



# **Vanuatu**

## Forest Policy

2013 - 2023

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**Tate Hanington,  
Director**

# List of abbreviations

<b>ADB</b>	Asian Development Bank
<b>AgB</b>	Agriculture Bank
<b>AFOLU</b>	Agriculture, Forestry and Other Land Use
<b>APFSOS</b>	Asia Pacific Forest Sector Outlook Study
<b>APP</b>	Appendix
<b>BCF</b>	Biodiversity Conservation Fund
<b>DoB</b>	Department of Biosecurity
<b>CAP</b>	Capitulum - chapter
<b>CBD</b>	Convention on Biological Diversity
<b>CBM</b>	Cubic meters
<b>CC</b>	Climate Change
<b>CDM</b>	Clean Development Mechanisms (under the Kyoto Protocol)
<b>CDU</b>	Curriculum Development Unit
<b>CIFOR</b>	Centre for International Forestry Research
<b>CITES</b>	Convention on International Trade in Endangered Species
<b>CoA</b>	Chamber of Agriculture
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>COOP</b>	Cooperatives
<b>COM</b>	Council of Ministers
<b>DARD</b>	Department of Agriculture and Rural Development
<b>DCNVB</b>	Department of Cooperative & Ni-Vanuatu Business
<b>DEPC</b>	Department of Environmental Protection and Conservation
<b>DLA</b>	Department of Local Authorities
<b>DLQS</b>	Department of Livestock and Quarantine Services
<b>DLS</b>	Department of Livestock Services
<b>DNA</b>	Designated National Authority
<b>DARD</b>	Department of Agriculture
<b>DoC</b>	Department of Customs
<b>DoF</b>	Department of Forests
<b>DoFA</b>	Department of Foreign Affairs
<b>DoFis</b>	Department of Fisheries
<b>DoGMW</b>	Department of Geology, Mines, and Water Resources
<b>DoL</b>	Department of Lands
<b>DoPA</b>	Department of Provincial Affairs
<b>DoT</b>	Department of Trade & Business Development
<b>DoTD</b>	Department of Tourism Development
<b>DoWA</b>	Department of Women Affairs
<b>DSPPAC</b>	Department of Strategic Planning, Programming and Aid Coordination
<b>e.g.</b>	exemplum gratum – for example
<b>EIA</b>	Environmental Impact Assessment
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization of the United Nations

<b>FCPF</b>	Forest Carbon Partnership Facility (of the World Bank)
<b>FRA</b>	Forest Resources Assessment
<b>FRIS</b>	Forest Resources Inventory System
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse Gas Emission
<b>GIS</b>	Geographic Information System
<b>Gov</b>	Government of Vanuatu
<b>GIZ</b>	German International Cooperation
<b>ha</b>	Hectare
<b>HDI</b>	Human Development Index
<b>HRD</b>	Human Resources Department
<b>i.e.</b>	Id est - that is
<b>ICC</b>	Island Council of Chiefs
<b>Ind.</b>	Industry
<b>INV</b>	Investor
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ITTA</b>	International Tropical Timber Agreement
<b>ITTO</b>	International Tropical Timber Organization
<b>LDC</b>	Least developed country
<b>LT</b>	Land Tribunal
<b>LO</b>	Landowners
<b>LULUCF</b>	Land Use, Land-Use Change and Forestry
<b>MALFFB</b>	Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity
<b>MDG</b>	Millennium Development Goal
<b>MoE</b>	Ministry of Education
<b>MoF</b>	Ministry of Finance
<b>MoIPU</b>	Ministry of Infrastructure and Public Works
<b>MoJ</b>	Ministry of Justice
<b>NA</b>	Not announced
<b>NAB</b>	National Advisory Board on Climate Change & Disaster Risk Reduction
<b>NACCC</b>	National Advisory Committee on Climate Change (now dissolved)
<b>NGO</b>	Non Governmental Organization
<b>NSO</b>	National Statistics Office
<b>NTO</b>	National Tourism Office
<b>PA</b>	Per annum
<b>PAA</b>	Priority and Action Agenda for Vanuatu
<b>PEA</b>	Preliminary Environmental Assessment
<b>PFE</b>	Permanent Forest Estate
<b>PG</b>	Provincial Government
<b>PICTA</b>	Pacific Islands Countries Trade Agreement
<b>PSC</b>	Public Service Commission
<b>R-PIN</b>	REDD Project Identification Note
<b>R-PP</b>	Readiness Preparation Proposal
<b>REDD+</b>	Reducing emissions from deforestation and forest degradation

<b>SFM</b>	Sustainable Forest Management
<b>SLO</b>	State Law Office
<b>SPC</b>	Secretariat of the Pacific Community
<b>spp</b>	Species
<b>TAG</b>	Technical Advisory Group
<b>TVET</b>	Technical, Vocational Education and Training
<b>UNCCD</b>	United Nations Convention on Combating Deforestation
<b>UNDP</b>	United Nations Development Programme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UNFF</b>	United Nations Forum on Forests
<b>URA</b>	Utility Regulatory Authority
<b>US</b>	United States
<b>USD</b>	United States Dollar
<b>TF</b>	Tree Farmer
<b>VAC</b>	Vanuatu Agricultural College
<b>VADG</b>	Vanuatu Agriculture Development Bank
<b>VANRIS</b>	Vanuatu Natural Resources Inventory System
<b>VCCI</b>	Vanuatu Chamber of Commerce and Industry
<b>VCCP</b>	Vanuatu Carbon Credit Project
<b>VDS</b>	Vanuatu Disabled Society
<b>VIPA</b>	Vanuatu Investment Promotion Authority
<b>VKS</b>	Vanuatu Cultural Centre
<b>VNCW</b>	Vanuatu National Council of Women
<b>VNTC</b>	Vanuatu National Training Centre
<b>VPF</b>	Vanuatu Police Force
<b>VT</b>	Vatu (National Currency of Vanuatu)
<b>VNPF</b>	Vanuatu National Provident Fund
<b>WB</b>	World Bank
<b>WP</b>	Working Paper

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# 1. Foreword

***Every person has the following fundamental duties to himself and his descendants and to others to protect the Republic of Vanuatu and to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations*** (Art. 7d, Constitution of the Republic of Vanuatu).

Guided by the staff of the Vanuatu Department of Forests, the 1997 National Forest Policy has been reviewed and revised. Redundant aspects have been removed and issues and challenges of today and tomorrow have been integrated, such as the impacts of climate change, downstream processing, marketing and trade, revenue generation, Ni-Vanuatu participation, reforestation and forest conservation. This updated policy is the result of a collaborative and participatory effort to set a framework for the development and management of the entire forestry sector. It is not only a reflection of the priorities of the Vanuatu Government's Department of Forests. For that reason, the consultation process for the review was both comprehensive and inclusive, involving international, national, provincial, community, NGO and private sector stakeholders. In workshops at the national and provincial levels, a policy statement was jointly agreed upon, including a long-term vision for the forestry sector as well as both general and more specific objectives.

This policy presents clear policy directives that are supported by implementation strategies that include timelines and responsibilities. Each policy directive is prioritized according to urgency and implementation timeframes (1: short-term, urgent; 2: medium-term; and 3: long-term). Although the policy directives and implementation strategies differ in terms of depth and detail, they reflect the current and future needs of Vanuatu's forestry stakeholders at all levels. The Policy's directives and strategies are not exhaustive, and others can be added flexibly and as deemed necessary by forestry stakeholders. The condensed version of the updated National Forest Policy includes a status report on Vanuatu's forest sector, an overview of current activities, constraints and challenges, relevant definitions and the policy directives and strategies. The comprehensive version of the National Forest Policy provides additional information on provincial development goals, commercial timber species, policies and legislation of relevance for the forestry sector, and information on the consultation process followed for the current policy review.

The implementation of the policy directives developed in this Forest policy Statement requires sufficient financial and human resources as well as trained staff. Considering the many challenges and constraints limiting the development of the forestry sector in Vanuatu, it is advisable to concentrate initially on the following three priority actions:

1. *Undertake a comprehensive forest resources assessment (incl. the collection of necessary information for climate change mitigation and adaptation measures);*
2. *Undertake economic analyses of wood and non-wood forest production and services;*
3. *Revise and strengthen the legal and institutional framework for the forestry sector.*

The resulting draft policy was reviewed and subsequently validated in yet another round of consultations in February 2011. In all, over 180 individuals and 35 institutions have contributed to the development of this policy. Vanuatu's new National Forest Policy has been endorsed by the honorable Council of Ministers on 30 November 2011.

.....  
**Tate Hanington**

Director, Department of Forests, Republic of Vanuatu  
January 2013

## 2. Vanuatu's Forestry Sector

### 2.1 Vanuatu's forests and their contribution to the national economy

In 2006, Vanuatu had an estimated 234,023 inhabitants (GoV, 2009), spread over 80 islands with a land area of 1.23 million hectares. In 2009, the GDP was estimated at 554 million USD (IMF, 2009), with an average per capita income of approximately 1 500 \$US/annum, but about 75 % of the Ni-Vanuatu live in the country side with less than 1 \$US/day off subsistence agriculture (ADB 2006). Of 182 countries ranked by UNDP in relation to their development, Vanuatu dropped in the Human Development Index from place 119 in 2006 to position 128 in the 2009 HDI. Vanuatu belongs to the group of Least Developed Countries (LDC).

According to the National Forest Inventory from 1993, approx. 74 % of the land area (about 900 000 hectares) are covered with different types of forest , or considered as other wooded land. Although about 890 000 hectares of this is still natural forests, the production forest occupies only 36 % of Vanuatu's land area (Tate, 2008), and only about 20 % of it are of commercial use - mainly due to inaccessibility, low tree density, cultural reasons, or because it has already been heavily logged during the eighties and nineties. While this logging led to severe degradation of the forest, about 50 % of the deforestation in Vanuatu is due to subsistence land use (DNA, 2008). Large areas of logged-over forests and abandoned agricultural land have been invaded by the introduced invasive vine *Merremia spp.*, which impedes the natural regeneration of the logged forest.

By 2006, about 4 800 hectares were covered with planted forests (Tate, 2008).

About 3 % of the mid-to high forest (about 6 000 hectares) and 0.7 % of the low forest (about 1 400 hectares) are in protected areas.

Vanuatu's land has not yet been classified according to functions or land capability classes, neither does Vanuatu have a legally defined permanent forest estate (PFE). All lands, including forest lands, are customarily owned, i.e. by individuals or communities (clans or families). Government-owned land with forest does not exist.

The forests of Vanuatu contain a number of valuable hard woods (see Appendices). National forests also supply a broad spectrum of non-wood forest products such as tubers, fruits (e.g. breadfruit from *Artocarpus spp*), nuts (e.g. from *Canarium spp.*, *Barringtonia spp.* and *Terminalia spp.*), fibers, grass and leaves for thatch, other construction materials, and game (e.g. wild pigs).

The rural population of Vanuatu also receives their domestic fuel from forests and trees outside forests. Brown (1997) estimated an annual per capita fuel wood consumption of 0.49 cbm. Taking into consideration the population increase during the past 13 years, Vanuatu's annual consumption of wood for fuel wood and charcoal in 2010 is estimated at 105 000 cbm. Tate (2008) considered the value of wood for fuel to have reached in 2007 180 million Vatu (1.8 million USD).

Forests also play an important spiritual role in Vanuatu's traditional societies and provide materials for ceremonies.

There are at present no forest concessions in Vanuatu, timber harvesting is mostly done on a small scale with the help of mobile sawmills (Mobile Sawmill Act, GoV 1996). As a result, the recent annual timber harvests of approx. 10 000 cbm have been far below the established sustainable yield levels of 68 000 cbm per annum (see appendices).

In the year 2000, the forestry sector contributed VT295 million approx. 0.9 % to the GDP

(Nat. Statistics Office, 2010) with decreasing tendency. . The share of forestry in all agriculture commodities was approximately 13% in 1999, however also decreasing over time (Figure 2). Note that the contribution could be higher if the informal forest use was also included in the analysis. . ITTO (2005) cited a national census which indicated that 80 % of the Vanuatu population was involved in some form of small-scale forestry, and estimated the value of forest products for subsistence use to have reached 14 million USD/annum.

The development of Vanuatu's forest sector is clearly influenced by outside forces. Forests are converted to agricultural land due to the need for small-scale subsistence farming, or for cattle grazing as a response to the international demand for Vanuatu's high- quality beef.

Infrastructure and tourism development as well as large scale agriculture along the coastlines force the former occupants to move inland and convert more forests for the livelihoods.

Vanuatu's position on the "Pacific rim of fire" makes it vulnerable to earthquakes, volcano eruptions and subsequent tsunami floods. Forest growth is also impacted by frequent cyclones.

Additional **drivers of change**, which will have an impact on Vanuatu's forest sector, are the **high population growth rate of 2.6 % p.a.**, international **economic development**, and the **impacts of climate change**.

