

# FORESTRY IN VANUATU

## Prospects for Sustainable Forest Management

by Tony Bartlett

### Background

Vanuatu is an archipelago of some 80 islands spread over a distance of 1000 kilometres in the south-west Pacific. In Vanuatu, forests, land and people are inextricably linked together. The forests, although not as extensive as in some other Melanesian countries, are a vital part of the country's cultural heritage and contribute to the welfare and economic development of the people. The Government of Vanuatu is strongly committed to ensuring that its forests are managed on a sustainable basis.

Forests cover some 35% of the land area of Vanuatu. The forests are predominantly composed of tropical hardwoods, with *Endospermum*, *Antiaris*, *Calophyllum*, *Castanospermum*, *Instia* and *Terminalia* being the major commercial species. There are also some remnant stands of *Agathis* on some islands. All of the forests in Vanuatu are owned by custom land owners rather than by the government. Timber companies that operate in Vanuatu require a Timber Licence and a Business Licence from the government. They also require contract agreements with each of the landowners on whose land they wish to harvest timber.

Over the past few years many steps have been taken to ensure that forestry in Vanuatu complies with the principles of sustainable development. Some of these measures are beginning to show results while others will take some time to be fully implemented.

The Government of Vanuatu is currently receiving substantial assistance from AusAID in the natural resources sector. Over the past year two new five year projects have commenced: the Vanuatu Sustainable Forest Utilisation Project and the Vanuatu Land Use Planning Project. Both of these projects have a range of activities which focus on achieving sustainable management of Vanuatu's forests and natural resources. In addition AusAID funds the Principal Forest Utilisation Officer position in the Department of Forests, which has responsibility for controlling all the logging operations in Vanuatu.

### Sustainable Forest Management

The debate about what might constitute sustainable forest management exists in Vanuatu in a similar manner as in other countries such as Australia. All of the major stakeholders have their own views on the subject, but these vary considerably depending on whether you are a landowner, a timber company, a non government organisation, a politician or a government forester. There is a growing awareness of the issues amongst the politicians and the media, although thankfully not to the same level as in Australia.

In my opinion the main issues that impact on sustainable forest management in a country like Vanuatu are as follows:

- Knowledge of the forest resources
- Ensuring that the level of timber harvesting is sustainable
- Implementing effective land use and forest planning mechanisms
- Developing an awareness amongst land owners of the benefits available from forests and of the need to view forestry as valuable long term land use
- Identification of important conservation sites
- Ensuring that logging operations do not result in unacceptable damage to environmental values
- Ensuring that a satisfactory level of regeneration is achieved to provide forests for the future
- Provision of adequate and equitable returns to all stakeholders
- Political commitment to implement sustainable development policies

### **Forest Resources**

The major areas of commercial forest occur on the larger islands of Santo, Malakula, Erromango and Efate, with smaller areas on the islands of Ambae, Ambrym and Tanna. A National Forest Inventory was carried out in the early 1990's. The total forest resource is estimated at about 13 million m<sup>3</sup>. However only about 20% of the total forest resource is thought to be commercially available, owing to factors such as steep slopes, dissected landform, low sawlog volumes and cultural reasons. The average commercial sawlog yield is rather low by international standards at around 15 m<sup>3</sup> per hectare.

There is currently very little accurate data available on actual sawlog yields per hectare or on actual areas that have been harvested which makes it difficult to be confident about the accuracy of the forest resource estimates, but they are at least a good starting point. The Department of Forests now requires logging companies to carry out forest inventories before harvesting and intends to monitor more closely the predicted and actual harvested volumes.

### **Sustainable Level of Timber Harvesting**

A National Forest Inventory to identify the forest resources of Vanuatu was completed in 1993. The sustainable level of harvest from Vanuatu's forests has been estimated to be in the range of 38,000-60,000m<sup>3</sup> of logs per year depending on the assumptions that are used.

