Pacific Islands FORESTS and TREES

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Incorporating SPC/GTZ Pacific-German Regional Forestry Project and Pacific Forestry Updates

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From the Programme Desk

Bula vinaka to you all.

We have come to the end of another year, an opportune time for us to take stock and to reflect on our achievements over the last 12 months and also to look at ways in which we can make things better for our people in 2007.

It is with some sadness that we note that, as reported in our previous issue, this will be the last issue of the *Pacific Islands Forests and Trees* newsletter, making way for the Land Resources Division's integrated newsletter *LRD News*. The *Forests and Trees* newsletter has been around since the early 1980s, (see Flashback on page 14) and with a circulation of over 600 has provided an important medium for information sharing and exchange about forests and trees in the Pacific. We are very hopeful that *LRD News* will present a timely opportunity for us to better promote forests and trees as a vital component of sustainable land use and livelihoods for our communities, and to actively contribute articles in support of this.

Furthermore, the Institute of Foresters of Australia (IFA) is offering the use of their email broadcast facility and members-only website for Pacific foresters to access, share and discuss forestry information and news in the region. An article on this is included in this issue, and Pacific foresters are encouraged to use the facility offered by IFA.

As in previous years, the Forestry Programme faced many challenges that were peculiar to the Pacific region. Despite these, we are pleased to report that a significant number of our activities were implemented. We hope these activities will positively contribute to the efforts of our member countries and territories in trying to improve the welfare of their communities.

Some of the main activities that were implemented during the year were:

Country capacity enhancement in participating in the international forest policy process: A number of PICs participated in a regional Pacific training workshop to enhance countries' capacity to effectively engage in the international forest policy process. The workshop was organised in cooperation with GTZ through the Pacific-German Regional Forestry Project (PGRFP). It was deliberately scheduled at the beginning of the year, just before

INSIDE

QUOTE

"And to Adam He said, Because you have listened and given heed to the voice of your wife and have eaten of the tree of which I commanded you, saying, You shall not eat of it, the ground is under a curse because of you; in sorrow and toil shall you eat [of the fruits] of it all the days of your life."

Genesis 3:17

Programme Desk News

From the Programme Desk

UNFF6 in New York in February, to enable countries to become better prepared for the meeting. Workshop participants from Fiji, PNG, Samoa, Solomon Islands and Vanuatu represented various government agencies, including agriculture, forestry, finance and foreign affairs. In addition, SPC was formally accredited as an observer at UNFF6, which further strengthened Pacific representation in this international forest policy dialogue.

Fiji draft forest certification standards and draft forest policy: The Fiji draft forest certification standards were completed and stakeholder consultations undertaken. The standards will now undergo field testing before they are endorsed for application in Fiji. The draft forest policy was finalised after extensive stakeholder consultations and will now be submitted for government endorsement.

ITTO pre-project on wood industries' efficiency study: This pre-project entailed an assessment of the efficiency of the wood industries of Fiji, PNG and Vanuatu (the current ITTO members in the Pacific). An important product of the study was to formulate a project proposal for ITTO to fund the implementation of a number of recommendations to improve the industries in the three countries.

Portable sawmill assessment: An ACIAR-funded project to assess the success or otherwise of portable sawmills in PNG and Solomon Islands was supported. The main objective was to document lessons learnt and also factors of success for the effective application of portable sawmills by Pacific communities.

Coconut-wood utilisation training: Three participants from French Polynesia undertook a three-month training attachment with the Fiji Forestry Department in response to a recommendation made during a review of the community-based coconut-wood processing project in Tikehau, French Polynesia.

Assessment of the progress of implementation of logging codes: Independent assessment of the progress of implementation of logging codes in Fiji, PNG, Solomon Islands and Vanuatu was completed. The assessment provided a report on the standard of logging in the four countries and recommended actions for improvements.