### **International economic development**

In the medium term, increasing globalization and regional integration will lead to an abolishment of duties on imported goods. This will affect the forestry sector in particular, where the production costs for local timber by far exceed those for timber imported from New Zealand and Fiji, e.g. and will require the necessary planning for Vanuatu's forestry sector to cope with the changes.

### **Climate Change**

Surface air temperature and sea surface temperature is projected to continue to increase over the course of the 21st century (very high confidence). Models project an increase (1.5°C) in annual and seasonal mean temperature by 2030, and by 2090, increases of greater than 2.5°C. Wet season rainfall is projected to increase while dry season rainfall is projected to decrease over the course of the 21st century (moderate confidence). The intensity and frequency of days of extreme heat and days extreme rainfall are projected to increase (very high confidence). Mean sea level is projected to continue to rise (very high confidence): approximately 5-15 cm by 2030, with increases of 20-60 cm indicated by 2090.

(Citation: Pacific Climate Change Science Program PCCSP 2012).

Impacts of climate change on the people and islands of Vanuatu are diverse and cross-sectoral, including coral bleaching affecting the availability of fish and crustaceans, inundation of agricultural land in low-lying areas, increased incidence of pests and disease, prolonged periods of drought and flood conditions, increased frequency and intensity of extreme weather events, salination of agricultural land close to the coasts and the penetration of saltwater into the subterranean fresh water resources, adversely affecting the availability and quality of potable water. Changing temperature and precipitation regimes may influence the productivity of agricultural land and require the adaptation of or introduction of new crops and agricultural production systems.

The combined impacts of climate change, population growth and soil fertility declines will exert a growing and cumulative pressure on the remaining lowland forests of Vanuatu to be converted to agricultural land.

To deal with these conflicting demands on land, there is an urgent need for a well articulated and widely accepted land use policy, emphasizing balance and trade-offs among different land-use options, and enabling close collaboration and coordination among the different Government authorities responsible for land, agriculture, livestock, forestry, climate change adaptation, provincial governments, customary chiefs and land owners.

This forest policy addresses some of the steps required to meet these objectives.

## **2.2 Forest sector organizational set-up and stakeholders**

A forest policy also defines the roles and responsibilities of the various actors involved. In the following, the present roles and responsibilities of the stakeholders in the sector are briefly described.

### **National Government**

The responsibility for the regulation and administration of the forestry sector throughout Vanuatu rests with the National Government. It enacts forestry legislation. It ensures the provision of adequate resources (i.e. trained staff, funds) to implement the National Forest Policy. The National Government consults with Provincial Governments on relevant forestry matters. Forestry falls into the domain of the Ministry of Agriculture, Forestry and Fisheries (MAFF). A forestry board provides advice to the Minister and the Prime Minister on forestry issues, particularly forest use negotiations and forest policy. The Forestry Board consists of the Directors of Forestry, Environment, and Lands.

### **Department of Forests**

The Department of Forests (DoF) has the administrative responsibility to manage the forestry sector throughout Vanuatu. It leads the implementation of the National Forest Policy and implements and enforces the forestry legislation. The Department of Forests issues licenses and permits for forestry enterprises. It promotes the integral and sustainable management of all forest resources for the supply of products and services. It approves utilization operation agreements and ensures that all forest-related orders and codes are implemented. It collects information about forest resources, conducts forest research and facilitates the development of commercial plantations and agro-forestry systems. It provides advice on forest conservation, protected areas and National Parks. The DoF provides forest policy advice to the Government and ensures the sustainable management and conservation of Vanuatu's forests.

### **Other National Government institutions**

The DoF cooperates with other national government agencies such as the Department of Lands (DoL), Department of Agriculture and Rural Development (DARD), Department of Environmental Protection and Conservation (DEPC) and the National Advisory Board on Climate Change & Disaster Risk Reduction (NAB) to implement and support the various strategies under this National Forest Policy. The Departments of Finance (DoFi), Customs (DoC), and Industry, Trade and Commerce cooperate with the Department of Forestry to strengthen the forest industry.

### **Provincial Governments**

The Provincial Governments (PG) issue Business Licenses, assist with the development and implementation of provincial land use plans, and facilitate the development of forest industries and plantations as well as the necessary supporting infrastructure. They facilitate the protection of conservation areas identified by landowners and assist in the resolution of landowner disputes. The Provincial Governments assist the DoF in providing advice to communities and in monitoring forestry operations. The DoF consults the Provincial Governments about forestry operations, including the issue of timber licenses and annual logging plans.

### **Customary Chiefs**

The DoF recognizes the role of customary chiefs and cooperates with them in matters such as notification of logging plans, identification of tabu sites, and resolution of disputes.

### **Landowners and Communities**

Landowners decide how their forest resources are managed. They identify land boundaries and assist the DoF in monitoring forestry operations. They are involved in harvesting, mobile sawmilling and tree planting on their land. Communities assist landowners in decisions on forest resources management and are encouraged to actively participate in forest development.

## **Forest Industry**

The forest industry negotiates with landowners on areas for timber harvesting and tree planting. The industry prepares logging plans and implements these in accordance with the Code of Logging Practice. The industry cooperates with the government in developing rural infrastructure as well as a skilled rural workforce. It develops value-adding timber processing facilities that provide competitive forest products for domestic and export markets. It finances the implementation of afforestation and reforestation efforts and assists the DoF in research.

## **Non-Government Organizations**

NGOs with clearly defined objectives and strategies are encouraged to closely cooperate with the DoF to promote sustainable forest management at the commercial and community levels, as well as the conservation of forest resources.



# 3. Development of the forestry policy

## 3.1 Stakeholder process and public consultations

**“A forest policy is a negotiated agreement amongst all stakeholders on a common vision or goals for a country’s forests (and trees). It provides key strategic policy guidance and should therefore be short and easily understandable by a broad audience”** (FAO, 2010).

The currently policy development process started in 2010 with a review of the 1997 National Forest Policy jointly with staff of Vanuatu’s Forest Department. Issues which have since become obsolete were discarded, and gaps identified. As a next step, a broad consultation process was started to collect views, concerns, and expectations of various actors on the new forest policy. More than six major stakeholder consultations were held at various levels: national, with participants from different government agencies, private sector and NGOs, and provincial, with land owners, private sector, NGOs and provincial governments from the Southern and Northern islands, respectively (appendices 5 - 7). Based on the review and the stakeholder inputs during the consultations, a draft forest policy was prepared, which went through a virtual consultation process with stakeholders in- and outside of Vanuatu. Further consultations followed, with inputs at national and provincial levels. The resulting second draft was re-circulated, and after another round of inputs the final proposal for the Council of Ministers was drafted.

The new national forest policy for Vanuatu will become operational after having been approved and endorsed by the Government of the Republic of Vanuatu.

## 3.2 Main issues and constraints

The forest sector of Vanuatu is confronted with the following issues and constraints:

- **Land disputes.** Although land-tribunals have been established, land disputes in forest areas or areas with potential for development continue to hamper forest development. Disputes about ownership of land and forest resources disrupt forestry operations, cause financial losses for forestry investors and limit the establishment of development projects. These disputes might even increase with the development of forest carbon projects.
- **Resource and land allocation.** In the absence of comprehensive and updated national and regional land use plans, there is no clear process for identifying conservation and timber production areas or for enforcing any form of land use planning.
- **Resource security.** If landowners do not protect the forest values for themselves and their descendants, the existing system of customary land ownership may well form a constraint to sustainable forest management.
- **Population growth.** The high population growth will increase the pressure on Vanuatu’s forest resources.
- **Forest management plans.** Due to the lack of land use plans and subsequent forest zoning, comprehensive forest management plans are not implemented. However, operational plans are available for some areas.
- **Reforestation/afforestation.** There is a gross imbalance between forest utilization and reforestation/afforestation. A reforestation program has been initiated, however it requires further work and subsequent implementation.
- **Business knowledge.** Knowledge of farmers, landowner, and communities regarding economic and financial opportunities and business management is limited and requires attention and training.

- **Technical knowledge.** Knowledge on the survival and growth of natural regeneration following logging is still limited and requires further research.
- **Resource knowledge.** The National Forest Resource Inventory from 1993 is outdated and urgently needs reassessment. This is of particular importance as Vanuatu begins to participate in any REDD+ initiatives.
- **Institutional weaknesses.** Shortage of funds still hampers the availability and attraction of adequate and qualified staff, the further development of skills and the implementation of forest activities.
- **Industry weakness.** There is an urgent need for comprehensive skills training for the forest industry to improve knowledge of forest utilization, downstream processing, and marketing.
- **Infrastructure.** Infrastructure limitations and high utility and transport costs hamper the domestic and international marketing of Vanuatu's forest products at competitive prices.
- **Coordination.** Coordination between public institutions and with private sector is weak, but indispensable to induce sustainable development.
- **Bureaucratic procedures.** Although progress has been made, policies, guidelines and procedures for forest businesses still require further refinement to attract and secure local and international investors to the sector.
- **Legislative framework.** The Forestry Act of 2001 was a major step forward for Vanuatu's forestry sector. Nevertheless, linkages with legislations of other sectors, and with other forestry-related acts and orders still require to be addressed, e.g. through amendments.
- **Funding and management of protected areas.** The provision of long term funding for the management and leasing of protected areas is still uncertain.
- **Climate change impacts.** Climate change will affect Vanuatu through temperature rise, changes in precipitation patterns, increase in frequency and intensity of extreme weather events, and rising sea level. Forest planning for the management of natural and planted forest may be confronted with changing site and growth conditions, and a possible increase of pests and diseases. On the other hand, Vanuatu's forestry offers opportunities for climate change mitigation through carbon conservation (SFM, protected areas, reducing of deforestation and forest degradation), carbon sequestration (afforestation and reforestation), and carbon substitution (replacement of carbon intensive products and fuels through wood products).

# 4. National Forestry Policy Statement

## Guiding principles

- To be successful, the National Forest Policy must be linked to and harmonized with Vanuatu's other policies.
- Participation, as well as the responsible and committed contribution of all stakeholders, are pre-requisites for the sustainable management and use of Vanuatu's forest resources.
- Sustainable forest management encompasses the management of natural forests and planted forests.
- Sustainable forest management abides to the principles set out in the seven elements of the Non – Legally Binding Instrument on all Types of Forests<sup>1</sup> (UNFF, 2007).
- Effective protection and management of the nation's significant conservation sites require full participation of Ni-Vanuatu landowners and communities.
- Forest-based rural development contributes to the well-being and livelihood of Ni-Vanuatu people.
- Efficient, viable, value-adding downstream processing of forest products contributes to economic growth.
- Knowledge and awareness of Vanuatu's forest resources, ecosystems, biological diversity and the silviculture of the indigenous species form the basis for sustainable forest development.
- The implementation of Vanuatu's National Forest Policy benefits and contributes to regional and international forest-related programs and processes.
- The implementation of the National Forest Policy facilitates the role of the forest sector in climate change mitigation and adaptation.

## Vision

**Trees and forests of Vanuatu are equitably, sustainably and profitably managed and conserved, contributing to development for the on going well-being of all people in Vanuatu in the context of global change.**

## Goal

**The nation's forest resources are managed in an integrated and sustainable manner and provide wood and non-wood forest products as well as environmental and social services to contribute *profitably* to income generation, employment opportunities, and social well-being for all people in Vanuatu.**

## Specific Objectives

- Vanuatu's forests are sustainably developed and managed.
- Deforested areas are rehabilitated and reforested
- Stakeholders and communities actively participate in sustainable forest management and utilization.

<sup>1</sup> SFM The seven elements of sustainable forest management are: (i) extent of forest resources; (ii) forest biological diversity; (iii) forest health and vitality; (iv) productive functions of forest resources; (v) protective functions of forest resources; (vi) socio-economic functions of forests; (vii) legal, policy, and institutional framework;



- The forestry sector contributes increasingly and equitably to the welfare and livelihoods of landowners, farmers, industry and communities.
- Forests with high biological, cultural, spiritual, and historical values are conserved and protected.
- The forestry sector proactively incorporates climate change adaptation and mitigation challenges and opportunities.
- The forestry sector embraces climate change mitigation and GHG emission reduction through reducing deforestation and degradation, and increasing afforestation and reforestation.
- Forest industries are modernized and utilize appropriate technologies.
- Forests are managed in an integrated manner to provide economic, social and environmental services.
- Forest products and services are marketable and tradable.
- Prices for forest products and services are nationally and internationally competitive.
- Forest production is sufficient for local consumption and export of surplus.
- Forest industries are increasingly Ni – Vanuatu owned and operated
- The forestry sector is efficient, well organized and resourced (both financial and human).
- The forestry sector is a primary source of income generation.
- The forestry sector is well governed and guided by effective legislation and strong compliance.
- The forestry sector is well coordinated and collaborates with other sectors.
- Forestry stakeholders are competent and qualified.
- The public is well-informed and educated on all forestry issues.
- The forestry sector is well guided by collaborative research and abides by internationally recognized standards.

