS)	5	" "
1	HUMAN RESOURCE DEV - SNR. HR OFFICER	7	" "
1	HRD OFFICER (TRAINING)	5	" "
<b>7</b>	<b>Sub total</b>		" "
1	<b>MANAGER</b>	7	Administration Branch
1	SENIOR SECRETARY	4	" "
1	SECRETARY	3	" "
1	SUPERVISOR	6	Facilities & Property
1	PROPERTY & MAINTENANCE OFFICER	5	" "

1	SUPERVISOR	5	Information & Documentation
1	RECORDS MGMT - SNR RECORDS OFFICER	4	" "
1	RECORDS OFFICER	3	" "
1	LIBRARIAN	4	" "
1	TRANSPORT MANAGEMENT OFFICER	5	Transport Management
3	DRIVERS	2	" "
1	OFFICE SERVICES - OFFICER	4	Offices Services
5	ATTENDANTS/HANDYMAN	1	" "
1	MESSENGER/RIDER	2	" "
1	TELEPHONE OPERATOR/RECEPTIONIST	2	" "
1	STORES CLERK	2	" "
<b>22</b>	<b>Sub total</b>		
1	<b>DIRECTOR</b>	8	Finance & Accounts Branch
1	SENIOR PROCUREMENT OFFICER	6	Procurement
1	SNR. ACCOUNTANT	7	Management Accounts
1	FINANCIAL ACCOUNTS SUPERVISOR	6	Financial Accounts
1	A/C PAYABLE OFFICER	4	" "
1	A/C RECEIVABLE OFFICER	4	" "
1	ACCOUNTING CLERK	3	" "
1	PAYROLL OFFICER	4	" "
1	PAYROLL CLERK	3	" "
1	SUPERVISOR	6	Final Accounts & Reporting
1	FINAL ACCOUNTS OFFICER	4	" "
1	BANK RECON OFFICER	4	" "
1	COLLECTIONS OFFICER	4	" "
<b>13</b>	<b>Sub total</b>		
1	<b>SNR. DIRECTOR</b>	LEVEL 9	Forest Science & Technoogy Division
1	ADMIN SUPPORT OFFICER	4	" "
1	SNR RESEARCH OFFICER	7	Research
1	RESEARCH OFFICER	6	" "
1	CIVIL WORKS- ENGINEER	6	Civil Works
1	MANAGER	8	Forest Information Resource Management
2	SNR. SURVEYORS	6	" "
1	GIS/MAPPING OFFICERS	7	" "
2	FOREST TECHNICIAN BIO PHYSICAL INVENTORY	5	" "
1	SILVICULTURE MANAGER	8	Silviculture
1	SEED PROGRAMME COORDINATOR	5	" "
1	PLANNING & MONITORING MANAGER	7	Planning & Monitoring
<b>14</b>	<b>Sub total</b>		
1	<b>PRINCIPAL DIRECTOR</b>	LEVEL 9	Forest Operations
1	ADMIN SUPPORT OFFICER	4	" "
1	PRIVATE FORESTRY PROGRAMME COORDINATOR	6	" "
1	COORDINATOR	6	Nursery Operations
3	NURSERY OVERSEER	4	" "
4	FOREMAN	3	" "
2	DIRECTOR	8	Zonal Operations

2	ADMIN SUPPORT OFFICER	4	" "
1	RURAL SOCIOLOGIST	7	" "
2	ACCOUNTING TECHNICIAN	4	" "
2	ACCOUNTS CLERK 2	3	" "
2	ACCOUNTS CLERK 1	2	" "
2	ATTENDANT/HANDYMAN	1	" "
2	DRIVER	2	" "
4	FOREST MANAGER	7	Forest Region
4	SECRETARY	3	" "
4	ATTENDANT/HANDYMAN	1	" "
8	SECURITY OFFICER/WATCHMAN	1	" "
4	CLIENT SERVICES - FORESTER	6	" "
4	FOREST MANAGEMENT - FORESTER	6	" "
<b>54</b>	<b>Sub total</b>		
76	FOREST TECHNICIAN	5	Forestry Department
<b>76</b>	<b>Sub total</b>		
<b>239</b>	<b>Total for Year 1 (2008/2009)</b>		

**FORESTRY DEPARTMENT  
PROPOSED STAFF FOR YEAR 2 (2009/2010)**

<b>NO.</b>	<b>TITLE OF POST</b>	<b>LEVEL</b>	<b>Organizational Unit &amp; Location</b>
1	ADMIN SUPPORT OFFICER	4	Forestry Department
1	CHIEF INTERNAL AUDITOR	8	" "
1	SYSTEM/ NETWORK ADMINISTRATOR	5	Information & Communication Technology
1	PROGRAMMER/DATABASE ADMINSTRATOR	5	" "
1	ADMIN SUPPORT OFFICER	4	Forest Science & Technology
1	CORPORATE PLANNING ANALYST	6	Strategic/ Corporate Planning
1	PROJECTS OFFICER	6	" "
1	PR & COMMUNICATIONS OFFICER	5	PR & Corporate Communication
1	MARKETING SUPERVISOR	6	" "
1	MARKETING OFFICER	5	" "
1	FORESTER	6	Forestry Department
1	ORGANIZATIONAL DEV - SNR. HR OFFICER	7	HRM&D
1	SNR. SECURITY OFFICER	4	Corporate Services
2	SECURITY OFFICERS/WATCHMEN	2	" "
1	INVENTORY OFFICER	3	" "
1	ADMIN SUPPORT OFFICER	4	" "
1	PROJECT ACCOUNTANT	6	Finance& AccountsF
1	ACCOUNTING TECHNICIAN	4	" "
1	RESEARCH OFFICER	6	Forest Science & Technology
2	GIS/MAPPING OFFICERS	7	" "
1	FOREST BIOLOGIST	6	" "
1	FOREST ECOLOGIST	6	" "
1	FOREST PLANNER	6	" "

2	FORESTER (technical audit)	6	" "
1	RURAL SOCIOLOGIST	7	Forest Science & Technology
7	FOREST RANGERS	4	" "
<b>35</b>	<b>Total for Year 2 (2009/2010)</b>		
<b>274</b>	<b>GRAND TOTAL</b>		

#### 4.11.4 Employment Status

The move to an executive agency will have several implications for the employment status of staff. Whereas the vast majority of the current staff of the Forestry Department are employed through the Offices of the Services Commissions (OSC) as civil servants and assigned to the Department, with the move to executive agency status, staff will be employed directly by the new agency as “public officers”. At the time of establishment of the new Agency, existing staff will be invited to apply for positions there. Staff will also have the option to request redeployment within the public service through the OSC.

Staff joining the new agency will be employed directly by the agency and be governed by the terms of their employment contract and the agency’s human resource management policies and procedures. However, while staff will no longer be guided by the Staff Orders for routine human resource management matters, they may have the right of appeal to the Public Service Commission on specific matters, such as in cases of dismissal.

#### 4.11.5 Compensation and Benefits

Positions will no longer fall within the Government of Jamaica establishment and salary scales. Post classification and compensation levels will be proposed by the CEO then approved by the Cabinet Office and the Ministry of Finance and the Public Service. The proposal and approval usually take into account the compensation levels in the private and public sectors, as well as the organisation’s ability to pay. Salary scales will, however, require the approval of the Ministry of Finance and the Public Service.

As “public officers”, staff of the Executive Agency will typically not be eligible for many of the benefits currently afforded to civil servants, including motor vehicle and other miscellaneous loans. Also, vacation leave and other leave benefits will be determined by the agency’s own leave policy or specific provisions documented in the individual’s employment contract.

New employees of the agency will not be eligible for participation in the Government of Jamaica’s pension scheme. Typically, in other organisations that have been turned into executive agencies, former employees have been given the option of remaining in the government pension plan, or converting to the executive agency scheme, with years of service being transferred as at the date of employment in the new agency.

Executive Agency staff may also opt to seek representation through the Jamaica Civil Service Association (JCSA).

#### **4.11.6 Staff Selection Process**

The arrangements for selecting staff for the Forestry Department will need to be discussed further with the Ministry of Agriculture and the Offices of the Services Commissions.

All selection decisions should:

- be fair and transparent
- be sufficiently rigorous to allow identification and appointment of suitably qualified personnel
- facilitate smooth transition and avoid disruption to services

#### **4.11.7 Staff Training and Development**

The transition to executive agency status will require an orientation programme. It will be relevant to those who are already public servants, either as members of the Forestry Department or recruits from positions elsewhere in the Government of Jamaica, as well as to new employees joining the agency from the private sector or elsewhere.

The programme would take account of the performance-based objectives on which the agency is founded, other aspects of quality assurance and the principles documented in the Citizens' Charter. In addition, as legislative and other process changes take place in operational areas, existing staff will receive regular update training to ensure that they are completely current with the policies and procedures. The training programme must include periodic provision for technical training.

With a major training and development programme in place the facilitation of training for both financial and other staff during the transition year and subsequently will occur. Financial staff will need continued professional development as well as specific training in the selected accounting package. Other staff will require training in basic accounting concepts, so that they can understand the information being provided by the accounting package, and further development in budgeting, planning, project management, etc.

It is essential that training, specifically in financial matters, be practical, performance orientated and not just theoretical in nature. The training will be delivered at the point of need when lessons learnt can be reinforced by practical action.

### **4.12 Financial Strategy**

#### **4.12.1 Introduction**

As a government entity, the Forestry Department's current financial arrangements include the following. Changes, however, will be made to them with the implementation of strategic key elements to strengthen the financial capacity and capabilities of the new agency [see 4.12.2]:

- An annual budget round that involves the Forestry Department bidding for government funds for the next financial year in order to meet its planned expenditure commitments. Its commitments are detailed to objective, sub-objective and item level. Staff costs are based on centrally approved pay scales and established numbers are set and agreed by the Ministry of Finance and the Public Service.
- Budgets are approved by Parliament.