Large scale logging operations are focused on the islands of Santo, Efate, Erromango and Malakula. Mobile sawmilling operations occur throughout the country and are increasing in popularity. There are a total of 16 companies with Timber Licences issued under the Forestry Act. These licences allow for a maximum possible annual cut of 226,000 m<sup>3</sup> of logs, which would be about four times the estimated sustainable level of harvest for Vanuatu.

The actual harvesting levels have always been below the sustainable level. In 1994 about 44,000m<sup>3</sup> of logs were harvested in Vanuatu. In 1995 the production of logs decreased to about 33,000m<sup>3</sup>. This drop in production was mainly due to the fact that no logs were cut on Erromango and because production on Efate was reduced after existing contracts expired. It is anticipated that log production in 1996 will be about 35,000m<sup>3</sup> and that it is likely to increase in subsequent years, once sawmills have been built on Erromango and Malakula.

The main reasons why the companies have been cutting much less than their permitted level of cut are:

- the government has a policy of banning the export of all logs from Vanuatu and many companies with timber licences have not completed building their sawmills in Vanuatu
- some companies have difficulties in negotiating logging contracts with the landowners
- disputes about land ownership and boundaries restrict logging in some areas
- most companies do not have adequate skilled workers to enable them to meet the Code of Logging Practice requirements

### **Land Use and Forest Planning Mechanisms**

Effective land use and forest planning mechanisms are generally regarded as necessary requirements of sustainable forest management. In Australia it is generally a government role to implement these planning mechanisms as most of the forests belong to the government. In Vanuatu, where the forest estate is owned by a very large number of individual landowners, the traditional planning mechanisms may not be appropriate. For this reason and because the government has not had the institutional capacity to carry out the planning until recently, very little proper planning of forestry activities has been done to date. However, both land use and forest planning mechanisms have recently commenced within the Department of Lands and the Department of Forests.

The Vanuatu Land Use Planning Project has recently commenced the task of developing national, provincial and local land use plans throughout the country. The project will work with the various natural resource agencies, the provincial governments and the landowners to develop plans that can be used to guide various development activities. The task of preparing local land use plans with individual communities is the most ambitious task, but it is the level that is required if the plans are to have any real impact on agriculture and forestry which are the two largest land uses.

As part of the introduction of the Code of Logging Practice, all logging companies will have to prepare detailed plans of each harvesting area for approval by the Department of Forests. Logging planning will occur at two levels:

- strategic planning (broad scale annual planning that indicates where the companies intend to carry out logging and build roads)
- operational planning (detailed planning of each logging area)

The operational plans will show the planned locations of all new roads, any watercourse crossings, the log landings and skid track network as well as the locations of areas that are to be excluded from timber harvesting. The overall aim is to ensure that all logging is carried out in accordance with properly prepared plans and thereby to reduce the amount of unplanned disturbance within the forest.

### **Landowner Awareness**

Most landowners in Vanuatu have a well developed knowledge of the importance of their forests and quickly voice their opinion if they think that their land is being spoiled by forestry activities. However the land tenure system is not well defined and there are numerous disputes about who the true landowners are. In addition the landowners are often eager to share in the financial benefits that come from logging and may not fully appreciate the science behind forest management prescriptions.

Forestry is seen by many landowners as a means of converting their bush to agricultural land. The concept of sustainable yield, which may mean that their particular area of forest may not be able to be logged for thirty years, is difficult to get across to low income landowners. Very few landowners are insisting that the logging companies reforest their land after logging even though the companies are obliged to do so if requested.

The Department of Forests with the assistance of the Vanuatu Sustainable Forest Utilisation Project is now delivering awareness programs to the landowners. These programs concentrate on explaining the landowner's rights during logging, the full range of benefits available from forests together with the mechanisms for protecting them during logging and of the need to view forestry as a viable and valuable long term land use.