## Policy Directives Sustainable Forest Management

### Specific Objectives

- Vanuatu's forests are sustainably developed and managed.
- Deforested areas are rehabilitated and reforested

#### A. Forest Assessment

##### 1. Undertake a National Forest Resources Assessment every ten years.

- Conduct a national forest resources assessment (in order to update the FRIS database and to enable overall forest planning) (DoF, Province, Ind), 1;
- Develop a national standardized methodology for Forest Resource Assessments (DoF, donors); 1
- Calculate and periodically update the national sustainable yield based on a new national forest resources assessment (DoF, NSO), 1,

- Industry and farmers provide reforestation and afforestation records to determine the planted resource base (Ind, DoF, farmers); 1
- Provide industry and public with updated resource data for planning and development purposes (DoF), 2.

## **B. Management of Natural Forests**

### **2. Sustainably manage forests using internationally accepted mechanisms and tools and incorporating traditional and cultural practices.**

- Undertake strategic forest planning at national and provincial levels (DoF, Private sector, Province). 1;
- Undertake a forest inventory prior to harvesting (Licensee, DoF), 1;
- Prepare annual strategic harvesting plans and detailed coupe harvesting plans according to an outline to be provided by DoF (Licensee), 1;
- Monitor harvesting levels of all licensees and ensure that the total annual harvest does not exceed the sustainable yield (DoF, Provinces), 1;
- Discourage forest clearing and the removal of trees outside forests (DoF, Province, Landowners), 1;
- Apply the sustainable forest management concept to reduce forest degradation and thus GHG emissions from forests and to maintain healthy forest ecosystems to enhance resilience against the negative impacts of climate change (Forest User, DoF, Province), 2;
- Record and protect indigenous knowledge and rights surrounding forest management, and encourage their use (VKS, NACC, ICC), 2;
- Register all processing facilities and license those which produce forest products commercially (DoF, Ind), 2;
- Manage priority species according to specific regulations and other Acts and orders as prescribed by the Minister (e.g. Vanuatu Sandalwood Regulation, Planted Forest Act) (DoF), 1;
- License all forest operators and report on their operations (Ind, DoF, Province), 2;
- Conduct forestry awareness programs in all areas where logging operations are being considered before utilization agreements are approved<sup>2</sup>. (DoF, Industry NGOs), 2;
- Develop accurate GIS data and maps relevant to the management of forest activities (DoF, Ind, Academia), 3;
- Discourage the use of fire in natural forest and land management areas, and encourage fire prevention measures (DEPC, MoE, NAB, communities); 3.

### **3. Sustainably manage native forests through various silvicultural systems.**

- Protect younger age class trees and potential crop trees during harvesting operations (Ind, DoF), 2;
- Establish minimum cutting diameters for different species and penalize operators that cut under sized trees (DoF, Ind), 2-

<sup>2</sup> The awareness programs will cover the options for land use, the content of utilization agreements, the Vanuatu Code of Logging Practice, the protection of environmental values and the importance of protecting regeneration and encouraging reforestation

#### **4. Protect, develop, and manage non-wood forest products and medicinal plants sustainably.**

- Identify and document the types of non-wood forest products and medicinal plants in natural forests (Ind, Gov, LO, Academia), 2;
- Develop mechanisms to protect and conserve high value, unique, rare or endemic non-wood forest species. (DoF, DEPC, Ind, Province, Govt) 2;
- Replant valuable non-wood forest products and traditional medicinal plants (Communities, industry, DoF), 2;
- Develop regulations and orders to manage non-wood forest products and medicinal plants in natural forests (Ind, Gov), 3.

#### **5. Discourage conversion of natural forest.**

- Strictly prohibit the commercial conversion of natural forest to forest plantations, including for forest carbon schemes (DoF), 1;
- Monitor and discourage the change of forest to other land uses (DEPC, DoL, DoF, DARD, landowners), 1.

#### **6. Implement and strictly observe forest health surveillance systems.**

- Control the import of any foreign organism to prevent invasive species and the introduction of pests and diseases (DoB, DEPC), 1;
- Develop and implement a plan to protect against, control and eradicate invasive forest species (DEPC, DoB, DoF), 1;
- Discourage the use of chemicals which may endanger ecosystem, human or environmental health (DoB, Ind, DEPC), 2;
- Control the collection and export of biological material (DoB, DoF, DEPC), 2.
- Establish a body to monitor and control research and scientific information related to endemic biological material (Gov); 2

#### **7. Apply for, issue and obtain Government permits for all forestry harvesting and prospecting activities.**

- Permit salvage logging operations where land is to be cleared or where dead trees or trees damaged by fire, pests and diseases, cyclone, or other natural events are to be cut (DoF and landowner), 1;
- Acquire a permit from DEPC for any bio-prospecting activity (Forest user, BSS, DEPC, Province, DoF), 2;
- Issue “evergreen” licenses to a company that demonstrates commitment to sustainable forest management and value adding processing, and signs Memorandum of Agreement with the Government (DoF), 2;
- Acquire a Timber Rights Agreement for all harvesting areas over 50 hectares (Ind), 2.

### ***C. Management of Planted Forests***

#### **8. Develop planted forests as the basis for Vanuatu’s forest resources and timber supply.**

- Undertake a forest inventory prior to harvesting (Licensee, DoF, LO), 1;
- Undertake regular inventories and create a database of planted forests (DoF and NSO), 2;
- Utilize existing local supply plantations (Ind, DoF), 3.

#### **9. Prescribe and follow guidelines for harvesting of planted forest.**

- Minimize disturbance and negative impacts on forest ecosystems through improved forest management techniques (Forest users, DoF, Ind, DEPC, landowners), 1.
- Evaluate and monitor the impact of harvest on ecosystems (DoF, communities, landowners), 1;

**10. Establish 20,000 ha of planted forests by 2020 by way of large-scale plantations, community forestry plantations and woodlots as stipulated in the Planted Forest Act.**

- Develop a national forest plantation program to ensure sufficient supply for forest industry and contribute to climate change mitigation (Ind, DoF), 1;
- Develop site-specific forest plantation concepts, in particular for degraded areas, with clear production objectives and preference for local fast growing commercial species (DoF, Investors, Ind, Province), 1;
- Establish and strengthen a system of priority species seed orchards and nurseries to provide appropriate planting material for afforestation and reforestation (DoF, Ind), 1;
- Plant high-value, locally adapted and cyclone and climate resistant wood and non-wood species (DoF, landowner, Ind, Province), 1;
- Register and legally protect woodlots as in Planted Forest Act. (DoL, DoF), 1;
- Provide and distribute species information and planting material (DoF, Ind, farmers), 2;
- Develop compensatory incentive schemes for forest plantations (e.g. REDD+) (DoF, Inv, Province, NAB), 2;
- Establish plantations for the sustainable production of fuel-wood, charcoal and other forest products (Forest users, Communities, DoF, NGOs), 2.

**11. Undertake compensatory replanting.**

- Strictly balance the GHG emissions resulting from any forest conversion to non-forest use by compensatory replanting (Inv, Ind, Gov, Landowner, forest user), 1;
- Promote compensatory tree planting when a farmer or landowner needs to convert forest for food production (DoF, Province, NGOs), 2;
- Achieve “zero” net-deforestation in Vanuatu by 2020 to balance deforestation-related emissions (DoF, Forest users, Province), 2.

**D. Watersheds and Soils**

**12. Identify, manage, and protect all watershed and catchment areas.**

- Identify critical watersheds and water catchment areas (DEPC, DoF, Province, NGOs, DoGMW, DARD, Province, LO), 1;
- Strictly control application of fertilizers, insecticides, herbicides, and pesticides in water catchment areas (DEPC, DARD, DoB, DoF, Province), 1;
- Discourage environmentally destructive and harmful activities inside water catchment areas (DoF, Geology and Mines, provinces, DEPC, LO), 1;
- Protect and rehabilitate watersheds and water catchments to secure long-term water supply (Landowner, DoGMW, DoF), 2;
- Promote and assist the implementation of land rehabilitation and watershed management activities (DoF, DEPC, Province, NGOs), 2.

**13. Manage and protect all areas vulnerable to erosion.**

- Minimize soil erosion and conserve soil carbon (DEPC, DARD, Province DoF, DARD), 1.

#### **14. Maintain soil quality.**

- Rehabilitate degraded and eroded areas through afforestation and reforestation in order to enhance soil quality, nutrient load and soil carbon (Landowner, DoF, Province Forest Users), 1.

#### **E. Wetlands, Lowlands, Coastal Areas and Mangrove Forests**

##### **15. Protect and manage wetland, coastal and mangrove forest areas.**

- Identify, develop and implement management plans for wetlands, mangrove forests, and coastal forest (DoF, DoFis and DEPC, Province, communities), 1;
- Conserve, protect and sustainably manage mangrove forests and mangrove ecosystems, wetlands, and shoreline trees especially as a measure to enhance resilience to the impacts of climate change (DEPC, Communities, DoFis, DoF, MoF, Province), 1;
- Afforest and reforest degraded coastal areas where possible, with appropriate tree species (DoF, Community, Landowner, Province), 1;
- Select appropriate multi-purpose tree species for coastline rehabilitation and stabilization (DoF, communities), 2;

#### **F. Land Use Planning**

##### **16. Develop and implement land use plans including forestry activities.**

- Assess trade-offs among different land-use options and continue land use planning and zoning to identify areas for sustainable management of natural and planted forests (DoL, Province), 1;
- Develop and implement a Forestry Master Plan<sup>3</sup> which sets the basis for all forest activities (all stakeholders), 1;
- Consult with chiefs, landowners and communities on planning of forestry operations including land-use planning (DoL, DoF, DEPC, DARD; Province), 1;
- Identify, classify and map forest areas based on national land use plans<sup>4</sup> (DEPC, Province, DoL, DoF), 1;
- Identify key forest functions within categorized forests (e.g. provision of food, medicine, wildlife, fragile watersheds, soil conservation, biodiversity conservation, carbon conservation, recreation and ecotourism, production, etc.) (DoF, DoL, DEPC, NTO, Province, VKS), 2.

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3 Forestry Master Plans- a plan to identify different forest uses and activities in relation to existing forested areas

4 Vanuatu's forests should be categorized as **1**) Conservation forests / protected areas where the forests' biological diversity and ecological integrity together with values such as water supply, soil conservation, carbon conservation, cultural or historical significance, or scenic appeal can be protected; **2**) Production forests for which the main management emphasis will be on long term sustainable production of forest products, further classified into: natural forest management areas, incl. natural and assisted regeneration areas; planted forest areas for afforestation and reforestation; and **3**) Conversion forests where forests may be converted to alternative land uses, provided that the GHG emissions resulting from any forest conversion are balanced through compensatory measures including replanting on degraded land.

## Small- Holder Farmer and Community Based Forestry

### Specific Objectives

- Stakeholders and communities actively participate in sustainable forest management and utilization.
- The forestry sector contributes increasingly and equitably to the welfare and livelihoods of landowners, farmers, industry and communities.

### G. *Small-holder farmer and Community-Based Forestry*

#### **17. Actively participate and engage with communities on forestry initiatives.**

- Ensure the rights and benefits of forest farmers and communities are maintained and acknowledged in the context of forestry activities (DoF, Ind), 1;
- Coordinate and collaborate with and amongst stakeholders from all sectors and levels for farmer and community development programs (DoF, all stakeholders), 1;
- Ensure farmers are organized into associations and cooperatives (DoF, COOP); 1
- Provide regular communications, advice and information to farmers and communities (DoF, Ind), 1;
- Conduct forestry relevant training and awareness campaigns (DoF, Ind, VRDTCA), 1;
- Develop project proposals to assist farmers, farmers associations and communities to seek funding/financing for forestry activities (DoF, Ind, NGOs), 1;
- Develop a comprehensive concept for farmer-based and community forestry (including farm plans and land use planning) (DoF, DARD, Livestock Dep.), 2;
- Ensure continuous dialogue on forestry matters among farmers, landowners, communities, industry, researchers and Government (DoF, Ind), 2;
- Establish consultation procedures to gather prior and informed consent of all rural stakeholders involved in new forestry projects (e.g. carbon) (NAB, DoF), 2;
- Assist farmers and communities to expand their resource base and gain access to forest resources (DoF), 2;
- Identify suitable areas within communities for forestry activities (DoF, DoL, farmers, NGOs), 3.
- Farmers independently seek funds to establish planting activities (Donors, LO, TF); 2

#### **18. Design and implement programs and projects for integrated and sustainable forest management jointly with community stakeholders.**

- Promote and enable farmer and community-based afforestation and reforestation programs for food security, non wood products, timber, fuel wood and charcoal production, as well as for conservation, watershed management and climate change adaptation and mitigation (DoF, Provinces, community), 1;
- Establish nurseries and seed orchards for priority species (Communities, NGO, Province, Ind, DoF), 1;
- Develop model small-scale farmer-based and community forest plantations and woodlots (DoF, Inv, Ind, Province, NGO), 1;
- Incorporate on-farm conservation of forest genetic resources into the activities

of farmers and communities (farmers, province), 2;

- Select trees, crops and farming systems that are adapted and resistant to climate change (DoF, DARD, farmers, NGO, province, NAB), 2;
- Establish agro-forestry and silvo-pastoral demonstration plots (DoF, Ind, Livestock, DARD), 2;
- Rehabilitate degraded lands to enhance forest and soil carbon (DARD, DoF), 3.