- Monies are released during the year by the Ministry of Finance and the Public Service. The totals released will cover staff costs but may not cover other budgeted expenditure depending on any central spending restrictions that the Ministry of Finance and the Public Service may be operating.
- The budget treats all expenditure as current year cash irrespective of the category of expenditure.
- The Forestry Department raises vouchers for expenditure and payments, and records these against its vote.
- There is flexibility to vire funds from one object to another.
- All expenditure and payments are from the Consolidated Fund.
- The Forestry Department does not cost its activities or outputs. It operates a cash based accounting system that does not charge revenues and matching expenditures at the same time and there is no asset accounting. Assets and their depreciation and their cost of capital are not recorded against the activities and outputs. The Forestry Department does not pay rent for its government owned buildings.
- Capital expenditure, when available, is accounted for through the Ministry of Agriculture.
- The aims of the Forestry Department as an agency are to improve service delivery and value for money. To achieve these aims, an accruals accounting system will need to be implemented, and work on the cost of service and the value and cost of assets undertaken.

#### **4.12.2 Overall key elements in the Forestry Department's financial strategy will be:**

##### **4.12.2.1 Sound financial projections and income generating activities through the forest recreation activities and geographical information and biophysical services**

The financial projections associated with this modernisation strategy are set out in the Medium Term Financing Plan (MTFP), which forms Annex B to the Modernisation Plan. The preparation of the MTFP has highlighted a number of strategic or policy points that have a bearing on the feasibility of the modernisation strategy. They are noted as follows:

- **Core funding Requirement:** It is assumed that the operations of the Forestry Department at the current level will form the baseline, and for the three-year time horizon of the MTFP, adjustments will be made to the Agency's budget as a result of full employment of required staff over the first two years with eighty-seven percent staffing being proposed in the first year and thirteen percent in the second year; the purchase of required equipment and the necessary goods and services to enable the agency to achieve its new mandate.
- **Revenue Generation:** The projections suggest that by Year 3, the Forestry Department would have consolidated the following new revenue streams and therefore be able to give a more aggressive growth projection of revenues from these same revenue streams :-

1. Realisation of recreational activities e.g. Gourie Forest reserve in Manchester
2. Geographic Information System (GIS) & Biophysical Services provision to clients.

Income, which is assumed to grow at 10% per annum, will be retained by the Department to supplement the operational funding and contribute to its modernisation and future development costs. Due to the nature of the forestry services however it is not envisioned that the Forestry Department will be a primary revenue generator and as such it will still represent a charge on the budget of the GoJ.

On being granted executive agency status in April 2008, the Forestry Department will be classified by default as a Model B Executive Agency under the FIEA. Revenue projections suggest that by the start of Year 2, the Forestry Department will be a full-fledged executive agency. As mentioned previously however its status as an Executive Agency is not expected to change from that of a Model B (as per the FIEA).

- Staff Emoluments: The other fundamental assumption that has been made is that the Forestry Department's pay scales will be brought in line with the approach that has been applied in other Executive Agencies. This means that an initial adjustment will be made to bring basic pay closer to market rates, and that a performance-related pay (PRP) scheme will be implemented that is linked to the attainment of the agreed performance targets.

#### 4.12.2.2

Capacity to manage delegation with cost effective and appropriate use of capital and recurrent cost resources, assisted by the use of accruals accounting and activity based resource management

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- Financial Objectives: The financial objectives set for the Forestry Department are that it meets the net funding requirement as set out in the Framework Document. This will include accounting fully and properly for depreciation of assets and a return on capital employed at the rate agreed with the Ministry of Finance and the Public Service.
- Fees and Charges: The Forestry Department earns modest income from licences and the sale of timber. In future, income may also be generated through such activities as the provision of geo-mapping services and franchising leisure activities. In order to establish the appropriate fees to charge and so to ensure value for money, the Agency will need to identify the input costs of each service including the cost of capital.
- Recurrent Costs: The recurrent costs for the new agency will cover:
  - Staff compensation
  - Travel and subsistence
  - Rental costs
  - Public utilities
  - Other goods and services
  - Minor capital items

The major item of expenditure is staff compensation. This is financed on a gross basis with staff numbers and grades agreed with the Ministry of Finance and the Public Service. The numbers and grades are historic and will need to be revised to reflect the agreed work programme. For the future, the CEO needs flexibility, in the form of delegated authority for grading and compensation of employees, to ensure that agreed outputs can be delivered.

- Funding Regime: The Forestry Department will be classified as a “Model B” agency with Recurrent and Capital B budget heads during its transition year. As such, the Financial Administration and Audit (FAA) Act and the Financial Instructions to Executive Agencies (FIEA) will apply. The Department will be funded through the Consolidated Fund and retain income. Income, however, is unlikely to reach a significant level in the medium term.
- Planning and Budgeting: Planning and budgeting systems will be reviewed and further developed to ensure a customer focused and strategic approach is taken to managing the agency and the resources that it requires to deliver its objectives. Over the medium term the agency should move towards an output based approach to budgeting and accounting. This will allow the true costs of outputs to be assessed so that effective charging for services, where appropriate, can be made and resource allocation can be more effective by focusing decisions on results and outputs.

Line managers will take a more active role in resource management and improving performance. They will be responsible for contributing to the development of plans and budgets and be able to justify their resource requirements. This will be a significant development for many managers, but it will help to ensure that scarce resources are spent in a manner that delivers better value for money while delivering the performance targets and improved customer services.

- Delegated Authorities: The Minister of Finance and the Public Service will appoint the CEO as Accounting Officer for the Agency. As an Accounting Officer, the CEO will have the authority to commit and certify expenditure, to authorise payments, and to accept receipts in respect of the Agency as set out in the annual business plan and budget. The CEO will also have the power to authorise payments and to procure goods and services (through an in-house procurement committee) up to a value to be agreed with the Contractor General.

The powers delegated to the CEO will not confer any authority to incur contingent liabilities. The CEO will consult the Minister and the Ministry of Finance and the Public Service on any proposal to issue a guarantee or indemnity, or on anything else which may put Government funds at risk and thus involve a contingent liability.

The CEO must consult the Minister and the Ministry of Finance and the Public Service before authorising any expenditure or payment, or accepting any receipt which may raise issues of propriety, regularity or prudent and economical administration, or which is novel or contentious. The CEO will similarly consult about changes to the level of delegation.

The CEO may delegate the day-to-day administration of his or her Accounting Officer responsibilities to other employees of the Agency as may be considered necessary for efficient management. S/he shall not, however, assign absolutely to any other person any of the responsibilities set out in this document.

#### 4.12.2.3 Improved Financial and Management Information Systems

The Agency will introduce a computerised financial and management information system to provide the accounting transaction information and the performance management information. This system will replace the current systems and procedures and link to other computerised financial (e.g. payroll) and operational systems as appropriate. This will enable the Agency to produce accurate, timely and cost effective financial and management information.

The new accounting system is expected to be implemented during the transition year, ready for live operation from the start of the 2009/2010 financial year. The system will, from April 2009, hold all the opening balances approved by the Auditor General.

Procedure manuals for the operation of the system (and any associated manual procedures) will be produced during the transition year and staff will be trained to operate the system.

The finance team will be responsible for both financial and management information reporting. This will require a change of emphasis of the work of the team with more emphasis on analysing, interpreting, advising on, and challenging the performance of the Agency.

The finance team will provide the CEO and the senior managers with monthly reports so that they can monitor progress against the budget and plan and take any necessary corrective action. The reports are likely to include: progress on performance indicators and targets, budgeted cost and actual spend, forecast of out-turn, cash requirements and key information about operational activities, workloads and staffing levels.

#### 4.12.2.4 Control Systems

The following control mechanisms will be in place to ensure accountability and accurate recording and reporting capabilities:

- Reporting Arrangements: The CEO as Accounting Officer will produce an annual report and audited accounts each year, which will be laid before Parliament by the Auditor General. The report will be published by the end of July each year.

In-year the CEO will report progress on budget and outputs to the Minister of Agriculture. Separate reports will be made to the Ministry of Finance and the Public Service.

- Accounting Arrangements: The Agency will adopt accruals based accounting as defined and guided by the Ministry of Finance and the Public Service. This

will enable the Agency to produce full cost accounts and to identify accruals, prepayments, return on capital and depreciation.

On becoming an Agency on 1<sup>st</sup> April 2008, the assets assigned to the Forestry Department will be transferred to its accounts at values to be determined by its parent Ministry. A valuation process will need to be agreed with the Ministry of Finance and the Public Service and a decision taken on the treatment of Forest Estates and the value of the forest inventory.

- Auditing Arrangements: The annual accounts are subject to audit by the Auditor General who is required to give an audit opinion on the agency as part of the certificate and report s/he makes to Parliament.

The CEO will be responsible for ensuring that appropriate internal audit provision is made so that s/he can be assured of the proper conduct of the Agency's affairs and to meet his or her Accounting Officer responsibilities. Internal audit will be carried out in accordance with the standards laid down in the Finance Administration and Audit Act and the Executive Agency Financial Operations Manual.

The Senior Management Committee will appoint an Audit Sub-Committee chaired by a non-employee of the Agency to assist and advise the CEO on internal and external audit matters. Its functions will be to:

- Review the nature and scope of external audit, consider external audit reports and management letters and ensure that the external auditor has the fullest co-operation of staff.
- Consider and advise the CEO on the annual and longer term internal audit programme and consider audit reports reviewing the effectiveness of the Agency's internal control systems.
- Recommend the appointment, fees and termination of the service where the internal audit function is outsourced.
- Review and approve the Agency's accounting policies and practices.
- Give the managers of the internal and external auditors right of access to the Chair at all times.
- Assess from time to time its own effectiveness and report its findings to the CEO.

#### 4.12.12 **Conclusion on Financial Strategy**

The CEO has two main requirements to satisfy through a new financial strategy. S/he must satisfy the Ministry of Finance and the Public Service that there are robust financial systems in place so that it can approve the Agency and give it the full range of delegations. S/he must also be satisfied that the systems will provide the necessary data to manage the Agency effectively and deliver value for money.

#### 4.13 Application of Information and Communication Technology

An initial review of the Forestry Department's Information and Communication Technology (ICT) requirements for the whole organisation has been undertaken jointly with the Cabinet Office's Public Sector Reform Unit (PSRU) and the Forestry Department's information technology personnel. The systems requirements have been outlined and further work will be undertaken by the PSRU to specify more detailed requirements, costs and the implementation strategy.