### **Conservation Planning**

In 1995, the government of Vanuatu introduced comprehensive legislation to allow for the establishment and management of National Parks. As yet there are no formal National Parks within the country nor is there any provision for a National Parks department. However there are a number of conservation reserves that have been set up under provincial government by-laws. Conservation reserves have been established on the islands of Santo, Erromango and Malakula.

The establishment of large conservation reserves is dependent on achieving a consensus amongst all of the landowners of the desirability of establishing such a reserve.

Mechanisms are being developed to establish a biodiversity fund to enable annual payments to be made to those landowners who agree to include their land in conservation reserves.

The Department of Forests has recently established a Conservation Unit which will try to ensure that forest conservation issues are properly considered. An attempt will be made to integrate conservation planning with logging planning, particularly at the strategic planning level. The work of the Conservation Unit will focus on:

- conducting ecological research, particularly research into forest regeneration processes
- conducting biodiversity assessments
- identifying potential conservation sites

### **Code of Logging Practice**

A Code of Logging Practice has been developed for Vanuatu during 1995 with the assistance of the Vanuatu Sustainable Forest Utilisation Project. This Code contains the standards and rules needed to look after the environment and ensure that Vanuatu's forestry operations are carried out in a sustainable manner. The logging companies were involved in modifying the South Pacific Regional Code of Logging Practice to suit the conditions in Vanuatu. At present a Forestry Order is being prepared by the Department of Forests and the Attorney General in order to provide the legal basis for the implementation of the Code. The intention is to introduce a requirement for all forest operators to be licensed and to define both major and minor breaches of the Code. Forest Officers are already beginning to explain the new Code requirements to forest operators and to issue instructions where harvesting practices don't comply with the Code. As could be expected, many of the logging companies will take some time to adjust, understand and accept all the new requirements.

Most of the logging operations in Vanuatu currently do not comply with all of the standards contained in the Code, due mainly to a lack of skilled forest workers. Logging planning in particular requires considerable specialist skills, but even the machine operators and tree fallers will require considerable retraining. The Department intends to introduce the new rules over the next year and to provide training programs to departmental and industry personnel with the assistance of the Vanuatu Sustainable Forest Utilisation Project.

In some places, where the Code of Logging Practice requirements for leaving buffer strips along watercourses have been implemented, the landowners have indicated that they do not agree with restrictions imposed by the Code. The trees that need to be reserved represent lost income to them and the environmental benefits may not be as important to them as the lost revenue.

## **Reforestation and Plantations**

The Department of Forests recognises the importance of achieving an adequate level of regeneration after logging. This regeneration can be in the form of natural regeneration or planted seedlings. Landowners can ask for a reforestation clause to be inserted in the logging agreement, if they want their land to be reforested after logging, although this doesn't often occur at present. The Department raises seedlings at its nurseries which are available to landowners who want to plant trees on their land.

At present the regeneration processes for some of the forest types in Vanuatu are not fully understood. Some forests regenerate quite well after logging while others do not regenerate adequately. These regeneration processes are now being studied as part of the Vanuatu Sustainable Forest Utilisation Project.

Plantations are an important component of ensuring that there will be an ongoing supply of forest products in Vanuatu. The Department of Forests has for many years assisted with the development of local supply plantations for communities throughout the country. In recent years there has been a large amount of work put into the development of a range of trial plantations at the Industrial Forestry Project on Santo. This work which was funded by the European Union has successfully demonstrated that commercial plantations can be established in Vanuatu.

Many companies are required to develop plantations as a requirement of their Timber Licences. Over the past couple of years, one logging company on Santo, Melcoffee Sawmills, has put considerable effort into the development of plantations of a highly valued native species, whitewood (*Endospermum medulosum*). To date they have established more than 200 hectares of plantations and they have plans to extend this to cover 2000 hectares.