# Forest Conservation and Environment

## Specific Objective

- Forests with high biological, cultural, spiritual, and historical values are conserved and protected.

### H. *Protected Areas*

#### 19. **Actively manage and protect 30% of Vanuatu's natural forests.**

- Establish and strengthen systems of traditional tabus & protected areas to protect biodiversity, ecosystems, environmental services and conserve forest carbon (DEPC, communities, Province, DoF, NGOs, VKS), 1;
- Establish and manage Community Conservation Areas (CCAs), as foreseen under the Environmental Management and Conservation Act (2003), to contribute to the conservation of forest biodiversity and forest carbon (DEPC, DoF, Province, NAB, DoL), 1;
- Protect and manage unique, vulnerable or threatened forest habitats and ecosystems (all stakeholders), 1;
- Establish clearly defined and regulated buffer zones around protected areas and other sensitive areas (Landowners, DEPC, DoF, Communities, Province), 1;
- Enforce protection status of conservation areas (Chiefs, Landowners and DEPC, Province, DoF), 1.

### I. *Biological and Cultural Diversity*

#### 20. **Maintain the biodiversity and ecological integrity of forests and trees.**

- Protect and manage endemic, rare, threatened and endangered species in forest environments (Landowner, DEPC, communities, DoF, Province), 1;
- Conduct a national biodiversity survey to improve the knowledge on biological values and to identify important biodiversity sites (DEPC, VKS, DoF, NGOs, DoL), 1;
- Undertake an archaeological site survey on areas proposed for harvesting of more than 100 ha per year and for planted forest programs > 25 hectares per year in accordance with the guidelines issued by the Vanuatu Cultural Centre-VKS (VKS, Licensee, Inv), 1;
- Promote in situ and ex situ conservation techniques and practices to conserve the gene pool (DoF, Province, NGOs), 2;
- Utilize genetic material exchange agreements to enable biodiversity conservation, ensuring the principles of MAT- Mutually agreed terms and PIC- Prior Informed Consent (DoF, DEPC); 2
- Develop a biodiversity strategy and action plan (DEPC, DoF), 3;
- Maintain and expand the botanical collections of the National Herbarium & Seed Storage Facility (DoF, VKS, Floral stakeholders); 2.
- Establish a national botanical garden (DoF, Ind, others); 3



## Climate Change

### Specific Objectives

- The forestry sector proactively incorporates climate change adaptation and mitigation challenges and opportunities.
- The forestry sector embraces climate change mitigation and GHG emission reduction through reducing deforestation and degradation, and increasing afforestation and reforestation.

### J. Climate Adaptation

#### 21. Integrate climate change adaptation issues into forestry sector planning and activities.

- Develop forestry-related CC adaptation demonstration projects including concerns for food security, soil stabilization, water management, and coastal erosion (FD, Communities, Province, NGO), 1;
- Raise awareness of stakeholders on forestry climate adaptation opportunities in Vanuatu, and develop related materials. (DoF, NAB, NGOs), 1;
- Liaise, collaborate and share expertise with relevant government and non government organizations (national, regional and international) to assist local efforts to adapt to climate change (DoF, NAB, NGOs, regional organizations), 1;
- Introduce and promote climate change resilient tree species and varieties (DoF, DARD, regional organizations, Ind, NGOs), 1;
- Maintain and enhance food security through agro-forestry systems (DoF, DARD, regional organizations, Ind, NGOs), 1;
- Undertake ground cover initiatives to prevent soil and coastal erosion (DoF, DARD, regional organizations), 1;
- Identify and seek financing for novel and promising forestry adaptation projects and programs (all stakeholders), 1;
- Train all stakeholders on the opportunities for climate change adaptation and impact assessment (NAB), 2;
- Rehabilitate watershed and water catchment areas to secure water supplies (DoF, communities, DoGMW, NGOs, Ind, PLA), 2;
- Systematically assess and continuously monitor the impacts of climate change on forest systems (i.e. through PSPs permanent sample plots) (DoF, NAB), 2;
- Zone development activities and undertake land use planning to minimize site specific climate change impacts (DoF, MoL, DLA), 3;
- Minimize wind damage to crops and infrastructure by trialing windbreak species and systems (DoF, Ind, NGOs), 3;
- Establish and manage buffer zones around climate sensitive ecosystems, and undertake enrichment planting within these areas (DOF, NGOs, landowners), 1;
- Develop and regularly update a database of climate change adaptation information in the Vanuatu forest sector (DoF, NAB), 1;
- Update the herbarium database to document existing vegetative biodiversity that may yield resilience to climate impacts (DoF, DARD), 3.
- Enable the storage of forestry seeds for germination of vulnerable species 'out of season'(DoF, donors); 1
- Identify, prioritize and implement appropriate and effective strategies for the forestry sector to adapt to climate change (NAB, DoF, communities, donors); 1

## **K. Climate Change Mitigation**

### **22. Integrate climate change mitigation issues into forestry sector planning and activities.**

- Develop a national REDD+ initiative (DoF, NAB & NGOs), 1;
- Develop national REDD+ Policies, Strategies and Legislations including governance structures (DNA, NACC), 1;
- Implement national and community REDD+ programs (DoF, LO); 2
- Conduct national forest carbon stock assessments in accordance with IPCC guidelines as part of the new forest inventory (DoF, NAB), 1;
- Entrust the “Designated National Authority” (DNA) as the formal entry-point and responsible party for forest carbon projects (NAB), 1;
- Monitor the international negotiation process on forests and climate change (NAB, DNA), 1;
- Establish and manage community and forest conservation areas for carbon storage (DEPC, Communities, Province, ngo, DOF), 2;
- Reduce forest degradation and related emissions from natural forests by applying the principles of SFM (DoF, Forest users, Licensees, Province), 2;
- Undertake socio economic assessments to identify most cost effective REDD+ projects with co-benefit provisions (NAB, DNA), 2;
- Consolidate the assessment of historical carbon emissions from deforestation and forest degradation (land-use change assessment), started under the Vanuatu Carbon Credits Project (VKSP), and establish the national Reference Emission Levels and Reference Levels for REDD+ (NAB), 2;
- Establish a national forest carbon monitoring system for monitoring, reporting and verification of forest carbon stock changes according to the IPCC Good Practice Guidance for Land-Use, Land-Use Change and Forestry (LULUCF-2003) and the Guidelines for National Greenhouse Gas Inventories for Agriculture, Forestry and other Land Use (AFOLU, 2006) (NAB, DoF), 2;
- Apply REDD+ approaches including incentive schemes on the ground in pilot projects (Aid Coordination Unit (DESPPAC), NAB, NGOs), 2;
- Formalize procedures for national and international forest projects in Vanuatu under the compliance and voluntary carbon markets (NAB, VIPA, DoF, DNA, NGOs), 2;
- Introduce compliance with the “Voluntary Carbon Standard” as one of the conditions for such projects (NAB, DoF, DNA), 2;
- Prescribe the involvement of respective line departments in scrutinizing forest carbon projects (PSC, NAB, DoF), 2;
- Enable the private sector to investigate carbon storage and carbon emission reducing project opportunities (Gov); 1
- Strengthen the DNA and build the necessary institutional capacity to deal with REDD+(NAB, Gov), 2;
- Regulate the establishment of forest plantations for the generation of carbon credits (DoF, NAB); 2.
- Prioritize the REDD+ mechanisms and approaches that will be used in Vanuatu, specifically those where additionality can be verified, and economic returns are maximized (DoF, NAB); 1

# Forest Industries

## Specific Objectives

- Forest industries are modernized and utilize appropriate technologies.
- Forests are managed in an integrated manner to provide economic, social and environmental services.
- Forest products (timber and non-timber) and services are marketable and tradable.
- Prices for forest products and services are nationally and internationally competitive.
- Forest production is sufficient for local consumption and export of surplus.
- Forest industries are increasingly Ni – Vanuatu owned and operated

### L. Sector Modernization

#### 23. Develop the adequate infrastructure to facilitate the development of forest products and services

- Develop and enable forest-based bio-fuel production and use, e.g. gasification and other renewable energies to support forest activities (Ind, govt1;
- Establish and improve infrastructure in provinces to facilitate transport of forest products (MoIPU, Ind, Province, Donors);2;
- Facilitate the provision of appropriate forest product processing infrastructure (eg. Solar dryers) for use at the community level. (NGOs, DoF, Province, industry) 2
- Develop project proposals for forest related infrastructure. (DoF, MIPU) 1
- Approve road construction as part of logging planning procedures (DoF) 2.

#### 24. Modernize the forestry sector to deliver efficiency, innovation, quantity, quality of products and services.

- Expand the range of forest products (timber and non-timber) and services available through use of new technologies and increased downstream processing (Ind, DoF, Gov, MoT, Inv); 1;
- Improve the quality of forest products (Ind, DoF, Inv, donors); 1;
- Develop guidelines/handbooks to ensure high quality forest products (Ind, DoF) 1;
- Produce forest products that comply with existing building codes and regulations (Ind, DoF) 1;
- Provide for genetic improvement and delivery of improved germplasm of forest species (DoF, DARD, NGOs); 2;
- Establish domestic processing facilities capable of processing the full range of commercial species (licenses), 2;
- Issue long term licenses to companies that establish value adding processing facilities in Vanuatu (DoF), 2;
- Acquire new and improved facilities for processing and downstream processing industries (Ind), 2;
- Promote the decentralization of downstream processing industries (Ind, DoT, Province); 2.
- Establish and encourage adoption of industry quality assurance systems, practices and facilities eg. ISO 14000, ISO 9000.(Ind, DoF); 2

- Establish timber preservation plants in strategic locations to ensure mobile sawmills more efficiently treat timber (DoF, Province), 2.
- Establish forest users associations (DoF, LO, Ind); 3

#### **25. Grade logs and timber to internationally accepted practices and standards.**

- Implement regulations for timber grading, seasoning, preservation (DoF, Ind); 1;
- Implement regulations for log scaling (DoF, Ind), 1;
- Implement regulations for timber treatments (DOF); 2

#### **26. Modernize the forestry sector by developing joint ventures arrangements.**

- Establish novel joint-ventures among community-based enterprises and industry (Dep. of Coop and Ni-Vanuatu Business, DoF), 2;
- Establish novel joint ventures that involve both foreign and local investors (DoF, VIPA), 1.

### **M. Production**

#### **27. Promote domestic processing and value adding of wood and non-wood forest products.**

- Facilitate foreign investment in the forestry sector (DoF, VIPA, DoB), 1;
- Develop sufficient capacity and facilities for processing and export of value-added forest products (Ind), 1;
- Enhance the knowledge and capacity and management of forest processors (DoF, Ind), 1;

#### **28. Increase the production of wood products.**

- Promote, maximize, diversify and facilitate the production of wood forest products from planted forests (DoF, Ind), 1;
- Promote and develop mobile sawmilling and other wood processing facilities in keeping with the principles of sustainable forest management) (DoF, Province), 1;
- Increase the domestic processing of timber by both large scale processing plants and mobile sawmills (Ind, Gov, donor, landowners), 1;
- Issue licenses to processors that can demonstrate competency and adequate supply of forest resources (DoF, Ind), 2;
- Develop quotas, production targets and price controls for wood forest products (DoF), 2;

#### **29. Increase the production of non-wood forest products.**

- Conduct site-specific assessments of the production potential for non wood forest products (DoF, Ind), 2;
- Promote, maximize, diversify and facilitate the production of non-wood forest products from natural forests, incl. medicinal plants (Ind, DoF), 2;
- Encourage, facilitate and regulate the local production of non wood forest products (DoF, Province, Ind), 2;
- Develop quotas, production targets and price controls for non wood forest products (DoF), 2;
- Issue licenses to processors that can demonstrate competency and adequate supply of forest resources (DoF), 2.
- Facilitate the training and education on processing of non wood products (Ind, DOF); 2

## **N. Marketing and Trade**

### **30. Seek new markets for products of priority species, particularly value-added products.**

- Improve and secure niche markets for wood and non wood products (DoF, Ind), 1;
- Encourage private and semi-private institutions to provide management extension services to forestry producers to prepare them for new market opportunities by 2016 (Gov, DCNVB, VCCI, DoT), 1;
- Foster and formalize market linkages to industry (DoT, Ind, DoF, Province), 2;
- Use Vanuatu timber products in Government and Aid-funded development projects (Donors, Gov), 2;
- Expand the marketing of forest-related services (i.e. watershed management, carbon capture and storage etc). (DoF, VIPA, NAB), 3.
- Establish quality and inspection facilities for wood and non wood forest product. (donors, VIQS, DOF; 1)
- Facilitate the implementation of bio-security systems (donor, Ind, NGOs, VQIS); 1
- Re-negotiate all trade agreements related to forest products ( DoT, DoFA, DoF); 1

### **31. Position forest products and services to be competitive in national and international markets and trades.**

- Develop and introduce financial and administrative incentive packages to make wood and non-wood forest product industries more competitive (MoF), 1;
- Gather and disseminate market intelligence/information, particularly on market opportunities for high-value processed products (Ind, DoT, MoF, VCCI), 2;
- Carry out economic analyses of timber production in natural and planted forests to determine the key-factors that can make forest industries more competitive (DoF, Ind), 2;
- Promote, publicize and showcase Vanuatu's forests and forest products (DoF, DoT)
- Promote a Vanuatu brand through niche and specialty forest products (DoT, Ind), 2;
- Encourage third-party certification and eco-labeling of forest products (forest management and chain of custody) to access high-end and high-price consumer markets (DoF, Ind, NGOs, DOI), 3;
- Market and promote Ni-Vanuatu forest operators and small-scale producers as skilled professionals nationally and overseas (Labor, Ind), 3.