Below are the Information and Communication Technology requirements, with costs, for the Forestry Department's transition into an Executive Agency. These costs are already reflected in the MTFP:

##### FD Information Technology and Communication Unit 2008 - 2009

	Yr 1 ( 2008 - 2009 )	Yr 2(2009-10)	Yr 3 (2010-11)
	US\$		
<b>Hardware</b>			
Servers	35,000.00		
OSI Layer 1 Devices (Cabling, Switches, etc)	5,000.00		
OSI Layer 3 Devices (Routers)	6,000.00		
Laptops	6,000.00		
Workstations	20,000.00	12,500.00	
<b>subtotal</b>	<b>72,000.00</b>	<b>12,500.00</b>	<b>-</b>
<b>Software</b>			
Geographical Information System incl. Volume Licensing			
ArcGIS Server incl. Internet Mapping Service	16,000.00		
ArcGIS Desktop	17,500.00		
ERDAS GeoMatics Suite	12,500.00		
<b>subtotal</b>	<b>46,000.00</b>	<b>-</b>	<b>-</b>
Financial Management Information System			
Enterprise Financial Management		20,000.00	
<b>subtotal</b>	<b>-</b>	<b>20,000.00</b>	<b>-</b>
Human Resources Management Information System		17,500.00	
<b>subtotal</b>	<b>-</b>	<b>17,500.00</b>	<b>-</b>
Registry and Library			
Microsoft SharePoint Server (20 CALs)		35,000.00	
<b>subtotal</b>	<b>-</b>	<b>35,000.00</b>	<b>-</b>
SQL Server	20,000.00		
Windows XP/Vista Volume Licensing	5,000.00		
Exchange Server Volume Licensing	5,000.00		
ISA Server Volume Licensing	5,000.00		
Windows 2003 Server Volume Licensing	10,000.00		
Visual Studio incl Licensing		1,600.00	
Office Professional Suite incl. Licensing	20,000.00		
Adobe Suite incl. Licensing		11,500.00	
Corel Draw incl. Licensing		2,000.00	

Acrobat Professional Suite incl. Licensing		10,000.00		
<b>subtotal</b>	65,000.00	25,100.00	-	
<b>Total</b>	<b>183,000.00</b>	<b>110,100.00</b>	-	<b>293,100.00</b>
	13,084,500.00	7,872,150.00	-	71.5

\*\*\*\*Costing excludes ICT Staff

20,956,650

A critical action is the system review and scoping for the executive agency's financial management information system and related operational framework. The agency is also to give consideration to the use of Free and Open Source Software in the medium term as a cost-saver.

#### **4.14 Recommendations for Physical Facilities and Motor Vehicle Fleet**

The Forestry Department's training facility at their Head Office was destroyed in a fire some time ago. It needs to be replaced as a matter of urgency. In addition, the nursery facilities at the Regional Offices need to be modernised, office facilities to be expanded to house additional staff and roads upgraded.

The CEO will also need to consider the adequacy of the agency's motor vehicle fleet and its communication facilities. Currently there is a provision in the MTFP to increase significantly the motor bike complement so as to strengthen field operations programmes. The estimation is that each of 4 sub-zones will need 7 motorcycles, totalling 28 motorcycles. These motorcycles will be introduced on a phased basis starting with 14 motorcycles in the first year, 8 motorcycles in the second year and the final 6 motorcycles in the third year.

The Forestry Department currently operates under three regions. These regions will be replaced in the new Forestry Department with 2 zones; each zone having 2 sub-zones. The strategy is that the Eastern and Western regions will be strengthened into zones and the Central Region absorbed into the operations of the Headquarter.

The inventory lists below provide detailed status on the present conditions of the physical facilities located within the Central, Eastern and Western Regions:

## 4.14.1

**CENTRAL REGION**  
**INVENTORY STATUS REPORT**

<b>Name of Building</b>	<b>Location</b>	<b>Comment</b>	<b>Repair / Condition</b>	<b>Remark</b>	<b>Occupied</b>
Portland Cottage House	Clarendon	This is a concrete building. The entire house needs to be refurbished.	House in disrepair. Windows, doors, roof and ceiling needs to be replaced. Walls need minor repair	Premises need bushing. A water tank at the rear at the building needs to be examined by the health officials to determine its usefulness.	Ms. Vinora Wallace who claims she brought the house from the Commissioner of Lands in 2001. However there were no supporting documents.
Forester's House	Moneague, St. Ann	This is a concrete Building. It appears to be in reasonable condition.	Roof leaks in the conference room	Needs minor repairs to roof, ceiling and doors.	Central Region Office
Forester's House	Moneague, St. Ann	House partially refurbished by occupant 2000	Floor needs replacing, roof leaks	The rear of the premises needs cleaning	Forester, Mr. M. Thomas
Forester's House	Kellits, Clarendon	This is a wooden house. It needs to be refurbished. There is evidence of termites in the external panels of the building.	Roof, ceiling, doors and windows are in very poor condition. Huge cracks are in the verandah floor. The house needs painting.	Premises needs cutting	A caretaker, Mr. Rohan Johnson
Forester's House	Alexandria, St. Ann	House in total disrepair. Walls falling apart and roof leaking.	House was recently painted.	Building was made from wood, stone and mud. Mud dried out, stone falling and wood rotting.	Ms. Vilma Pennant
Forester's House	Alderton, St. Ann	Total disrepair	No roof, windows, doors are fixtures. However walls remain standing.	Building vandalized	Uninhabitable
Central Region	Moneague, St. Ann	House needs urgent repairs	Roof leaks, walls need painting, windows and doors need to be replaced.		Forester, Ms. A. Bromfeild
Forester's House	Woodhall, Clarendon	House in very poor condition	This is a rotting wooden house. Termites have done	Yard is heavily bushed	Caretaker, Ms. Hermine Shakespeare



<b>Name of Building</b>	<b>Location</b>	<b>Comment</b>	<b>Repair / Condition</b>	<b>Remark</b>	<b>Occupied</b>
			extensive damage to this facility		
Great House	Bogue, St. Ann	House in total disrepair.	Sections of this house has collapsed	Yard is heavily bushed	Caretaker, Mr. Audley Sewell former forest warden
Interpretation Center	Moneague, St. Ann	Building in good condition	Needs painting		

## 4.14.2

**EASTERN REGION**  
**INVENTORY STATUS REPORT**

<b>Name of Building</b>	<b>Location</b>	<b>Condition</b>	<b>Repair</b>	<b>Remark</b>	<b>Occupied</b>
Forester's House	Twickenham Park	House in a poor state	Major repairs	Ceiling, floor, roof, sideboards and all kitchen and bathroom fixtures are in a state of disrepair.	Althea Taylor
Forester's House	Mt. Prospect, St. Andrew	House appears in good condition.	Minor repairs	There are sections of the ceiling that needs replacement. Also openings are appearing between the boards and the skirting is rotting.	Forester Mr. L. Fearon
Forester's House	Mt. Prospect, St. Andrew	House in a poor state.	Major repairs	This house is in a very poor state. The staircase to the main entrance of the house is almost non-existent. The boards at side of house are bulging and rotting. Ceiling as seen from outside is missing.	Research Officer  Mr. L. Nelson
Nursery House	Mt. Airy, St. Andrew	House appears in good condition.	Minor repairs	A number of the zincs need replacement. Also, plumbing, electrical and carpentry works are urgently needed.	Forestry Department
Chesterfield House	St. Andrew	No house exists at this site.	-	A visit to the site revealed a school. Mr. Dalling informed me that his wife Mrs. Dalling got permission from the commissioner of Lands to erect the school on the site however no proof was provided.	Mr. & Mrs. Dalling

<b>Name of Building</b>	<b>Location</b>	<b>Condition</b>	<b>Repair</b>	<b>Remark</b>	<b>Occupied</b>
Forester's House, Guava Ridge	St. Andrew	House appears in good condition	Minor repairs	Roof needs minor repairs and tank needs cleaning.	Mrs. Stewart
Folly Forestry House	Portland	Building in good condition	Minor repairs	House was extended and refurbished in 1998 /9. Cracks appear in ceiling where the building is extended.	R.A.D.A.
Folly Forestry Office	Portland	Office – In use by F.D.	Minor repairs	Building was recently renovated. However, all bathroom fixtures need replacement.	Forestry Department
House / Office	Mt. Cressy, St. Andrew	House appears in good condition. No access was gained to house.	Minor repairs	A few windowpanes are missing and staircase the residence needs reinforcing.	Caretaker
Cinchona Forest House	St. Andrew	Administered by Public Gardens	-	No visit due to road blockage	✓
Chepstowe House	Portland	No house at this site but a school was erected. Time of construction to be determined	-	A caretaker at the property said land was donated.	Infant school
Forest House	Commodore, Portland	House in poor condition	Major repairs	All sections of this house needs major repairs	Mr. Carlton Duckett
Grange Hill House	Portland	Mr. Roy Bennett allegedly bought this property in 1992 and he erected his house on the property. No proof was provided.	-	-	Miss. Bennett
Golden Valley/ Sunning Hill Building	St. Thomas	Golden Valley house is poor condition Sunning Hill Building non-existent	Major repairs	All sections of this house needs major repairs	Ms. Hyacinth McFlarene
Coley Office	St. Thomas	In use, needs water/light (reconnection)	Minor repairs		

<b>Name of Building</b>	<b>Location</b>	<b>Condition</b>	<b>Repair</b>	<b>Remark</b>	<b>Occupied</b>
Coley Residence	St. Thomas	House damaged in Hurricane Dean	Major repairs	Needs roof, verandah, front door, interior fixtures to be replaced house to be painted	Unoccupied
Forestry House	Millbank, Portland	House appears in good condition		No access was gained to this house	J.C.D.T. Port Ranger occupy
Landcaster House	Portland	No house exists at this site.	-	Land heavily bushed	Unoccupied
Windsor Forestry House	Portland	Poor condition		The property is heavily bushed and sections of house have collapsed.	Ms. Annette Salmon
Forester's House	Cape Clear St. Mary	Poor condition		Land sold	Ms. Renee Williams
Forester's House	Grays Inn St. Mary	House destroyed in Hurricane Gilbert	-	-Land was sold	-Samuel Bennett
Forester's House	Joppa	No house exists at this site.	-	-	-
Forest Sub-office	Starapple Tree Mt. Airy	This house is in total disrepair.	-	Leased with Coffee Lands	-
Office, 3 cabins, and gazebos	Hollywell, St. Andrew			Leased to JCDT	
Great House, Cabin, campers dormitory	Clydesdale, St. Andrew	Cabin appears in good condition, great house and dormitory in poor condition.	Cabin – minor repairs; Great house – major repairs. Dormitory – major repairs.	Great house roof is destroyed, campers dormitory in poor condition. Cabin has a few panes of glass missing from windows and a section of the ceiling to the side of building damaged.	Unoccupied
Forester House	Commodore, Black Rock Dist. Priestman River, Portland	Good condition		Needs a paint job, minor ceiling and roof repairs	Forester Mr. S. Bailey