Plantations are much more productive than an equivalent area of native forest. The level of harvesting that is currently occurring in native forests could be achieved on a sustainable basis from a plantation resource of between 5,000 and 10,000 hectares. If this were the case, the current annual harvesting which comes from over 3000 hectares of native forest would be achieved from only 200 hectares of plantations.

The major limiting factor which restricts the development of further plantations in Vanuatu at the present time is the lack of security for investors in the land needed to establish the plantations. The frequency of cyclones is a further disincentive, however many of the native species are relatively resistant to damage from cyclones.

## **Returns to Stakeholders**

Sustainable forest management will not be truly sustainable unless it provides adequate and equitable returns to all the stakeholders. In Vanuatu the main stakeholders are the landowners, the companies and the government.

Landowners in many cases see their forests as a source of cash income and often they do not have other viable sources of cash. They are becoming increasingly aware of the value of their forests and are demanding higher prices to be paid by the companies for any logs cut on their land. In most cases they see the forests as sources of current income rather than future income. Obviously if forest utilisation is to continue on a sustainable basis then landowners will have to be prepared to delay receiving some income from their forests until future years.

The companies that have established forest industries need to achieve a reasonable return on the funds that they have invested. The government is encouraging the companies to invest in more sophisticated and expensive machinery in order to implement the Code of Logging Practice, as well as to install additional seasoning and processing facilities in the sawmills in order to maximise the value of processed forest products in Vanuatu. Much of the forest resource in Vanuatu is scattered and is located in areas where there is poor existing access, which means that the costs of producing the logs are relatively high.

Finally the government must also receive sufficient returns from forestry to ensure that it has the necessary funds to monitor and control all forestry operations. At present the Department of Forests relies to an extent on the provision of funds from various donors as well as on government appropriations and the revenue it raises through a reforestation tax. Consideration also needs to be given to using forest revenue to fund the opportunity costs of environmental protection and to fund other development, particularly rural infrastructure.

A major study of the various components of the forest revenue system has just been completed with the assistance of the Vanuatu Sustainable Forest Utilisation Project. This will be used by the Department of Forests to recommend changes to the log royalties paid to the landowners and the fees and taxes paid to the government.

### **Political Commitment**

A strong political commitment to sustainable development is essential if there is to be any chance of achieving sustainable forest management. In Vanuatu, there is a very strong level of awareness and commitment amongst the politicians about the importance of managing the nation's forests in a sustainable manner. The government has maintained a ban on the export of logs and has been willing to take a leading role through the South Pacific Forum in introducing a Regional Code of Logging Practice.

During a recent high level visit by a delegation of Malaysian forestry personnel, various Ministers of the Vanuatu government reaffirmed their commitment to downstream processing of logs in Vanuatu and to the Code of Logging Practice. The current Minister responsible for Forestry is very keen to finalise a National Forest Policy Statement during 1996.

## **Conclusion**

Vanuatu has achieved considerable progress in recent years towards sustainable management of its forests. Timber harvesting is currently within the sustainable level of harvesting. A Code of Logging Practice has recently been developed and is now beginning to be applied to logging operations. Improved planning mechanisms now exist to make sure that forest development and conservation are balanced. Work has commenced on studying the regeneration of various forest types and logging companies are beginning to develop plantations.

Further work needs to be done on training all people involved in forestry, including the landowners, about the Code of Logging Practice. In order to encourage further investment in plantation development there is a need to develop more effective mechanisms of identifying land suitable for plantations and of establishing security of land tenure for the plantations.

Vanuatu should be recognised as a leader amongst the Melanesian countries in terms of being committed to achieving sustainable management of its forests. Australia is currently providing considerable assistance to Vanuatu in the forestry sector which will help the country to implement many of the remaining things that need to be done to achieve sustainable forest management.

## **Postscript**

The IFA is also providing assistance towards the establishment of the Vanuatu Foresters Association. IFA members in Vanuatu have helped the interim executive of the Vanuatu Foresters Association to prepare an application for funding under AusAID's Professional Agencies International Development Scheme.