### **32. Regulate the import and export of timber, logs and flitches.**

- Maintain the general ban on the export of logs and flitches from natural forests other than sandalwood and tree species that cannot be processed by companies in Vanuatu, subject to approval from the Council of Ministers (Gov), 1;
- Permit the import of logs and flitches subject to strict quarantine control (MALFFB, Ind), 2;
- Monitor and regulate the levels and grades of timber imports into Vanuatu with the aim to supporting the continued development of domestic production and processing (DoF, MoT), 2;
- Enable the export of logs and flitches from planted forests as an incentive to develop plantations subject to approval from the Council of Ministers (Gov); 3.

### **33. Expand the utilization of local timber as an economically valuable, durable and renewable commodity for housing and construction purposes.**

- Promote and utilize local timber more widely in construction (e.g. to reduce use of carbon intensive building materials) (MIPU, PWD), 3;
- Utilize coconut palm stems for timber production and facilitate the deployment of appropriate coconut sawmilling and processing techniques (Ind, DoF, Province); 3.

#### **O. Promotion and Investment**

### **34. Create a conducive business and investment environment to enable competitive forest industries.**

- Reduce costs of doing business (e.g. reduce forestry production costs by substantially) (Gov, URA, VCCI, VAT office), 1
- Examine and reform the processes and costs for obtaining forestry licenses (, DoF, provinces), 1;
- Enable VAT /DUTY exemptions and other trade agreements for priority forest industries (DoC, CoC, DoF), 1;
- Inform and prepare wood and non-wood processing industries for the gradual decrease in trade barriers and tariffs (to zero by 2013 at the latest) (DoF, Ind, MoE, VCCI, Dept trade), 1;
- Introduce and apply financial and administrative incentive schemes to encourage local and foreign investments in downstream processing (MoF, VIPA, Bank of Agriculture, Provinces, VNPF, VCA), 1
- Review the land lease system as it applies to forest plantations and develop efficient processes for assisting potential investors to identify and secure land leases (DoL, DoF, Community, Landowners, Province, Ind, SLO), 2
- Establish a negotiating team to secure land suitable for plantation development for licensees or other investors (DoL, VIPA, DoF, province, chiefs, landowners), 2.
- Examine and reform the process & costs of obtaining licenses & ensure license terms & conditions are appropriate to attract investment.(DoF, DoL, landowners, province); 2

#### **P. Local Ownership and Involvement**

### **35. Improve the access of Ni-Vanuatu to forest industries.**

- Limit the employment of expatriates in forest industries to those situations where experienced suitable Ni-Vanuatu personnel are not available (VIPA, Labour), 2;
- Facilitate and promote Ni-Vanuatu involvement, ownership and participation in forestry activities (VIPA, DoNVB, CCI, VCA), 2;
- Improve access to credit for forest industries to Ni-Vanuatu business people and investors (Banks, Ind, other credit facilities), 2.
- Encourage joint-venture partnerships (DoF, Ind, LO); 2



## Finance

### Specific Objectives

- The forestry sector is efficient, well organized and resourced (both financial and human).
- The forestry sector is a primary source of income generation.

### Q. Forestry Development Financing

#### **36. Allocate sufficient funds to DoF and forestry sector in order to adequately carry out legislative responsibilities and to ensure the sustainable management of forests.**

- Allocate funds according to the DoF's proposed budget (MoF), 1;
- Allocate sufficient funds to other stakeholders to undertake forestry operations and activities (DoF, Ind), 1.

#### **37. Establish a forestry project fund for the purpose of financing priority activities and initiatives.**

- Review and reform the operation of the Forest Fund (MoF, DoF), 2;
- Identify and promote the priority activities to be funded under the Forest Fund (DoF) 3

#### **38. Establish a Biodiversity Conservation Fund (BCF) to support biodiversity conservation activities related to Forests.**

- Establish a system of conservation taxes to provide for the establishment and maintenance of protected areas (DEPC, DoF, donor, Ind);
- Develop mechanisms to fund conservation areas and compensate landowners to offset their resulting opportunity costs (DEPC, Province, NGOs, DoF, Donors), 2;
- Establish and manage a Biodiversity Conservation Fund BCF (DEPC, DoF), 3.

#### **39. Establish a forest and climate change fund**

- Develop procedures and protocols governing the establishment and operation of the F&CCF (NAB, DoF); 2
- Develop priority activities to be supported by the F&CCF (NAB, DoF); 2

#### **40. Contribute a portion of Industry revenues to the development of the sector.**

- Establish mechanisms for industry to reinvest in the forestry sector (VIPA, DoI), 2;
- Monitor the financial and investment contribution of business and industries to the national forest sector (MoF, NSO), 2;
- Reinvest in the forestry sector through financial and administrative incentives (i.e. VAT/ Duty exemptions) (Ind, Gov), 2.

#### **41. Establish credit and financing opportunities for forestry enterprises.**

- Establish long-term, low-interest financing and credit programs for local farmers, catering for the particular needs of forest producers (AgB (and other financial institutions), DCNVB, VNPF, CoA, Donors), 1;
- Establish links between banks and forest sector actors (DoF, DoI, Ind), 1;
- Facilitate the establishment of a Forestry Bank with support from foreign investors (e.g. China) and develop and promote alternative means and facilities for securing forestry

development loans and credit (Credit providers, Ind, DoF, VIPA).

**42. Coordinate donor partners' contribution to the financial capital available to the forest sector.**

- Seek and coordinate donor support to the forestry sector (Donors, DoF, Province, NGOs), 1;
- Increase donor support to the forestry sector (Donors), 1;
- Allocate donor support to the Government's strategic forestry sector directions (Donors), 2.

**R. Forestry Sector Investment**

**43. Develop and promote forestry sector investment opportunities for private and institutional investors**

- Provide long-term and low-interest credit facilities and schemes for forest producers(VNPF, DoF, MoF, donor), 1;
- Provide financial and administrative incentives to encourage foreign investment in the forestry sector(VIPA, Gov), 2;
- Encourage international investment in Vanuatu forest carbon projects (NAB, VIPA, DoPA, Province), 2;
- Explore the potential of forestry projects in Vanuatu under international financing schemes (e.g. Clean Development Mechanism and REDD+)(DNA, NAB), 2.

**44. Reduce costs of doing business.**

- Introduce competition in the fuel, electricity and stevedoring sectors to generate competitive market prices for these commodities (URA, Stevedores), 1;
- Improve enabling conditions<sup>5</sup> for forest investment. VIPA, DOF, DOI,Province

**S. Forestry as a Source of Income**

**45. Vigorously promote forestry as a primary income generating activity throughout Vanuatu.**

- Develop income generating programs for women and vulnerable groups in forest management and utilization (DoF, DoWA, VNCW), 1;
- Establish mechanisms to derive local income from forest products (DoF, Ind, Provinces), 1;
- Assess site-specific economics of different wood and non- forest species (DoF, Ind), 2;
- Conduct cost-benefit analysis on various forest-related businesses and industries (Ind,

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Streamlining legislation, minimizing bureaucracy/red tape, utility costs, favorable policies etc



Academia), 2;

- Encourage cultivation of priority forest species as village-based means of income generation (DoF, Ind), 2.

#### **T. Royalties, Fees and Charges**

#### **46. Collect annual license fees from all operators according to the maximum output permitted under the license.**

- Charge License Application Fees for new licenses (designed to cover the administrative costs of processing the license application) (DoF, MoF), 1;
- Charge License Application fees for harvest amounts over 500 m<sup>3</sup> (including natural and planted forests) (DoF), 1;
- Charge and collect Application Fees of 1 million vatu for all Timber Rights Agreements; (DoF); 1
- Introduce research fees for international researchers conducting forest-related research in Vanuatu to be paid to the DEPC according to an appropriate schedule.(DEPC); 1

#### **47. Apply Forest Management Charges to all licensees.**

- Assess Forest Management Charges according to the volume of output (from planted and natural forests) (DoF), 1;
- Assess Forest Management Charges equivalent to 20 per cent of the log royalty for timber or additional rates to be specified for other products<sup>6</sup> (DoF), 1;
- Pay a portion of the Forest Management Charge into the Forest Fund for use by the DoF to cover costs associated with forest management (DoF, DoFi), 3.

#### **48. Register all forest product-processing facilities with the Department of Forests.**

- Pay a registration fee according to the class of processing plant as defined by a fee schedule. This fee is intended to cover DoF costs in operating its Timber Inspectorate. (Ind, DoF), 2.

#### **49. Collect royalties for all forest resources.**

- Review log royalties (for landowners) and establish guiding prices for species and grades with due regard for the location and accessibility of the logging area, species involved, their quality and end use (DoF, Llandowners,Ind, province), 1;
- Regularly monitor royalties paid to landowners (DoF), 1;
- Negotiate royalties for each utilization agreement between the licensee and landowner, but these shall not be less than the minimum royalties established by the Forestry Act. (DoF, province, landowners), 1;
- Develop and assess royalty valuation and collection mechanisms for "Community Carbon Credit Schemes" (NAB, DNA, USP), 2.

#### **50. Pay an annual holding fee to landowners.**

- Negotiate an annual holding fee between the licensee and the landowners as specified in the utilization operations agreement. The fee will be paid for each area held under a utilization agreement, whether or not logging takes place. It will be based on the area and resources covered within the agreement area (DoF, Ind), 1.

## Institutional Setup

### Specific Objectives

- The forestry sector is well governed and guided by effective legislation and strong compliance.
- The forestry sector is well coordinated and collaborates with other sectors.

### U. Sectoral Administration

#### 51. The National Government is responsible for regulating and administering the forestry sector in Vanuatu.

- Develop and enact forestry sector legislations, regulations and policies (DoF, COM)
- Establish strategic directions to govern the use and management of natural resources (DoF, forestry stakeholders), 1;
- Comply with international treaties and obligations related to the forestry sector (DoFA, DoF, Ind, DEPC), 1;
- Review the structure and financial arrangements of the Department of Forests and make necessary amendments and changes for its strengthening (DoF, MoF, PSC), 2;
- Consult with Provincial Governments on relevant forestry matters (DoF, Ind, landowners), 3.

#### 52. The Department of Forests is responsible for the management of forestry sector activities in Vanuatu.

- Administer and enforce the Forestry Act, its Orders and Regulations (DoF, province, Ind), 1;
- Establish policies plans, procedures to govern forestry activities (DoF, stakeholders), 1;
- Prepare budgets to support the development of the forestry sector (DoF, stakeholders), 1;
- Report annually to the Minister and Parliament on operations and financial management of the forestry sector (DoF), 1;
- Manage Government assets (DoF), 1;
- Perform a negotiation role among various stakeholders (DoF), 1;
- Intervene in forest operations and activities to ensure the sustainable use of resources and the preservation of Ni-Vanuatu resource heritage (DoF, VKS, ICC), 3;
- Encourage and facilitate the work of key farmers to educate others (DoF), 1;
- Inform and communicate with stakeholders on relevant forestry sector issues (DoF), 1;
- Coordinate forestry activities in the islands through the development of provincial and island forestry plans (DoF), 1
- Recruit talented and competent Ni-Vanuatu forestry officers (DoF), 1;
- Establish forest farmers associations and cooperatives (DoF, COOP), 1;
- Develop procedures to protect and maintain the safety and welfare of forest officers and staff (DoF), 1;
- Accurately and fairly represent the views, concerns and capacities of Vanuatu's forestry sector regionally and internationally (DoF), 1;
- Define the rules and process for the use of forestry staff as technical consultants to external projects and programs (DoF), 1;

- Develop forestry stations in each Province and assign officers in proportion to the level of forestry activity in that Province (DoF), 2.