## 4.14.3

**WESTERN REGION**  
**INVENTORY STATUS REPORT**

<b>Name of Building</b>	<b>Location</b>	<b>Condition</b>	<b>Repair</b>	<b>Remark</b>	<b>Occupied by</b>
Dormitory Complex	Smithfield, Hanover	3 Buildings and 1 Garage	Minor	Buildings needs minor repairs to flooring and guard rails for verandah. Garage in a very poor state.	Squatters
Nursery Buildings	Williamsfield, Manchester	Building in fairly good condition	Minor	Minor leaking in Nursery Office. Also minor repairs to Nursery bathroom and kitchen facility	Nursery
Forester's House	Williamsfield, Manchester	House in good condition	No repair	House needs new paint job	Nursery foreman Robinson McCalla
Forester's House, Cooks Bottom	Eletershie St. Elizabeth	Existing building need to be demolished	Major	This wooden house is heavily infested with termites.	Unoccupied
Forester's House	St. James P.O. Montego Bay	This building is now owned by C.A.N.C.A.R.A. Development Limited	-	-	Squatters
Forester's House	Troy Trelawny	The roof leaks and the walls are falling apart. The ceiling, windows and doors are in a poor state. Urgent termite treatment is needed.	Major	Perimeter fence needs repairing and building needs a new paint job.	Forest Warden Devon Farquharson
Forestry House	Wait-A-Bit Trelawny	Roof blown off during Hurricane Ivan	Major	All sections of this house needs major works	Squatters
Forestry House/Office	Irwin Montego Bay	This building is now owned by C.A.N.C.A.R.A. Development Limited	-	-	-

<b>Name of Building</b>	<b>Location</b>	<b>Condition</b>	<b>Repair</b>	<b>Remark</b>	<b>Occupied by</b>
Forest House	Quick-Step Trelawny	Need new roof, ceiling, flooring, toilet bowl, tank and basin. Electrical upgrading urgently needed along with termite treatment. Partitions need replacing.	Minor	House needs a new paint job and yard properly bushed.	Forester Donald Watson
Forest Residence	Irwin Montego Bay	This building is now owned by C.A.N.C.A.R.A. Development Limited	-	-	Forester Edward Richards
Dias-Forest House	Hanover	House in habitable condition	Major	Ceiling of house overrun with wasp. Roof, ceiling and guttering needs urgent repairs. Tank needs cleaning and covering.	Forester Glen Ivey
Forestry Office	Wait-A-Bit Trelawny	Office in fair condition.	Minor	Building needs a new paint job. The roof, windows & doors need urgent replacement. The floor needs rehabilitation works also. Some plumbing works needed also.	Foresters Office

## 4.15 Key Stakeholder Groups

The key stakeholder groups, on which the Forestry Department should focus, either as customers, clients or delivery partners, are listed in the following table.

### *Key stakeholder groups*

<b>Function</b>	<b>Key groups</b>
<b><i>Forest Operations</i></b>	<ul style="list-style-type: none"> <li>- Government of Jamaica</li> <li>- Private owners of forest lands</li> <li>- Saw mill operators, logging contractors, and others applying for licences</li> <li>- Enforcement authorities</li> </ul>
<b><i>Research and Development</i></b>	<ul style="list-style-type: none"> <li>- Government of Jamaica</li> <li>- Local universities</li> <li>- International and national agencies</li> <li>- Inter-agency services</li> </ul>
<b><i>Public Awareness</i></b>	<ul style="list-style-type: none"> <li>- Government of Jamaica</li> <li>- Private land owners</li> <li>- Tourism sector</li> <li>- Schools and educational institutions</li> <li>- Media</li> </ul>
<b><i>Community Forestry</i></b>	<ul style="list-style-type: none"> <li>- Government of Jamaica</li> <li>- Private landowners</li> <li>- Farmers</li> <li>- Environmental Non-Government Organisations</li> <li>- Tree Growers' Associations</li> </ul>
<b><i>Recreation</i></b>	<ul style="list-style-type: none"> <li>- Government of Jamaica</li> <li>- Tourism and entertainment agencies</li> <li>- Property developers</li> </ul>
<b><i>Legal</i></b>	<ul style="list-style-type: none"> <li>- Government of Jamaica</li> <li>- Public and private corporations</li> <li>- Applicants for licences and permits</li> </ul>
<b><i>Financing/Funding</i></b>	<ul style="list-style-type: none"> <li>- GOJ</li> <li>- Multilateral &amp; bi-lateral donor agencies</li> <li>- Local and international conservation funds</li> <li>- International agencies</li> <li>- Carbon Sink Trading Agencies</li> <li>- Mining Corporations</li> </ul>
<b><i>Training and Professional Development</i></b>	<ul style="list-style-type: none"> <li>- Educational sector</li> <li>- MIND</li> </ul>

## **4.16 Communications Strategy**

Ideally, the Minister of Agriculture should make a formal statement to announce the initiation of the modernisation process. On completion of the Modernisation Plan, the Minister should formally endorse the document, and, in so doing, announce the commencement of the implementation process.

In addition to putting in place effective communication arrangements with key external stakeholders, the CEO will need to ensure effective communication within the organisation throughout the modernisation process.

## **4.17 Recommended Implementation Strategy**

The chart shown at the end of this section represents a high level work plan for the conduct of the modernisation process. It will be noted that targeted timings are placed on the implementation of the organisational arrangements over the first two years.

- **Year 1**, the transition year, where the focus will be on the implementation of the institutional arrangements prescribed by the Executive Agencies Act and Financial Instructions to Executive Agencies for transition agencies. The intention is that the Forestry Department will be given full agency status on 1<sup>st</sup> April 2008 on approval of the Scheme of Management.
- **Year 2**, where the emphasis will be placed on capacity building in service delivery areas. It is anticipated that this will bring about the introduction of new or improved regulatory services, and the introduction of value-added services.

## **4.18 Transition Process Management**

The transition process will be complex and require a significant amount of time and attention from senior managers in the Ministry of Agriculture and the Forestry Department. The Ministry is planning to set up modernisation teams for Finance, Human Resource Management, and Information and Communications Technology with responsibility for the management of the transition process in these three areas. The teams might also include external experts from the Cabinet Office's Public Sector Reform Unit, other parts of government, and, if funding is available, experts recruited on contract from outside government. It will be important to ensure that members of the management teams are relieved from a substantial portion of their existing duties so that they can devote the required amount of time to the transition process.

The CEO has also commenced establishing a number of Working Groups within the Forestry Department to provide an input to the work of the Modernisation Teams. Separate Working Groups might also be established to review areas, such as physical resources and customer service.



## **APPENDIX 1**

### **Development and Formulation of New Performance-Based Forestry Institution Strategy According to Consensus Obtained**

**Development and Formulation of New Performance-Based Forestry Institution  
Strategy According to Previous Consensus Obtained**

**Appendix 1**

Thematic	Agreed Strategic objective (SWOT) and corresponding output	How FD/ future Agency can meet such strategic objectives according to Consultant	Does the proposed way the future Performance-Based institution reaches strategic objective is in conformity to FD's suitable core business ?		
			Stakeholders standpoint	FD staff standpoint	Consultant standpoint
Staff Management	Develop and implement output – based management system	By implementing Performance Based Institution and gradually implementing internal process driven management systems meeting performance/quality indicators.	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all but Consultant's recommended FD role in agro forestry being limited to research and community strengthening
	Develop and implement training program for staff	By implementing and maintaining structured continuous development programmes.	Meets all corresponding FD core business	Meets all corresponding FD core business	Idem
	Establish priority watershed	By maintaining and developing its technical and operational capabilities in watershed management (e.g.: forest hydrology biophysical/forest survey, GIS capabilities, research & development on watershed...etc). In addition by explicitly include its role of prime watershed manager within its Agency Statutes (functions).	Meets all corresponding FD core business but watershed management was not addressed as a function in core/non core consultation.	Meets all corresponding FD core business but watershed management was not addressed as a function in core/non core consultation.	Meets all corresponding FD core business but watershed should be addressed

**Development and Formulation of New Performance-Based Forestry Institution  
Strategy According to Previous Consensus Obtained**

**Appendix 1**

Thematic	Agreed Strategic objective (SWOT) and corresponding output	How FD/ future Agency can meet such strategic objectives according to Consultant	Does the proposed way the future Performance-Based institution reaches strategic objective is in conformity to FD's suitable core business ?		
			Stakeholders standpoint	FD staff standpoint	Consultant standpoint
	Establish LFMC within priority watershed	By having a decentralized structure and maintaining /developing FD capacities in social/community forestry in designated watershed	Meets all corresponding FD core business except agro forestry. Watershed management was not addressed as a function in core/non core consultation	Meets all corresponding FD core business except agro forestry. Watershed management was not addressed as a function in core/non core consultation	Meets all corresponding FD core business but watershed should be addressed and agro forestry also addressed but limited to research activities.
Technology	Develop a cadre of GIS service professionals with technical skills to provide GIS related technical services	By maintaining the actual GIS capability at the FD (equipment, hardware, software personnel training, software)	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business
	Establish and maintain forestry research programmes to enhance forest management output and create forest resource data bank	By maintaining / reinforcing and managing a forest research section on a performance basis.	Meets all corresponding FD core business except agro forestry	Meets all corresponding FD core business except agro forestry	Meets all corresponding FD core business. Agro forestry recommended by the Consultant to stay a core research activity at the FD

**Development and Formulation of New Performance-Based Forestry Institution  
Strategy According to Previous Consensus Obtained**