### **53. Establish mechanisms to provide sound advice to Government on forestry issues.**

- Establish a multi sectoral representative body to monitor the implementation of the National Forest Policy (DoF)
- Establishment of a Forestry Board to provide advice to Government on forest-related issues (Gov), 1;
- Advise the Minister responsible for forestry on forest policy, legislative matters, and sustainable forest management (DoF), 1;
- Develop policy papers for consideration and endorsement by the Council of Ministers (DoF), 1;
- Review the terms of reference, responsibilities and duties of the Forestry Board (Gov), 2.

### **54. Improve the administration of forestry stakeholders.**

- Review the organizational structures and administrative capacities of forest stakeholders (DoF, Academia, Ind, NGOs), 2;
- Provide regular updates to DoF on thematic funding areas and report on projects financed and technically supported (Donors); 1
- Collaborate with DoF on the planning & implementation of forestry sector programmes and projects, and report regularly on progress (NGOs); 1
- Update the DoF regularly on their activities in the forestry sector (Ind, Farmers), 1;
- Protect the welfare and safety of forestry stakeholders (All), 1;
- Consult frequently with the DoF and others in regard to administrative processes and weaknesses (All), 2;
- Organize and restructure stakeholders through technical assistance and advice as required (DoF), 3.

## **V. Sector Collaboration and Cooperation**

### **55. Strengthen cooperation and collaboration among all forestry sector stakeholders.**

- Initiate forestry development round table meetings to foster improved cooperation among forest owners, forest users, local administrations (provincial, community/traditional) and support organizations (e.g., Vanuatu Investment Promotion Authority (VIPA), Chamber of Commerce (VCCI), Vanuatu Agriculture Development Bank (VADG), Department of Cooperative & Ni-Vanuatu Business (DCNVB), Government Departments, Quarantine, Customs, Trade) (Civil society, NGOs, Politicians), 1;
- Strengthen international and regional exchange and cooperation on all aspects of sustainable forest management (DoF, Gov), 2;
- Strengthen the communication mechanisms and coordination among all relevant stakeholders (MAQFF, Gov, Province), 2.

### **56. Develop and clarify the roles and responsibilities of different actors within the forestry sector.**

- Clearly define responsibilities in forest conservation, biodiversity conservation, and protected areas between DEPC and DoF (Gov), 1;
- Establish clear responsibilities and rules of coordination for the different aspects of climate change adaptation and mitigation (NAB), 1;
- Clearly define responsibilities in forest product marketing and trade (DoF, DoT, Dol), 1;

- Establish clear responsibilities and rules of financing and revenue collection within the forestry sector (DoF, MoF), 1.
- Clearly define responsibilities for agroforestry, silviculture and agriculture as they relate to forestry (DoF, DARD, MoL, DLS); 1

#### **57. Clearly define the responsibilities for Land Use Planning as it relates to forestry ;**

- Establish forestry-related associations to strengthen the implementation of forestry activities.
- Promote forestry associations (e.g. cooperatives) where landowner groups can take equity in planted forest establishment (DoF, landowner, DCNVB, VCCI, Province), 1; (DoF, MoL)
- Establish a Forestry Industries Association to represent the needs of its members to Government and to promote Vanuatu forest products. (DoF, Ind), 2;
- Establish a Vanuatu Foresters Association as an independent body representing professional foresters to improve its members' their professional development and provide an independent voice on forestry matters in Vanuatu (DoF, Farmers), 2.

#### **58. Devolve and decentralize forestry operations and implementation to communities and the private sector.**

- Establish conservation committees within Communities under consent of Chiefs (DEPC, DoF, Province), 1;
- Manage and regulate the devolution and decentralization of logging and forest management activities to local individuals and industries (DoF, Ind); 1
- Manage and regulate the devolution and decentralization of nursery & reforestation activities to local individuals and industries (DoF, NGO, communities); 1
- Manage and regulate the devolution and decentralization of forestry awareness activities to educational institutions, NGOs, communities and lead farmers (DoF, VAC, NGOs); 1
- Manage and regulate the devolution and decentralization of forestry research activities to research institutions (DoF, VARTC, academia); 1
- Strengthen the Technical Advisory Groups (TAG) at provincial level (DoPA, Provinces), 2.

### **W. Equity, Rights, and Benefit Sharing**

#### **59. Equitably identify, determine and share forestry rights and benefits (across diverse users, products and services).**

- Establish mechanisms to permit the distribution of a proportion of forest revenues to the Provincial Governments (DoF, MoF, Provinces), 1;
- Protect the rights of landowners regarding the conservation and management of their forest resources (DoL, Province, DoF, DEPC, Ind), 1;
- Assist and Encourage Ni-Vanuatu owned forest business (DCNVB, Ind, Inv, DoT, NGOs, Province), 1;
- Increase the employment opportunities for Ni-Vanuatu in the forestry sector (Ind, Landowner, DoF, Province), 1;
- Identify future benefit sharing opportunities from forestry operations with landowners (DoF, Industry, NAB, Province, Government), 2;
- Incorporate joint ventures for enhanced benefits and equity for all forest sector activities (DF, Ind, landowners); 2.

- Establish and support Incorporated Landowner Groups in which landowner groups can take equity in afforestation, reforestation and other forestry ventures, on a profit-sharing basis. (DoF, Landowners), 2;
- Regulate forest carbon rights and their transfer (NAB, Gov), 2.

#### **60. Protect and document indigenous knowledge and rights regarding forests.**

- Identify, regulate and protect indigenous knowledge and rights relating to forests (VKS, DoF, Province), 2;
- Equitably share economic benefits from traditional indigenous knowledge on forests between the local knowledge owners and the knowledge user (VKS, DoNVB, DoF, Ind), 1.

#### **61. Compensate appropriately all undue damages to forests, operations, infrastructure, communities, cultural sites, industries and the environment.**

- Assess compensation claims at the first instance by the relevant authority (DEPC, DoF, VKS), 1;
- Facilitate compensation negotiations based on agreement by both parties or otherwise defer to court for further determination (DoF, SLO, Court), 2.

#### **62. Consider gender balance and gender equality in all forest operations and activities.**

- Improve the gender balance in the employment of forest and environment officers at all levels (DoF, Province, DEPC, Ind, DoWA); 1;
- Involve women in forest industries (Ind), 1;
- Provide extension and awareness programs particularly aimed at women (DoF, MoE, Ind, NGO, Province), 1;
- Involve women in all levels of forestry related decision making (all stakeholders), 1;
- Involve women in village-level forestry discussions and activities (Communities), 1;
- Incorporate views and concerns of women in forest planning (all stakeholders), 1.

### **X. Legislation, Enforcement, and Compliance**

#### **63. Develop, harmonize, and enforce forestry sector legislative frameworks.**

- Update all forest-related Acts & Regulations to ensure harmonization<sup>7</sup>(DoF, all), 1;
- Harmonize carbon right and transfer regulations with the objective to maximize benefits for landowners (NAB, SLO), 2;
- Harmonize land, forest, agriculture, environment and other related legislations (Gov). 3.

#### **64. Effectively monitor and enforce the forestry Act and National Forest Policy to ensure compliance.**

- Monitor and enforce compliance of all forestry operations against the standards, rules, and regulations for harvesting, post-harvest processes, and processing of commercial wood and non-wood forest products (incl. Sandalwood) (DoF, DoT, DEPC, Ind, province, community), 1;
- Establish mechanisms for the regular inspection of forestry operations and activities (e.g.

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<sup>7</sup> Review and update the Forestry Rights and Harvesting Act in accordance with this forest policy, incorporate other forest related acts and orders such as the Mobile Sawmill Act, and others. Review the system of forestry related license fees, permits, and royalties

processing plants). (DoF, Ind, province, Community), 1;

- Submit records and reports on forestry operations and activities (Ind), 1;
- Monitor and enforce all environmental, chemical and quarantine rules and regulations relevant to the forestry sector (Ind, DEPC, VQIS, Province), 1;
- Promote and encourage the use of local and traditional enforcement and monitoring practices (Communities), 1;
- Enforce forestry codes, rules, and regulations at farmer and community level (DoF, VPF, Provinces, Community leaders), 2.

**65. Undertake Environmental Impact Assessment for relevant forestry activities and operations.**

- Set and streamline guidelines for PEA and EIA preparation and approval procedures (DEPC, DoF), 1;
- Undertake a Preliminary Environment Assessment (PEA) for any forest development proposal or application (Forest user, DEPC, NGOs), 2;
- Undertake an Environmental Impact Assessment (EIA) before Timber Licenses are issued for harvesting of more than 5,000 m<sup>3</sup> per year and/or for planted forest programs > 25 hectares per year (Licensee, Inv, Province, Forest user, DoF, DEPC), 2.

**66. Regulate the collection and export of forest biological materials.**

- Develop and implement a permit system for collection and export of biological materials from forests (DEPC, DoB and the DoF), 2;
- Issue permits for forestry research (DEPC), 2;
- Issue permits for the export of forest biological materials (DoF, DEPC), 2.

**67. Minimize the impact of land disputes and land ownership issues on forest production.**

- Provide appropriate evidence about land ownership before applying for utilization agreements and permits for forest product harvesting (Landowner, DoL, Chiefs, Province), 1;
- Approve forest harvesting on lands with disputed ownerships only once all claimants agree to proceed (DoF, DoL, Licensee, Province), 1;
- Undertake all forestry operations according to the rulings of Land Tribunal Act or any other determination as approved by Customary Law and practices. (DoF, LT), 2;
- Suspend temporarily any forestry operations where disputes arise, and maintain the suspension while the dispute is discussed and resolved (DoF, Ind, community, police), 2;
- Deposit all royalties from areas subjected to unresolved land disputes into the Lands Department's trust account until land ownership has been resolved. (DoF, MoL, MoF), 2.

# Awareness, Training, Capacity Development, and Research

## Specific Objectives

- Forestry stakeholders are competent and qualified.
- The public is well-informed and educated on all forestry issues.
- The forestry sector is well guided by collaborative research and abides by internationally recognized standards.

## Y. Training

### 68. Provide adequate training for all forestry sector stakeholders.

- Critically examine training needs of forestry stakeholders and promote/ facilitate the most effective training systems<sup>8</sup> to meet these needs. (DoF, VNTC), 1;
- Forestry Department is to be registered as a training provider, and its officers to be accredited trainers. (DOF, VNTC)
- Organize competency based workshops to train industry personnel in the proper practices of forestry operations (VNTC, DoF, Ind, VAC, TVET), 1;
- Organize competency based training courses for Government personnel on forestry topics (DOF, PSC, VNTC, Scholarships), 1;
- Strengthen and further develop forestry training in the Vanuatu Agriculture College (MoE, DoF, Ind), 1;
- Organize technical trainings for landowners and farmers in all aspects of sustainable forest management, (DoF, Ind, DEPC, VAC, NGOs, Lead farmers), 2;
- Facilitate and enable the participation of Ni-Vanuatu in regional and international forestry training programs and study tours. (DoF, Ind), 2.

### 69. Secure adequate funds for training on forestry issues.

- Provide financial incentives for acquiring further education and training for industry and forest users (MoE, VAC, TVET, Gov, Ind, donors), 1;
- Establish and coordinate a forestry scholarship scheme to assist students, DoF and industry personnel to undertake professional forestry and management training (DoF, Ind, MOE, donors), 2.

### 70. Provide work experience in the forestry sector for trained stakeholders.

- Provide forestry apprenticeship opportunities for trained forestry stakeholders, especially for young people and other vulnerable groups (DoF, DoWA, MoE, TVET, Ind, VANWOD), 2.

### 71. Introduce forestry education in schools.

- Introduce forestry, environmental issues, and climate change issues in curricula for schools (MoE, CDU, NGOs, NAB, DoF, donors), 1.
- Train teachers on the effective introduction of forestry issues in schools (MoE, CDU, NGOs, NAB, DoF, donors), 1
- Develop forestry related training materials for use in schools. (MoE, CDU, NGOs, NAB, DoF, donors), 1

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<sup>8</sup> Priority training areas include: forest inventory techniques, cultural identities, values and rights of vulnerable forest users, agro-forestry, silviculture, forestry issues for women, forest fires, pests and diseases, timber preservation and occupational safety, sustainable forest management, assisted natural regeneration, planted forests, sandalwood management, climate change issues, eco-labeling, and responsibilities under environmental legislations.

## Z. Awareness

### 72. Conduct forestry awareness campaigns<sup>9</sup> across all levels of Vanuatu society.

- Raise awareness with farmers, landowners and communities on relevant forestry issues (DoF, NGOs and others), 1;
- Encourage and conduct forestry awareness programs specially tailored to women and vulnerable groups (DoWA, Province, NGO, DoF, VNCW, VANWOD), 1
- Develop information packages for industry and investors (DoF, Ind, VIPA), 1;
- Coordinate with relevant Government and non government agencies to conduct forestry awareness programs (Gov, NGO), 1;
- Organize forestry field days with communities (DoF, NGOs, donors, Provinces), 2;
- Organize annual "National Forestry Days"<sup>10</sup> (DoF, Provinces, NGOs), 2;
- Conduct field visits to forestry demonstration plots with farmers and communities (DoF), 2;
- Promote lead farmers and operators to undertake forestry awareness in communities (donors, VANWOD, DoF, NGOs)
- Develop and disseminate Radio, TV and DVD programs on relevant forestry issues (DoF, donors, NGOs), 2;
- Develop and disseminate pamphlets and posters on relevant forestry issues (DoF, donors, NGOs), 2;
- Form and support farmer networks for peer education activities (DoF, donors, Farmers), 2;
- Hold regular awareness meetings/briefings at the national level on various forestry-related topics (DoF), 2.

## AA. Research

### 73. Conduct targeted and applied research in all aspects of the forestry sector<sup>11</sup>.

- Develop a National Forest Research Plan to guide activities and financing of research stakeholders and donors (DoF, Ind), 1;
- Strategically allocate major forestry research programs to industry, donors and academia,

9 Priority forestry awareness topics include: the contents of agreements, permits, and licenses, forest-related policies and legislation, the role of trees and forests in climate change issues in communities and villages, forests and carbon rights, watershed management, forest conservation and integrated land management practices.

10 (National Forestry Days are nationally declared thematic days which include activities, awareness displays and media attention, tree planting, etc.)

11 Research priorities include:

- i. Provision of research backup and training required for the implementation of the planted forest program (DoF, Ind and Academia); 1;
- ii. Maintenance of existing plantation trials and dissemination of research results;
- iii. Research and documentation of value of non wood forest products and traditional medicines (academia, industry, Gov);
- iv. Research on opportunities for and systems of Agribusiness in Vanuatu;
- v. Extension of silvicultural knowledge of native commercial species and exotic species suitable for plantation development;
- vi. Improvement of seed handling, storage and nursery techniques;
- vii. Development of tree improvement techniques to increase forest productivity and conserve genetic resources;
- viii. Development of guidelines and manuals for productive community forestry, agro-forestry, and silvo-pastoral systems;
- ix. Establishment of permanent sample plots to monitor forest growth;
- x. Development of erosion control and site rehabilitation techniques;
- xi. Assessment of the sandalwood resource and studies on its cultivation;
- xii. Studies on the utilization of lesser used species and market acceptance;
- xiii. Testing and adaptation of techniques which improve wood processing through milling, seasoning, grading and timber preservation;
- xiv. Studies on the commercial cultivation and utilization of forest products other than timber, with particular emphasis on village-based activity;
- xv. Development of techniques for the protection of natural forests and plantations and their products from pathogens, insect pests, and fire;
- xvi. Research on impacts of climate change on forest resources and potential adaptation responses.



(DoF), 1;

- Set research priorities in collaboration with stakeholders, considering past research achievements; gaps in knowledge; existing research capability; and available funding from domestic and external sources (DoF, academia, donors) ,2;
- Develop cooperative research programs among the DoF, licensees, international research organizations (donors, Ind. DoF, Gov), 2;
- Coordinate with stakeholders regarding the use of research laboratories and facilities. (all stakeholders)
- Coordinate with stakeholders regarding the exchange of germ-plasm and distribution of genetically improved plant materials (DoF, Ind, Academia); 3

**74. Return to Vanuatu the outputs and results of scientific research undertaken in Vanuatu and share these equitably with resource owners.**

- Grant Research application approvals from the relevant authority prior to commencement of research (DoF, DEPC and VKS), 2;
- Ensure that free, prior and informed consent is granted by landowners before forestry research is undertaken. (DoF, DEPC and VKS), 2
- Enter into research agreements with resource owners and DoF, which define the return of results, financial ramifications, confidentiality and intellectual property (DoF, DEPC and VKS), 2;
- Develop mechanisms and protocols for the recognition of proprietary Vanuatu forest biodiversity that has been shared regionally or internationally (DoF, DEPC), 2;
- Develop processes for sharing of information and data according to international standards (DoF, NSO), 2.

## Implementation Process

The success of this national forest policy depends on its implementation.

According to FAO (2010) certain factors will ensure effective policy implementation:

- i. Strong and professional communication and sufficient capacity building for participating in the follow-up implementation is crucial;
- ii. The new forest policy and the outline of its implementation strategy should be officially adopted at high level of Government, so as to commit and guide those sections of Government necessary for its implementation. Key non-governmental stakeholders should likewise formally express their commitment to the policy and the respective responsibilities for implementation wherever possible;
- iii. Forest policy is there to be used to guide in daily practice. An institutional arrangement for maintaining a continuous dialogue is essential for effective follow-up implementation of the new policy, its operational fine-tuning, and its adaptation over time.

It will be important to **communicate** the new forest policy and its implementation strategy to all stakeholders as well as society in general, once it has been approved by the Council of Ministers. To avoid the possibility that this forest policy collects dust on the shelves of Government Institutions, but will rather be implemented and thus filled with life, the following issues will have to be addressed immediately (FAO, 2010):

- i. **Aligning the institutional framework;**
- ii. **Amending** the forest-related **legislation;**
- iii. Developing and/or adjusting **concrete work plans and budgets** of the respective institutions (including communication and capacity building) for the implementation of the new policy.

Issues 1 and 2 should be started immediately, since they include change processes, which require some time, but they should be concluded no later than one year after Government approval of the Policy. The concrete work planning and budgeting (issue 3) can be conducted in parallel, but should be concluded earlier, no later than six months after Government approval of the Policy.

For the implementation of the forest policy, it will be important to maintain the momentum created during its development process and make best use of the stakeholder ownership achieved so far. Therefore, the Department of Forests needs to maintain the dialogue with other stakeholders through frequent communication and regular stakeholder meetings to assess the progress made in policy implementation. Formal stakeholder consultations should be conducted once a year.

In parallel, the policy implementation should be externally monitored once a year, and the results discussed at the annual consultations.

To oversee the dialogue, conduct the monitoring and organize the stakeholder consultations, a small stakeholder policy committee should be established under the leadership of the Director of Forests.

The implementation strategy of the new Forest Policy is not carved in stone, but rather a living concept, which should be amended and adapted if and when the need arises. The annual stakeholder consultations could well serve as a forum to address such adaptations and amendments, based on the results of the monitoring process.

Generally, a forest Policy has a lifetime of about ten years. A review should therefore be planned for 2020-2021.



The proposed implementation schedule for the Forest Policy is provided in Table 1.

**Table 1: Proposed implementation schedule**

Action	Time line
Approval of forest policy by Council of Ministers	11/2013
Communication to stakeholders and general public	12/2013
Alignment of institutional framework <ul style="list-style-type: none"> <li>- Definition of roles and responsibilities of different Government departments</li> <li>- Departmental restructuring and resourcing</li> <li>- Capacity building</li> </ul>	11/2013 - 09/2014
Amendment of legislation	11/2013 - 09/2014
Work planning & budgeting	02/2014-4/2014
Establishment of stakeholder committee	05/2014
Monitoring of policy implementation (repeated annually)	09/2014
Stakeholder consultation (repeated annually)	10/2014
Planning for forest policy review	11/2020
Forest policy review	2020-2021

# Appendices

## Appendix 1: Definitions<sup>12</sup> of forest-related terms

### Afforestation

Establishment of forest plantations on land that, until then, was not classified as forest. Implies a transformation from non-forest to forest (FAO, 2000).

or

Direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or human-induced promotion of natural seed sources (UNFCCC, 2001).

### Agroforestry

A land-use system in which woody perennials (trees, shrubs, palms, bamboos) are deliberately used on the same land management unit as agricultural crops (woody or not), animals or both, either in some form of spatial arrangement or temporal sequence. In agroforestry systems, there are both ecological and economic interactions between the different components (ICRAF, website).

### Biological diversity (or Biodiversity)

The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (CBD, 2002).

### Carbon offset

The result of any action specifically undertaken to prevent the release of, and/or to remove from, carbon dioxide into the atmosphere in order to balance emissions taking place elsewhere (ITTO, 2002).

### Carbon sequestration

Process by which the tree or forest absorbs carbon dioxide from the atmosphere (GoV 2000: FRTHGA).

### Carbon stock

The quantity of carbon in a "pool", meaning a reservoir or system that has the capacity to accumulate or release carbon (FAO, 2006; 172).

### Carbon right

In relation to land, means a right conferred by agreement nor otherwise to the legal, commercial or other benefit of carbon sequestration, conservation or substitution by any existing or future tree or forest on the land (based on GoV 2000: FRTHGA).

### Commercial Forest

A forest area defined to be harvestable, based upon slope, landform and other factors (Baldwin & Mathias, 1993)

### Community forestry

A cost-effective approach to conserve threatened forest ecosystems while responding to rural livelihood needs in a socially just manner. Community Forestry aspires not only to contribute to forest restoration and conservation, it also strives to encourage the protection of indigenous,

<sup>12</sup> See also: Proceedings of Second Expert Meeting on Harmonizing Forest-Related Definitions for Use by Various Stakeholders, 2003, FAO, Rome, Italy.

forest-oriented cultures and societies (Community Forestry International, website).

### **Compensatory Replanting**

Re-planting in compensation for the removal of forest species.

### **Crown classes**

Crown classes are based on average crown diameter of canopy trees

Large-crowned	> 15 m
Medium-crowned	8-15 m
Small-crowned	< 8 m

(GoV 1993:VANRIS)

### **Deforestation**

The conversion of forest to another land-use or the long-term reduction of tree canopy cover below the minimum 10 percent threshold (FAO, 2000).

### **Degree of disturbance**

The degree of disturbance is defined by the percentage of original forest left:

Slightly disturbed	dense remnants	65 % or more left
Moderately disturbed	medium dense remnants	40 %
Very disturbed	sparse remnants	10 %

(GoV 1995: VANRIS)

### **Exotic tree species**

Tree species not native to Vanuatu.

### **Forest**

Different definitions for the term forest have been in use in Vanuatu, responding to the instruments of the forest resources assessment undertaken:

- An area covered with trees with a canopy height greater than 10 m, crowns touching or overlapping, and no groundlayer visible on airphotos (GoV 1993: VANRIS);
- Areas of natural vegetation with a predominant canopy height of over 10 meters (Baldwin & Mathias, 1993);
- Any area of Vanuatu predominantly covered by trees, and includes areas planted with trees, except where such trees are for agricultural purposes (Forestry Act, 2001);

The following definition for the term forest is proposed:

### **Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ.**

It does not include land that is predominantly under agriculture or urban use. Forest is determined both by the presence of trees and the absence of other predominant land uses. Areas under reforestation that have not yet reached but are expected to reach a canopy cover of 10 percent and a tree height of 5 meter are included, as are temporarily unstocked areas, resulting from human intervention or natural causes, which are expected to regenerate.

**Includes:** Areas with bamboo and palms provided that height and canopy cover criteria are met; forest roads, fire breaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of scientific, historical, cultural or spiritual interest; windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 hectares and width

of more than 20 meters; plantations primarily used for forestry or protected purposes; such as rubberwood plantations and cork oak stands.

**Excludes;** tree stands in agricultural production systems, for example in fruit plantations and agroforestry systems. The term also excludes trees in urban parks and gardens (FAO, 2006: 171);

or:

**Minimum area of land of 0.05-1 hectare with tree crown cover (or equivalent stocking level) of more than 10-30 percent with trees with the potential to reach a minimum height of 2-5 meters at maturity in situ.**

A forest may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground or open forest. Young natural stands and plantations which have yet to reach crown density of 10-30 percent or tree height of 2-5 meter are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest (UNFCCC, 2001).

### **Forest conversion**

The conversion of natural forest to planted forest stands (coniferous, hardwoods), agricultural or other uses. The conversion causes ecological changes and affects the further carbon balances of forests.

### **Forest degradation<sup>13</sup>**

The reduction of the capacity of a forest to provide goods and services (Simula, 2009)

### **Forest harvesting**

Cutting and removal of timber for the purpose of timber production (GoV 2000: FRTHGA)

### **Forest plantation**

A forest established by planting and / or seeding in the process of afforestation or reforestation. It consists of introduced or in some cases, indigenous species (FAO, 2000).

### **Forest rehabilitation**

A management strategy applied in degraded forest lands that aims at re-establishing site productivity and protective functions and many of the ecological services provided by a functional forest or woodland ecosystem (ITTO, 2002)

### **Forestry right**

Interest in the land pursuant to which a person having the benefit of the interest is entitled to enter the land and do all or any of the following:

- a) to establish, maintain and harvest a crop of trees on the land
- b) to construct and use such buildings, works and facilities as may be necessary or convenient to enable the person to establish, maintain and harvest the crop;
- c) to claim a carbon sequestration right in respect of the land; or
- d) to claim a combination of the interests and rights referred to in paragraph a (GoV 2000: FRTHGA).