**Appendix 1**

Thematic	Agreed Strategic objective (SWOT) and corresponding output	How FD/ future Agency can meet such strategic objectives according to Consultant	Does the proposed way the future Performance-Based institution reaches strategic objective is in conformity to FD's suitable core business ?		
			Stakeholders standpoint	FD staff standpoint	Consultant standpoint
	Identify and map resources in priority watershed	Same as above (e.g.: GIS capabilities)	Meets all but watershed management not being addressed in core/non core consultation	Meets all but watershed management not being addressed in core/non core consultation	Meets all corresponding FD core business but watershed should be addressed
Governance	Develop harmonized policies	By maintaining the participatory approach of the FD by also developing a more result responsive FD in better leadership position.	Meets all corresponding FD core business except agro forestry	Meets all corresponding FD core business except agro forestry	Meets all corresponding FD core business but Consultant believes the FD should be active in integrating agro forestry within harmonized policy.
	Training Programme developed and implemented	By implementing and maintaining a structured and continuous development program.	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business.
	Develop a Forest Management System	By maintaining and improving current forest management capabilities at the FD which integrates several others technical services.	Meets all corresponding FD core business except agro forestry if considered as a part of a forest management system activity (Crown land)	Meets all corresponding FD core business except agro forestry if considered as a part of a forest management system activity (Crown land)	Meets all corresponding FD core business. FD's role in promotion of agro forestry shall be maintained as part of a forest management system activity (crown land).
	Public awareness and education	By maintaining and improving current capabilities in public awareness at the FD	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business

**Development and Formulation of New Performance-Based Forestry Institution  
Strategy According to Previous Consensus Obtained**

**Appendix 1**

Thematic	Agreed Strategic objective (SWOT) and corresponding output	How FD/ future Agency can meet such strategic objectives according to Consultant	Does the proposed way the future Performance-Based institution reaches strategic objective is in conformity to FD's suitable core business ?		
			Stakeholders standpoint	FD staff standpoint	Consultant standpoint
Resource Management	Establish framework for collaboration and partnership to achieve sustainable forest management	By maintaining current community/social forestry capabilities at the FD which integrate decentralization management.	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business
Customer Service	Public Awareness Programmes that reach 50% of the public system	Same as above (public awareness and education) but also integrating performance and measurable quality indicators showing if the objectives are reached or not.	Meets all corresponding FD core business except eco tourism	Meets all corresponding FD core business except eco tourism	Meets all corresponding FD core business except eco tourism but FD shall promote it within its core function.
	Develop User Friendly Customer Service Programme	By being in control of its process (simplification) and adopting a customer responsive approach (Ref: ISO 9001 version 2000 chapter 7)	Meets the five value statements agreed at the Strategic Review and/SWOT (April May 2005)  - Accountability - Integrity - Team work - Efficiency - Equality	Meets corresponding FD core business	Meets corresponding FD core business
	Develop Customer-friendly mechanism				
Sustainable Development	Develop Natural Forest Management & Conservation Plan	By maintaining and developing the current FD capabilities in Forest Management and integrating the "ecosystemic approach".	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business

**Development and Formulation of New Performance-Based Forestry Institution  
Strategy According to Previous Consensus Obtained**

**Appendix 1**

Thematic	Agreed Strategic objective (SWOT) and corresponding output	How FD/ future Agency can meet such strategic objectives according to Consultant	Does the proposed way the future Performance-Based institution reaches strategic objective is in conformity to FD's suitable core business ?		
			Stakeholders standpoint	FD staff standpoint	Consultant standpoint
	Formulation of FD Laws and Policies	By maintaining and developing its capabilities to develop legal instruments and collaborating with the private sector for outside contracting.	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business
	Training plans to support the arrangement and use of forest reserves	By maintaining and developing the current FD capabilities in Forest Management implementation activities including bio physical inventories, protection and sustainable utilisation.	Meets all corresponding FD core business	Meets all corresponding FD core business	Meets all corresponding FD core business

## **APPENDIX 2**

### **Proposed Performance Indicators Performance-Based Management System Forestry Administration**

## Proposed level of quality of services and selected performance indicators by type of tasks and main activities at the Forestry Department

### Appendix 2

Example of type of services/activities conducted by the FD	FD managing section	Measurable performance criterion as an indication of level of quality
<ul style="list-style-type: none"> <li>- National / Operational Forest</li> <li>- Inventory</li> <li>- Land / boundary survey</li> <li>- GIS task</li> <li>- GPS positioning</li> <li>- Map production</li> <li>- Data processing</li> <li>- Photo interpretation work</li> </ul>	<p style="text-align: center;">Technical Services Division</p> <p style="text-align: center;">Forest Resource Management Planning Section</p>	<ul style="list-style-type: none"> <li>• Budget cost respected</li> <li>• Precision requirement achieved</li> <li>• Timely delivery</li> <li>• Cost recovery if contracted for another party</li> <li>• Quality requirement monitored by field control point (photo interpretation, GIS, GPS ...etc)</li> </ul>
<ul style="list-style-type: none"> <li>- Produce yield table and determine Annual Allowable Cut (AAC)</li> </ul>	<p style="text-align: center;">Technical Service Division</p> <p style="text-align: center;">Forest Resource Management Planning Section</p>	<ul style="list-style-type: none"> <li>• Field survey budget cost respected</li> <li>• Survey precision target achieved</li> <li>• Field control checks acceptable</li> <li>• Timely delivery</li> </ul>
<ul style="list-style-type: none"> <li>- Prepare forest management plan</li> <li>- Conduct public hearing for forest management plan</li> <li>- Enforce forest management plan</li> </ul>	<p style="text-align: center;">Technical Service Division</p> <p style="text-align: center;">Forest Resource Management Planning Division</p>	<ul style="list-style-type: none"> <li>• Overall budget cost respected</li> <li>• FD in control of its day to day costs</li> <li>• Quality criterion to determine (have to have a referential)</li> <li>• Timely delivered</li> <li>• Stakeholders timely mobilized</li> <li>• Hearing/workshop organized and documented</li> <li>• Public hearing timely conducted and budget respected</li> <li>• Determine a forest management monitoring plan (enforcement of Forest Management Plan)</li> <li>• Monitor participating stakeholder groups</li> <li>• Mobilize necessary budgets and/or financing mechanism planned</li> <li>• Determine the success/failure criterion of Forest Management plan implementation</li> </ul>



## Proposed level of quality of services and selected performance indicators by type of tasks and main activities at the Forestry Department

### Appendix 2

Example of type of services/activities conducted by the FD	FD managing section	Measurable performance criterion as an indication of level of quality
<p>- Issuing permits, granting licences...etc as a regulatory function</p>	<p>Regional Forestry Operations Division (with all regional offices)</p>	<ul style="list-style-type: none"> <li>• Timely delivery of permits and licences</li> <li>• Adequacy of permits / licence attributes (applicants, validity, regulation, boundaries...) in conformity with a written procedure part of a "written "process at the FD.</li> <li>• Suitable as a quality control process which can measure the level of error (ex: random sampling and evaluation of follow-up)</li> </ul>
<p>Control of several contracted operations such as:</p> <ul style="list-style-type: none"> <li>- timber harvesting/exploitation,</li> <li>- contracted reforestation works,</li> <li>- thinning/pruning</li> <li>- road construction / maintenance,</li> <li>- silviculture works</li> <li>..etc.</li> </ul>	<p>Regional Forestry Operations Division (with all regional offices)</p>	<ul style="list-style-type: none"> <li>• Full knowledge and uniform understanding of "acceptable/non acceptable" operation monitoring criterion within FD regulations.</li> <li>• Adequacy and timely application of <u>control routine</u> pertinent to a given operation</li> <li>• Quality control procedures (to be developed for FD) in operational mode.</li> </ul>
<p>Seedling Production</p>	<p>Technical Services Division Research &amp; Development Section Nursery &amp; Private Planting Coordinating Unit</p>	<ul style="list-style-type: none"> <li>• Adequacy of morphological criterion of forest seedlings such as root mass, height, stem diameter, presence or not of signs of nutriment deficits (chlorosis ...etc) and/or presence or not of insects and pests...etc.</li> <li>• Measure of germination rate and determination of acceptance level</li> <li>• Timely seedling deliveries</li> <li>• Evaluation of seedling mortality rates in nurseries (overall sowing vs. overall produced) and after plantation (normally end of rainy seasons) according to a written procedure of quality control duly followed.</li> <li>• Control of cost and respect of FD budget.</li> </ul>

## Proposed level of quality of services and selected performance indicators by type of tasks and main activities at the Forestry Department

### Appendix 2

Example of type of services/activities conducted by the FD	FD managing section	Measurable performance criterion as an indication of level of quality
<p>All activities pertinent to Management / evaluation of Forestry lands and watershed including;</p> <ul style="list-style-type: none"> <li>- Protection against fire</li> <li>- Protection against squatting and illegal establishment</li> <li>- Forest Act (1996) enforcement</li> <li>- Patrolling</li> <li>...etc</li> </ul>	<p>Technical Services Division</p> <p style="text-align: center;">Forest Resource Management Planning Section</p> <p>Watershed Management &amp; Soil Conservation Section</p>	<ul style="list-style-type: none"> <li>• National/local forest management / watershed conservation activities duly implemented and monitored</li> <li>• Forest fire prevention/protection duly enforced and forest fire frequency diminished</li> <li>• Patrolling procedures in forest reserves and other territories operational and monitored.</li> <li>• Early detection of forest fires increased</li> <li>• Forest Act (1996) enforcement procedures duly operational and monitored</li> <li>• Forest Act (1996) enforcement cases increasing</li> <li>• Patrolling procedures duly followed and monitored.</li> <li>• Forest Management plan output activities timely delivered and budget respected.</li> </ul>
<ul style="list-style-type: none"> <li>- Monitoring and evaluation (sawmilling and other wood processing operations)</li> <li>- Wood products sales control (new)</li> </ul>	<p>Regional Forestry Operations Division (with all regional offices)</p>	<ul style="list-style-type: none"> <li>• Procedure of sawmilling/ wood processing registration and routine inspection of sale points clearly established and operational.</li> <li>• Location of sawmilling/wood processing units known</li> <li>• Location of sale points known</li> <li>• Wood processing/sawmill duly registered and fees collected.</li> <li>• Wood product sale points located and reported according to routine procedure</li> </ul>
<ul style="list-style-type: none"> <li>- Tree Improvement</li> <li>- Silvicultural Practices</li> <li>- Fuel wood /Yam Sticks</li> <li>- Pathology /entomology (new)</li> <li>- Growth Studies PSP</li> <li>- Native species Silviculture and utilization</li> <li>- Collaboration (local&amp; international)</li> </ul>	<p>Technical Services Division</p> <p style="text-align: center;">Research &amp; Development Section</p>	<ul style="list-style-type: none"> <li>• Research protocol and associated objectives and follow-up procedures clearly defined.</li> <li>• Research output meeting objectives and result transmitted and implemented.</li> <li>• Timely delivery of outputs</li> <li>• Budget respected.</li> </ul>
<ul style="list-style-type: none"> <li>- Pathology/entomology capabilities including phyto inspection (border control for pest/insect) reinforcement (new)</li> </ul>	<p>Technical Service Division</p> <p style="text-align: center;">Research &amp; Development Section</p>	<ul style="list-style-type: none"> <li>• Inter agency procedure for collaboration in phyto inspection known and operational.</li> <li>• Pathology/entomology specialist trained at FD Research &amp; development section.</li> <li>• Frequency of phyto-inspection of wood products increasing proving the system is working.</li> <li>• Positive (pathologic/entomologic) specimen identified diminished according to a comparable level.</li> </ul>