### **Fresh water swamp communities**

A complex comprising thicket, scrub and herbaceous vegetation, subject to permanent or near inundation. Where possible, mapped as woody or herbaceous (GoV 1993: VANRIS)

<sup>13</sup> There is as yet no commonly agreed upon definition rather than this generic one.

**Grassland or herbaceous community**

A complex comprising grasses, sedges, herbs and lower woody shrubs, generally with a height of less than 1.5 m, and the possible presence of scattered trees (GoV 1993: VANRIS)

**Invasive alien species**

Alien species, which becomes established in natural or semi-natural ecosystems or habitats. It is an agent of change and threatens native biological diversity (CBD, 2002).

**Low Forest**

Forests with a canopy height of 10-20 m (GoV 1993: VANRIS)

**Mangrove communities**

Complex comprising low trees, shrubs and herbs, subject to tidal inundation (GoV 1993: VANRIS)

**Midheight Forest**

Forests with a canopy height of 20-30 m (GoV, 1993: VANRIS)

**Native species**

A species that occurs naturally at a given location or in a particular ecosystem (CBD, 2002: 154).

**Natural forest**

A forest composed of indigenous trees and not classified as forest plantation (FAO, 2000).

**Natural regeneration**

Natural succession of forest on temporarily unstocked lands that are considered as forest (FAO, 2000).

**Net-Deforestation**

Annual area of deforestation of natural forest minus annual replanting through afforestation and reforestation.

**Non-timber forest products**

All products except timber, including products from trees, plants and animals in the forest area, includes fuelwood and charcoal.

**Non-wood forest products**

All products except timber and wood other than timber, including products from trees, plants and animals in the forest area, excludes fuelwood and charcoal (ITTO, 2002).

**Other wooded land**

Land that has either a crown cover (or equivalent stocking level) of 5 to 10 percent of trees able to reach a height of 5 meter at maturity; or a crown cover (or equivalent stocking level) of more than 10 percent of trees not able to reach a height of 5 meter at maturity; or with shrub or bush cover of more than 10 percent (FAO, 2000).

**Permanent forest estate**

Land, whether public or private, secured by law and kept under permanent forest cover. This includes land for the production of timber and other forest products, for the protection of soil and water, and for the conservation of biological diversity, as well as land intended to fulfill a combination of these functions (ITTO, 2002).

**Planted forest**

See Forest plantation

**Reforestation**

Establishment of forest plantations on temporarily unstocked lands that are considered as forest. (FAO, 2000)

or

Direct human- induced conversion of non-forested land to forested land through planting, seeding and/or human-induced promotion of natural seed sources, on land that was forested but has been converted to non-forested land. For the first commitment period (2008-2012) reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on December 31 1989 (UNFCCC, 2001).

**Scrub**

Vegetation form with a dense to open layer of shrub less than 3 m tall (GoV, 1993: VANRIS)

**Soil carbon**

Organic carbon in mineral and organic soils (including peat) to specified depth chosen by a country and applied consistently through the time series (FAO, 2006).

**Stakeholders**

Any individuals or groups who are directly or indirectly affected by, or interested in a given resource (in this case forest) and that have a stake in it (ITTO, 2002).

**Sustainable Forest Management (SFM)**

The stewardship and use of forests and forest lands in a way, and at a rate, that maintain their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems (UNFF, 2007).

**Thicket**

A vegetation form with a dense canopy of poorly formed trees and/or other arborescent life forms between 3 and 8 me height, with no ground layer visible (GoV 1993: VANRIS)

**Timber plantation**

An area of land on which the predominant number of trees forming, or expected to form the canopy are trees that have been planted (whether by sowing seed or otherwise) for the purpose of timber production (GoV 2000: FRTHGA).

**Tree**

Includes a shrub, palm or bush of any kind and of any age, and any sapling, seedling or reshoot (Forestry Act, 2001).

**Woodland**

Forests with trees with separated crowns, height of less than 10 m, and a clearly visible ground layer of herbs and grasses (GoV 1993: VANRIS)



## Appendix 2: Estimation of annual allowable cut and Island Policy Focus

Table 2: Estimation of Annual Allowable Cut

Island	Total volume <sup>a</sup> , Pacmerch <sup>b</sup> species, (‘000 m <sup>3</sup> )	Commercial Pac- merch <sup>b</sup> volume <sup>a</sup> , (‘000 m <sup>3</sup> )	NFI Sustainable Yield <sup>a</sup> (m <sup>3</sup> /year)	Adjusted <sup>c</sup> Sus- tainable Yield (m <sup>3</sup> /year)
Banks/Torres	1,857	487	9,700	9,700
Santo/Malo	5,079	1,197	23,900	30,000
Ambae/Mae- wo	818	0	0	3,500
Pentecost	325	0	0	1,800
Malakula	1,635	328	6,500	6,500
Ambrym	214	0	0	1,000
Epi	3	0	0	1,000
Efate	497	271	5,400	6,500
Tanna/Ane- ityum	337	50	0	2,000
Erromango <sup>d</sup>	2,455	302	6,000	6,000
All Vanuatu	13,220	2,635	51,700	68,000

Notes:

- Figures from Appendix 2 of Incoll report using the minimum economic yield of 10 m<sup>3</sup>/ha.
- “Pacmerch” species i.e. those species generally accepted commercially in the Pacific.
- Adjusted figures include volumes in areas less than 10m<sup>3</sup>/ha, estimates of forest patches within agricultural areas, and a reduced allowance for loss of forest due to population growth.
- The figures for Erromango are unreliable and should be updated as a matter of priority. Particular attention should be paid to volume reductions for landform and slope.

**Table 3: Island Policy Focus**

Island	Proposed Forest Policy Focus	Comment
Ambae and Maewo	About 6,900 ha of natural forest suitable for sustainable forest management and estimated sustainable yield of 3,500 m <sup>3</sup> . Prospect for mobile mills and shipment of 2,000m <sup>3</sup> logs for processing on Santo.	Very little infrastructure. High population but widely distributed. Steep slopes.
Ambrym	Has 2,900 ha of natural forest suitable for sustainable forest management area and estimated commercial volume about 85,000 m <sup>3</sup> . Can support 4-5 mobile mills cutting 1,000 m <sup>3</sup> annually. Prospects for agroforestry and wood carving. Tourism potential.	High, traditionally oriented population, increasing need for additional shifting cultivation areas. Famous carvers.
Aneityum	Has only small an area of natural forest suitable for sustainable forest management. Has 800 ha of community-based pine plantation. Main focus will be community forestry and extension of plantation. Future prospects for a small community sawmill, reforestation with high value timber species and sandalwood plantations.	Little infrastructure, low population, need for afforestation and special measures for erosion control.
Aniwa and Futuna	Main focus will be sandalwood and agroforestry.	Limited timber resources available
Banks and Torres	Banks has 9,500 ha and Torres has 4,300 ha of natural forest suitable for sustainable forest management. Sustainable yield total of 9,700 m <sup>3</sup> /yr. Total allocation for mobile mills to 1,500 m <sup>3</sup> /yr plus shipment of 8,000 m <sup>3</sup> /yr of logs to Santo for processing. Need for coconut crab conservation areas in Torres. Fuelwood plantations and commercial plantations (2000 ha) on Vanua Lava.	Natural forests comprise relatively small size classes and with high proportion of Myristica. Very little infrastructure. Remote from markets due to high shipping costs. Some islands have high population pressure.
Efate	Proposed sustainable yield of 5,000 m <sup>3</sup> /yr from natural forests, mobile sawmill operations on agricultural patches to 1,500 m <sup>3</sup> /yr. Value-adding processing centre. Potential for plantation afforestation and agroforestry. Conservation area in central Efate.	Prime tourist destination, main urban population centre, considerable infrastructure, small area of commercial remnant natural forest. Large number of land disputes.
Epi	Prospects for limited number of mobile mills and development of conservation areas.	No DoF presence.
Erromango	An island where forestry will be the major industry. Most forests to be designated as production forests. NFI loggable forest volume of 302,000 m <sup>3</sup> . Priority for further forest inventory to provide a better estimate of sustainable yield. Island can support only 2 main timber licenses and some mobile mills. Potential for sandalwood plantations.	Extensive area of overmature tamanu forest and some remnant Kauri. DoF considers the NFI sustainable yield estimate and sandalwood volumes have been under-estimated.  Has low population, large areas of land with single landowners but many land disputes. Little infrastructure and shipping difficulties. Contains regionally important Kauri Reserve, which must be protected.

Island	Proposed Forest Policy Focus	Comment
Malakula	Sustainable yield of 6,500 m <sup>3</sup> /yr. Can support only one medium sized logging operation to 5,000 m <sup>3</sup> /yr plus small sawmills cutting scattered timber patches to 1,500 m <sup>3</sup> /yr. Light selective logging required. Good potential for plantation development (at least 3,000 ha) and agroforestry. Need for a mangrove management plan. Potential for ecotourism.	Medium population, limited infrastructure. Mostly low-yielding forest, heavy vine infestations and areas of cassis. High value placed on traditional forest uses including traditional carving. Contains more than 90% of Vanuatu's mangroves
Pentecost	Estimated harvesting volume 90,000 m <sup>3</sup> , estimated sustainable yield of 1,800 m <sup>3</sup> . Timber harvesting mainly by mobile mills. Potential for Agroforestry using multipurpose trees and kava production. Firewood production and conservation sites potential.	Very limited commercial forest, mostly steep and unsuitable for SFM. Areas with high population and intensive land use, low infrastructure.
Santo/Malo	Major focus for forestry in Vanuatu. Sustainable yield of 30,000 m <sup>3</sup> including 6,000 m <sup>3</sup> sourced from agricultural areas not included in NFI. Main focus for West coast will be low volume, small scale operations and sandalwood operations. East and South coast, main focus for forest industries, logging of natural forest, major potential for plantation reforestation (at least 9,000 ha), village-based production of timber and other forest product, and intensified agro-forestry production systems. Major focus for forest research.	Main timber processing centre. Contains nearly half the available timber in Vanuatu. Location of IFP forest research plantation and private whitewood plantations. Protected area at Big Bay; Large potential for tourism development, increasing infrastructure, high intensity of land usage in eastern and southern coastal fringe. Continuing conversion of forest to agriculture.
Tanna	Small-scale commercial forestry using mobile mills. Need for extension programs to promote community forestry, sandalwood plantations and agroforestry.	High population density, little commercial forest, major tourist focus, developing infrastructure.
Other islands	Mobile mill operations for local supply of sawn timber; mainly no reforestation activities, increased multipurpose tree production in conjunction with gardening system, other forest produce.	

Both tables adapted from National Forest Policy Statement 1997

### Appendix 3: List of commercial timber tree species

Scientific Name	Local name	Importance in trade	In plantation program
<i>Adenathera pavonina</i>	Bisa, red bean	2	no
<i>Agathis macrophylla</i>	Kauri	1	no
<i>Alphitonia zizyphoides</i>	Huremi, waetwud	2	no
<i>Antiaris toxicara</i>	Milktree, melektri	1	no
<i>Bischofia javanica</i>	Nakoka, Javanese cedar	2	no
<i>Burckella obovata</i>	Naduledule	2	no
<i>Calophyllum neo-ebudicum</i>	Tamanu	2	no
<i>Canarium</i>	Nangai	1	yes
<i>Castanospermum australe</i>	Bean tree, black bean	1	no
<i>Dracontomelum vitiense</i>	Nakatambol	1	no
<i>Dysoxylum gaudichaudianum</i>	Stinkwood, stingwood	1	no
<i>Elaeocarpus floridanus</i>	Blu frut	2	no
<i>Endospermum medullosum</i>	Whitewood, Guinea basswood	1	yes
<i>Garuga floribunda</i>	Namalaus	1	no
<i>Intsia bijuga</i>	Natora, kwila, merbau	1	no
<i>Myristica fatua</i> , <i>M. fatua</i> var. <i>pap-uana</i>	Nandai, wild nutmeg	2	no
<i>Neonauclea forsterii</i>	Bokma, wud blong tamtam	2	no
<i>Palaquium neo-ebudicum</i>	Pencil cedar	1	no
<i>Pinus caribaea</i> var. <i>hondurensis</i>	Caribbean pine	1	yes
<i>Pleiogynium timorense</i>	Red nakatambol	2	no
<i>Pometia pinnata</i>	Nandao, taun	1	no
<i>Pouteria costata</i>	Komtri	2	no
<i>Pterocarpus indicus</i>	Nanara, New Guinea rosewood, Angsana, narra, amboyna	1	no
<i>Samanea saman</i>	Raintree	2	no
<i>Santalum austro-caledonicum</i>	Sandalwood, santal	1	yes
<i>Serianthes</i> spp.	Wael krismestri	2	no
<i>Swietenia macrophylla</i> King.	Mahagony	1	yes
<i>Syzygium malaccense</i>	Nakavika	1	no
<i>S. buettnerianum</i>	Wael nakavika	1	no
<i>Terminalia catappa</i>	Natapoa, Indian almond	1	yes

Source: DoF 1998: Timber Properties Handbook