## Proposed level of quality of services and selected performance indicators by type of tasks and main activities at the Forestry Department

### Appendix 2

Example of type of services/activities conducted by the FD	FD managing section	Measurable performance criterion as an indication of level of quality
		<ul style="list-style-type: none"> <li>• Integration of pathologic/entomologic specimen collection in annual forest inventories.</li> </ul>
<ul style="list-style-type: none"> <li>- Forestry education presentations</li> <li>- Information displays</li> <li>- Open days and Exchange</li> <li>- LFMC activities (overlap with Comm. For)</li> <li>- Publicity and Tech. papers</li> <li>- National Tree Planting day</li> <li>- School Programmes</li> </ul>	<p style="text-align: center;">Education Division</p> <p style="text-align: center;">Forest Information and Public Awareness Section</p>	<ul style="list-style-type: none"> <li>• Number of presentations performed</li> <li>• Number of different sectors/entities/group of stakeholders made aware of natural resources conservation.</li> <li>• Positive feedback from stakeholders/organizations contacted.</li> <li>• Forest education presentation/publicity &amp; technical papers timely delivered according to budget.</li> <li>• Long term performance measurement will contribute in the reduction of the depletion rate of forest cover in Jamaica on forested Crown land and forest reserves.</li> </ul>
<ul style="list-style-type: none"> <li>- Local Forest Management Committees</li> <li>- Extension forestry</li> <li>- Agro forestry</li> <li>- Urban forestry</li> <li>- Stakeholder involvement</li> </ul>	<p style="text-align: center;">Education Division</p> <p style="text-align: center;">Forest Information and Public Awareness Section</p> <p style="text-align: center;">Regional Forestry operations Division (with all regional offices)</p>	<ul style="list-style-type: none"> <li>• Number of stakeholders contacted/integrated/organized/technically assisted.</li> <li>• Constant increment in stakeholders' participation</li> <li>• Positive feedback from participating groups.</li> <li>• Long term performance indicator being an increment of tree/forest cover and agro forestry practices within agricultural areas.</li> </ul>
<ul style="list-style-type: none"> <li>- Private Planting Program (PPP)</li> </ul>	<p style="text-align: center;">Regional Forestry Operations Division (with all regional offices)</p> <p style="text-align: center;">Technical Services Division</p> <p style="text-align: center;">Research &amp; Development Section</p> <p style="text-align: center;">Nursery &amp; Private Planting Coordinating Unit</p>	<ul style="list-style-type: none"> <li>• Timely delivery of seedlings according to a determined "time delivery" target. (time cycle from the PPP application to the seedling delivery)</li> <li>• Seedlings meeting defined quality criterion (see above).</li> <li>• PPP shall be responsive tree growers by providing them required species in the appropriate quantities.</li> <li>• PPP meeting budget planning.</li> </ul>

## Proposed level of quality of services and selected performance indicators by type of tasks and main activities at the Forestry Department

### Appendix 2

Example of type of services/activities conducted by the FD	FD managing section	Measurable performance criterion as an indication of level of quality
<ul style="list-style-type: none"> <li>- Corporate involvement</li> </ul>	<p style="text-align: center;">Education Division Forest Information and Public Awareness Section</p> <p style="text-align: center;">Note: This section shall be reinforced by addressing directly lobbying to the corporate/private sector</p>	<ul style="list-style-type: none"> <li>• Breakdown of sectors where FD wishes to involve the private sector</li> <li>• Forest plantation</li> <li>• Eco tourism</li> <li>• Recreation in forest reserves/forested Crown lands</li> <li>• Small wood transformation</li> <li>• Identification of sector stakeholders.</li> <li>• Lobby/inform/contact each sector stakeholder with <u>defined ideas and/or project concept to present</u>.</li> <li>• A long term performance indicator shall be a positive increment in the rate of corporate involvement in sectors previously identified by the FD</li> </ul>
<ul style="list-style-type: none"> <li>- Incentives</li> <li>- Agro-forestry</li> <li>- Tree Growers Association</li> <li>- User fee generation</li> </ul>	<p style="text-align: center;">Education Division Forest Information and Public Awareness Section</p> <p style="text-align: center;">Regional Forestry operations Division (with all regional offices)</p>	<ul style="list-style-type: none"> <li>• Sector stakeholders willing to privately participate clearly identified and contacted.</li> <li>• The FD being pro active to address/promote/defend ideas and private investment projects in</li> <li>• Agro forestry</li> <li>• Tree plantation (fuel wood, yam stick, utility woods ...etc)</li> <li>• Non Timber Forest Products (NTFP)</li> <li>• A long term performance indicator shall be a positive increment in the number of private investments within the rural sector.</li> </ul>
<ul style="list-style-type: none"> <li>- Licence / Permits</li> <li>- Land Management Policies (leases, - squatting, encroachment, protection)</li> <li>- Private Land Declaration</li> <li>- Development of legal instrument/legislation</li> <li>- Delegation /co management</li> </ul>	<p style="text-align: center;">Office of the Chief Conservator</p> <p style="text-align: center;">(Legal Unit)</p>	<ul style="list-style-type: none"> <li>• The best performance indicator of an institution in legal/policies is the efficiency of implementation of its legal instrument which can be measured by: no of appeals, no of cases enforced, no of law violations reported and solved...etc</li> </ul>
<ul style="list-style-type: none"> <li>- Legal surveys (contracted out)</li> </ul>	<p style="text-align: center;">Office of the Chief Conservator</p> <p style="text-align: center;">(Legal Unit)</p>	<ul style="list-style-type: none"> <li>• Performance of FD can be measured by being in control of its external survey contractors with specifications and contract conditions well defined.</li> <li>• Survey result should meet adequacy of contract conditions (precision needed and scope of work) and timely delivery as an indication of level of quality.</li> </ul>

## Proposed level of quality of services and selected performance indicators by type of tasks and main activities at the Forestry Department

### Appendix 2

Example of type of services/activities conducted by the FD	FD managing section	Measurable performance criterion as an indication of level of quality
<ul style="list-style-type: none"> <li>- Forest funds</li> <li>- Private sector funds</li> <li>- Multi/bilateral funds</li> <li>- Governmental funds</li> <li>- User fee, tax/royalties collection on timber, permits and licence granting.</li> </ul>	<p style="text-align: center;">Finance &amp; Account Division</p> <p style="text-align: center;">Note: This section shall be reinforced by a project unit (fund raising) structure with objectives to apply for external funding.</p>	<ul style="list-style-type: none"> <li>• FD has established its mid term budget and its needs for several funding sources.</li> <li>• Government funding sources are planned and timely addressed and explained.</li> <li>• User fee/tax/royalties collection projections are timely and accurately projected.</li> <li>• External funding sources (private, multi/bilateral...etc) clearly identified and analysed for FD to qualify.</li> <li>• The best performance indicator would be to see FD outsourcing for funds constantly increasing by preparing timely and fund sourcing objectives to request funding.</li> </ul>
<ul style="list-style-type: none"> <li>- Training/local symposia</li> <li>- Local/international training</li> <li>- Short/long term international training</li> <li>- In service training</li> </ul>	<p style="text-align: center;">Education Division</p> <p style="text-align: center;">Training Section</p>	<ul style="list-style-type: none"> <li>• Nomination of a FD responsible as training coordinator</li> <li>• Identification of training needs in each FD section/function</li> <li>• Preparation of a training plan / training objectives by section and nomination of the individuals to be trained.</li> <li>• Determination of a training budget</li> <li>• Identification of the training medium (in house, interagency, local /international private/institutional sources).</li> <li>• Identification of potential source for funding.</li> <li>• The best long-term performance evaluation is the measurable improvement of staff competence and knowledge within the field it has been trained in.</li> </ul>
<ul style="list-style-type: none"> <li>- Customer service</li> </ul>	<p style="text-align: center;">Each concerned section</p>	<ul style="list-style-type: none"> <li>• Identification of customer needs</li> <li>• Timely and adequate delivery of service/products within the defined quality standards</li> <li>• Feedback from customers to check if quality standards are achieved.</li> </ul>

## **APPENDIX 3**

**Proposed Key Group of Clients/Beneficiaries  
the Forestry Administration Should Focus on**

**Proposed key group of clients / beneficiaries  
the future modernized Forestry Administration should focus on**

**Appendix 3**

Major group of FD functions and associated activities	Key groups of clients
<b>Forest Management and Planning</b>	
<ul style="list-style-type: none"> <li>- Conduct forest/biophysical inventories and maintain permanent sample plot system.</li> <li>- Operate Geographical Information Systems (GIS) including program running and/or related task.</li> <li>- Determination of Annual Allowable Cuts (AAC) via permanent sample plots and yield table generation</li> <li>- Preparation of Management plans at national and local level</li> <li>- Land use mapping, map production and edition, photo interpretation , forestry evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>• Government of Jamaica in the context of FD's mission on Crown land, Forest Reserves and private land under management.</li> <li>• Public and corporate parties.</li> <li>• Government Agencies (NEPA, Water authorities...etc with interest in environmental impact studies, biophysical data, maps, GIS and GPS locations...etc).</li> <li>• International/ sub regional Cooperation Agencies (FAO, Inter American Development Bank, etc undertaking projects)</li> <li>• Other Caribbean states (CARICOM members) which may not maintain a fully staffed forestry administration and looking for competences which the FD has.</li> <li>• Any private owner of a forest land interested to conduct a forest inventory and/or determine an AAC (Annual Allowable Cut) can be contracted by FD as an executing agency.</li> <li>• Mining companies and other mineral companies who may require state-of-the-art GIS products integrating FD competence.</li> <li>• Other government Agencies and/or Ministries (Road construction, Geological Commission conducting mineral exploration ..etc).</li> <li>• National tourism promotion agencies looking for maps, GIS products and services..</li> <li>• Private tourism investment corporations (ex: Sandals ...) using Arc Info applications for scenic simulations and landscape design of which the FD has the master.</li> <li>• Tree growers associations, LFMC and other stakeholders or private plantation owners interested to know AAC.</li> </ul>

**Proposed key group of clients / beneficiaries  
the future modernized Forestry Administration should focus on**

**Appendix 3**

<b>Major group of FD functions and associated activities</b>	<b>Key groups of clients</b>
<b>Major Function: Forest Operations</b>	
<ul style="list-style-type: none"> <li>- Supervise reforestation</li> <li>- Control Harvesting/Exploitation</li> <li>- Produce forest seedling</li> <li>- Promote technically agro forestry</li> <li>- Manage/evaluate forestry lands for production purposes.</li> <li>- Thinning/Pruning</li> <li>- Monitor road/trail maintenance</li> <li>- Makes operational and monitor fire protection system</li> <li>- Patrol forest territories and enforce the law. (e.g: squatters)</li> <li>- Survey boundaries</li> <li>- Monitoring and evaluation (sawmilling and other - wood processing operations) (new)</li> <li>- Wood products sales control (new)</li> <li>- Operational Inventories</li> </ul>	<ul style="list-style-type: none"> <li>• Government of Jamaica in the context of FD mission on Crown land and private land under management.</li> <li>• Any private owner of a forest land interested to conduct an operational forest inventory.</li> <li>• Saw millers, logging contractors and other entities applying for registration or logging licences.</li> <li>• Police and juridical system to enforce the Forest Act (1996)</li> </ul>
<b>Major Function: Research and Development</b>	
<ul style="list-style-type: none"> <li>- Conduct tree improvement program</li> <li>- Promote silvicultural practices</li> <li>- Utility forest products (fuel wood /Yam Sticks) research</li> <li>- Pathology /entomology (new)</li> <li>- Phyto inspection (border control for pest/insect) reinforcement (new)</li> <li>- Growth Studies PSP</li> <li>- Native species Silviculture an utilisation</li> <li>- Collaboration (local &amp; international)</li> </ul>	<ul style="list-style-type: none"> <li>• GoJ in the context of FD mission on Crown land and private land under management.</li> <li>• International / national agencies granting the FD for research funds application (eg: ITTO, FAO, etc)</li> <li>• Inter agency services (customs and phyto sanitary) for pest/insect border control on wood products.</li> </ul>
<b>Major Function: Public Awareness</b>	
<ul style="list-style-type: none"> <li>- Media Production</li> <li>- Forestry education presentations</li> <li>- Information displays</li> <li>- Open days and Exchange</li> <li>- LFMC activities (overlap with Comm. For.</li> <li>- Pubs and Tech. papers</li> <li>- National Tree Planting day</li> <li>- School Programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism sector</li> <li>• Schools and education agencies interested by expertise in natural resources conservation</li> <li>• Mass media (newspaper, radio, TV)</li> <li>• GoJ in the context of FD public awareness mission on Crown land and private land under management.</li> </ul>
<b>Major Function: Community Forestry</b>	
<ul style="list-style-type: none"> <li>- LFMCs assistance</li> <li>- Extension</li> <li>- Agro forestry</li> <li>- Urban</li> <li>- Stakeholder inv.</li> </ul>	<ul style="list-style-type: none"> <li>• Communities, township, villages administration</li> <li>• Local Forest Management Committees</li> <li>• GoJ in the context of FD mission on Crown land and private land under management.</li> </ul>
<b>Major Function: Private Sector Forestry</b>	
<ul style="list-style-type: none"> <li>- Private Planting Programme (Database)</li> <li>- Corporate involvement</li> <li>- Agro-forestry</li> <li>- Incentives</li> <li>- Tree Growers Association</li> </ul>	<ul style="list-style-type: none"> <li>• Private forestland owners (small and large one)</li> <li>• Private farmers interested to integrate agro forestry</li> <li>• GoJ in the context of FD mission on Crown land and private land under management</li> <li>• Overseas investor in the forestry sector (carbon</li> </ul>



**Proposed key group of clients / beneficiaries  
the future modernized Forestry Administration should focus on**

**Appendix 3**

Major group of FD functions and associated activities	Key groups of clients
	sink) • Tree Growers Associations and other stakeholders in the forest plantation business.
<b>Major Function: Recreation</b>	
- Site selection. - Co-management - Ecotourism - User fees generation	• GoJ in the context of FD mission on Crown land and private land under management. • Goj tourism agencies. • Large entertainment and tourism Group. • Resort/entertainment and properties development Groups (e.g: Sandals, Holiday Inns ..etc)
<b>Major Function: Legal and policies</b>	
- Licence/Permits - Development of Legislation - Land Management Policies - leases, squatting, encroachment, and protection. - Private Land Declaration - Land acquisition not in Act - Delegation - Co-management - Enforcement - Development of legal instruments - Legal Surveys(contract)	• GoJ in the context of FD mission on Crown land and private land under management. • Public and private corporations. • Any party looking for licence granting and/or permits.
<b>Major functions: financing</b>	
- Forest Funds - Private Sector Funds - Multi/Bilateral Funds - Government of Jamaica Funds - User fees, forest products, sales, professional services	• Local and international conservation funds • International agencies (World Bank, Caribbean Development Bank, Inter American development Bank. OAS, FAO ...etc • Conservation funds such as WWF, IUCN, European Union Conservation Fund, ITTO. • Carbon Sink Trading Agencies • Jamaica based mining corporation (JAMALCO, ALCOA, ALCAN, etc) • Public and corporation for professional fees to collect
<b>Training and Professional Development</b>	
- International/local Symposia - Local/International Training - Short/Long term international training - In-service training - Customer service	• Any educational, inter agency agreement where FD is providing training on several topics of forestry and biophysics. Such training may be required at NEPA, Water Authorities but also within various college and universities in Jamaica.

## **APPENDIX 4**

### **Recommendations on Delivery of Services**

## Recommendations on delivery of services

### Appendix 4

Major function	FD Department / stakeholders majority preference	Consultant's recommendations	Consultant's comments
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#### Major Function: Forest Management and Planning

Biophysical Inventory	Agency	Agency/outside contract	Outside contracts for biophysical inventory assuming that there would be qualified environmental/forestry consulting companies and/or groups in Jamaica able to realize such contracts at competitive prices and quality standards. <sup>13</sup>
GIS	Agency	Agency /outside contract	As above, the Agency can contract from time to time Geographical Information System (GIS) jobs (e.g: digitalization, control point verification) 1
Determine Annual Allowable Cuts (AAC)	Agency	Agency	No comment
Prepare Management Plans(NH/local)	Agency	Agency	No comment
Land use mapping/evaluation change detection	Most likely by Agency	Agency	No comment

#### Major Function: Forest Operations

Reforestation	Most likely by Agency	Outside contract	Most of the reforestation work and tree planting shall be contracted via the Local Forest Management Committees and/or via Cooperatives and Associations as it is the case now. There is a need however for more "professional" reforestation (better equipment).
Harvesting/Exploitation	Definitely outside contract	Outside contract	Totally agree. Private sector shall take over harvesting/exploitation, road construction and maintenance
Seedling Production	Divided between Agency/FD and outside contract	Mainly Agency	For the time being, only the Forestry Administration is in a position to improve seedling quality.
Agro forestry	Most likely Agency but opening for privatization	Private sector supported by Agency	The FD's role should be to develop and search for new and innovative systems and only implement it at the pilot

<sup>13</sup> A prerequisite being that there are fairly competent and competitive consulting firms to do the work in Jamaica.

## Recommendations on delivery of services

### Appendix 4

Major function	FD Department / stakeholders majority preference	Consultant's recommendations	Consultant's comments
			level. It is via Local Forest Management Committees, the Jamaica Tree Growers Association and other stakeholders that agro forestry shall be implemented in the private sector. The FD has also a promotional role of agro forestry that it should maintain.
Management/Evaluation of Forestry lands	Agency	Agency	No comments
Thinning/Pruning	Outside contract	Outside contract	Contracted to stakeholders (associations, LFMC...etc)
Road/Trail maintenance	Outside contract	Outside contract	Can be executed by a private sector entity holding a permit or can be also contracted out. The FD currently identifies the trees and the work is contracted out.
Protection – fire	Most likely Agency	Agency / private & communities	So far, close partnerships shall be maintained with stakeholders and communities as part of public awareness program.
Boundary Surveys	Agency	Agency	No comments
Monitoring and evaluation (sawmilling and other wood processing operations)	Agency	Agency	This is an article of the Forest Act (1996) never enforced. However, the Consultant believes it is the responsibility of the FD to monitor wood processing operations in Jamaica even small scale.
Wood products sales control (new)	n.a	Agency	To detect illegal logging operations and illegal forest products in circulation.
Operational Inventories	Agency	Agency	No comments

#### Major Function: Research and Development

Tree Improvement	Agency	Agency	Especially for natives species propagation.
Silvicultural Practices	Agency	Agency/outside contract	Agency may design the program, but field work and experiments should be contracted as it is presently the case.
Fuel wood /Yam Sticks	Most likely Agency	Agency/Private sector	The FD must be involved at the research level to search for suitable species. This should be for the private sector to develop.

## Recommendations on delivery of services

### Appendix 4

Major function	FD Department / stakeholders majority preference	Consultant's recommendations	Consultant's comments
Pathology /entomology (new)	Agency	Agency	Need to build a capacity at the FD to intervene especially in specimen collection and search for macroscopic/microscopic identification and/or further laboratory testing in the sub-region (e.g: Porto Rico, Costa Rica, Trinidad...etc).
Phyto inspection (border control for pest/insect) reinforcement (new)	n.a	Agency	Being an island, Jamaica is at risk for any pest/insect epidemic. The phytosanitary service exists but is part of Ministry of Agriculture. Very rare and few interventions of the FD to date. Needs to be improved.
Growth Studies PSP	Agency	Agency	No comments
Native species Silviculture an utilisation	Agency	Agency	No comments
Collaboration (local& international)	Agency	Agency	No comments

#### Major Function: Public Awareness

Media Production	Divided between Agency/FD and contract out	Contract out	Can certainly be designed by FD but contracted out as the FD has no expertise in mass media.
Forestry education presentations	Agency	Agency	No comments
Information displays	Agency	Agency	No comments
Open days and Exchange	Agency	Agency	No comments
LFMC activities (overlap with Comm. For.	Agency	Agency	No comments
Pubs and Tech. papers	Agency	Agency/outside contract	Design and printing can be advantageously contracted.
National Tree Planting day	Agency	Agency	No comments
School Programmes	Agency	Agency	No comments

#### Major Function: Community Forestry

LFMCs	Agency	Agency	Support from FD is vital
Extension	Agency	Agency/local groups	No comment
Agro forestry	Divided between Agency and privatised	Privatised	The FD can continue to conduct research and promotion but this is up to local groups (stakeholders, LFMC, tree

## Recommendations on delivery of services

### Appendix 4

Major function	FD Department / stakeholders majority preference	Consultant's recommendations	Consultant's comments
			grower associations) to deploy agro forestry
Urban	Most likely Agency	Agency	No comments
Stakeholder inv.	Most likely Agency	Agency	No comments

#### Major Function: Private Sector Forestry

Private Planting Programme(Data Base)	Agency	Agency/private sector	Without actual expertise in seedling production by the private sector and the suitable shift in native species, it is difficult to see the FD out of this activity in the short term. However enrichment planting in Forest Reserves, rehabilitation of mining sites and plantation on Crown land shall continue to be contracted out but with better strengthening from the FD (work related terms of reference, technical specifications) and makes " tree plantation activity" a more professional one. Agency should continue to manage PPP database.
Corporate involvement	Agency	Agency	FD should limit its involvement to project promotion and conceptual design and then solicit /promote corporate involvement via associations (private plantation program) or chamber of commerce (investment in the tourism sector within the territories of the FD jurisdiction).
Agro-forestry	Divided between Agency and privatised	Private sector /Agency	The FD role shall be limited to research and agro forestry promotional functions. Private sector shall be the implementing "agent".
Incentives	Agency	Agency	No comments
Tree Growers Association	Divided between Agency/FD and privatised	Agency	Role of the FD shall be limited to maintain dialogue with the various associations by providing technical insights, assisting them in their organization ...etc.

## Recommendations on delivery of services

### Appendix 4

Major function	FD Department / stakeholders majority preference	Consultant's recommendations	Consultant's comments
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#### Major Function: Recreation

Site selection	Most likely Agency with opening to outside contract	Agency/private sector	This is to the Agency to determine which site can be valorised commercially for recreation (e.g: establishment of mitigation measures, sensitive areas ...etc).
Co-management	Divided between Agency/FD and contract out	Private sector	FD shall not be involved in recreational facilities management and limit its intervention into joint co-management arrangements with the private sector on territories of its jurisdiction.
Ecotourism	Divided between Agency/FD, outside contract and privatized	Agency/private sector	Shall be involved at the promotional, lobbying and concept development levels with partners in order to collect royalties and taxes.
User fees generation	Agency	Agency	No comments

#### Major Function: Legal and policies

Licence/Permits	Agency	Agency	No comments
Development of Legislation	Most likely Agency	Agency	No comments
Land Management Policies - leases, squatting, encroachment, protection	Agency	Agency	Have to look for partnership for monitoring (aerial detection support from Air Force, police)
Private Land Declaration	Agency	Agency	No comments
Land acquisition not in Act	Agency	Agency	No comments
Delegation	Agency	n.a	n.a
Co-management	Agency	n.a	n.a
Enforcement	Most likely Agency with opening to outside contract	Agency in partnership with Constabulary forces	The needs for reinforcement of application of Forest Act (1996) especially on land issues are critical, considering the present situation of illegal occupations in territories under the jurisdiction of the FD
Development of legal instruments	Agency	Agency	At some extend the FD has the necessary legal resources in the forestry sector. It may cost more to contract outside.

## Recommendations on delivery of services

### Appendix 4

Major function	FD Department / stakeholders majority preference	Consultant's recommendations	Consultant's comments
Legal Surveys(contract)	Contract out	Contract out	No comments

#### Major functions: financing

Forest Funds	Agency	Agency	No comments
Private Sector Funds	Agency	Agency/contract out	A fund raising structure may be advantageously implemented and if possible commissioned with the private sector
Multi/Bilateral Funds	Agency	Agency	No comments
Government of Jamaica Funds	Agency	Agency	No comments
User fees, forest products, sales, professional services	Agency	Agency/private sector	The FD shall not be involved in the processing and marketing of forest products. Its role should be limited to control the sale of rough timber and non timber forest products located on the forest estate.

#### Training and Professional Development

International/local Symposia	Agency	Agency	No comments
Local/International Training	Agency	Agency/outside contract	Incentives shall be given to implement a "train the trainer" concept instead of costly training for too much staff. International training shall be reserved for such trainer.
Short/Long term international training	Agency	Outside contract	Idem as above
In-service training	Agency	Agency	No comments
Customer service	Agency	Agency	No comments



## **APPENDIX 5**

### **About Executive Agencies**

## **ABOUT EXECUTIVE AGENCIES**

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Executive agencies in Jamaica are public sector bodies which:

- are customer and performance orientated;
- have enhanced delegated authorities over the management of their resources;
- are part of their parent Ministry;
- are staffed by public servants;
- have Chief Executive Officers employed on short-term performance contracts;
- have clear performance targets recorded in their Framework Documents; and
- receive funding from the Ministry of Finance and the Public Service as part of a Framework Agreement that includes the achievement of key performance targets.

The agency model provides a clearer framework than many other Performance-Based Institutions for implementing policy and delivering results through a performance contract that sets out operational targets. It includes more delegated authority in the areas of finance and human resource management to ensure that its inputs can be managed more flexibly to achieve target outputs. It is still a part of government, still part of the vote system, and its staff remain public officers, which provide Government with a greater degree of control than it has over Statutory Boards or Corporations. Additional advantages deriving from the creation of agencies are:

- Increased clarity of objectives for the organisation
- Greater transparency in the organisation's activities
- Heightened accountability of the organisation and its management
- Improved efficiency and effectiveness in the delivery of services

Given their characteristics, executive agencies also have comparative advantages over other types of public bodies in that they:

- relieve their parent ministry of the burden of management, freeing it to focus on policy;
- maintain a direct relationship with the Minister and Permanent Secretary, so that influence can be exerted quickly and effectively over an agency's operations; and
- are part of the ministry's planning process.

The objectives of creating executive agencies are to:

- Improve the efficiency and effectiveness of the organisation
- Establish a customer oriented culture in the organisation
- Enable the measurement and management of organisational and personal performance against the objectives and performance targets

- Carry out the operational functions of government, while remaining part of government
- Increase the accountability of organisations and their Chief Executive Officers
- Increase the transparency of organisational activities
- Allow managers more discretion to manage the resources at their disposal

## **APPENDIX 6**

### **LIST OF ACRONYMS AND ABBREVIATIONS**

## LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Annual Allowable Cut
ALCAN	Aluminium Company of Canada
ALCOA	Aluminium Company of America
BA	Bachelor of Arts
BPR	Business Process Reengineering
BSc	Bachelor of Science
CDB	Caribbean Development Bank
CDB	Convention on Biological Diversity
CEO	Chief Executive Officer
CIDA	Canadian International Development Agency
DCS	Director of Corporate Services
EA	Executive Agency
EAA	Executive Agency Act
ECFNC	European Centre for Nature Conservation
EU	European Union
FAA	Financial Administration and Audit
FAO	Food and Agriculture Organisation
FD	Forestry Department
FIDCo	Forest Industries Development Company
FIEA	Financial Instructions to Executive Agencies
FMIS	Financial Management Information System
FR	Forest Reserve
GIS	Geographical Information System
GoJ	Government of Jamaica
GPS	Global Positioning System
HR	Human Resource
HR&A	Human Resources and Administration
HRM	Human Resource Management
IBRD	International Bank of Reconstruction and

## LIST OF ACRONYMS AND ABBREVIATIONS

	Development
ICT	Information and Communications Technology
IDB	Inter-American Development Bank
ISO	International Standardized Organization
ITTO	International Tropical Timber Organization
IUCN	International Union of Conservation of Nature
JAMALCO	Jamaica Aluminium Company
JCSA	Jamaica Civil Service Association
LFMC	Local Forest Management Committee
LFMP	Local Forest Management Plan
MoA	Ministry of Agriculture
MoFP	Ministry of Finance and Planning
MoFPS	Ministry of Finance and the Public Service
MSc	Masters of Science
MTFP	Medum Term Financing Plan
MU	Management Unit
NEPA	National Environmental Planning Agency
NFMCP	National Forest Management and Conservation Plan
NGO	Non-Governmental Organisation
NTFP	Non-Timber Forest Products
OAS	Organization of American States
PBI	Performance-Based Institution
PhD	Doctor of Philosophy
PMAS	Performance Management and Appraisal System
PPP	Private Planting Program
PSC	Public Service Commission
PSP	Permanent Sample Plot
PSRU	Public Sector Modernisation Unit

## LIST OF ACRONYMS AND ABBREVIATIONS

PV	Payment Voucher
SMC	Senior Management Committee
SWOT	Strength, Weaknesses, Opportunities and Threats
UNDP	United Nations Development Program
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WWF	World Wildlife Fund