We would like to take this opportunity to thank all of you, our readers and contributors of articles, for your support and assistance during the year, without which it would be impossible for us to accomplish all that we do. In particular, we would like to express deep gratitude to our member countries and territories, donors and collaborating partners for their generous support and contributions.

We wish you an enjoyable Christmas and a happy new year.

Sairusi Bulai, Adviser, Forests & Trees Programme, Land Resources Division, Secretariat of the Pacific Community

Country visit to Vanuatu and Samoa

(Extracts from a report of duty travel to Vanuatu and Samoa from 26 October to 5 November 2006)

In my new role as Regional Forest Genetic Resources Officer of the Forests and Trees Programme of SPC's Land Resources Division, I have been looking forward to the great opportunity of travelling to most, if not all, Pacific Island countries and territories (PICTs) to promote sound management, conservation and improvement of forest and tree genetic resources in the region.

Events happen quite fast in the Pacific, and before the end of October I was on my first duty travel, to Vanuatu and Samoa.

In Vanuatu I was accorded warm hospitality by no less than the Acting Director of Forestry, Ioan Viji, who met me late at night at the airport. The Forestry Department of Vanuatu has actively participated in South Pacific Regional Initiative on Forest Genetic Resources (SPRIG) project, from the first stage of implementation in 1997 until the completion of the second phase in June 2006.

The following day, after a lengthy discussion on various projects and activities of the Department focusing on its forest genetic resources conservation programme, I flew to Luganville on Espiritu Santo, where most of the SPRIG projects were established. My visit to Santo gave me the opportunity to observe the progress of various projects dealing mainly with the genetic improvement of three local priority species, namely whitewood (*Endospermum medullosum*), nangai (*Canarium indicum*) and sandalwood (*Santalum austrocaledonicum*).

Whitewood, with its exceptionally fast height and diameter growth and good, straight bole form with very

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Country visit to Vanuatu and Samoa

little taper on it, is showing the great potential any major plantation species needs to have. The SPRIG project has already achieved significant progress in the improvement of the species. Thus far, promising clones have been marked and identified (Figure 1 below)

Figure 1: Ken Robson of the Queensland Department of Primary Industries and Fisheries, who used to work for the SPRIG projects, provides a briefing in the provenance trial plot of whitewood at Shark Bay, Espiritu Santu, Vanuatu.

that are now being propagated for further testing. Whitewood timber, though it may not be as durable as mahogany, is suitable for light construction and is gaining popularity among the local people because of its ability to produce commercial-size timber in a very short rotation period. I met some foreign consultants who intend to conduct research on the improved silvicultural management of the species for enhanced plantation development in Vanuatu. From the Acting Director of Forestry I also learned that various business groups are interested in going into plantation development using whitewood as their major species.

The growth of nangai or canarium at the project site is relatively good, but the trees are still too young to make any conclusive observations. There is a need to know more about the

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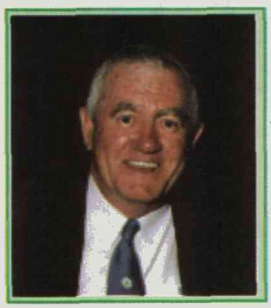
Institute of Foresters of Australia extends friendship to Pacific

Bula,

The Institute of Foresters of Australia (IFA) extends its best wishes to the forestry profession in the Pacific Islands.



Right: J. Adrian O'Loughlin Executive Director, IFA

The Institute has been trying for a long time to develop closer professional relationships with fellow foresters in its neighbouring region. However, there have been the usual restrictions of funding, distance, etc. that are well known to us all.

In August I visited Fiji and met with Sairusi Bulai, and I mentioned to him that we might be able to overcome some of these barriers. We now have modern electronic facilities such as the Internet, and IFA (a member-funded organisation) could provide administrative support using its own facilities.

I note that production of the newsletter *Pacific Islands: Forests and Trees* is being discontinued as of the end of this calendar year. It has been suggested that this is an area where the Institute could assist.

IFA has an excellent email communication system and sends out a weekly email bulletin to all its 1300 members throughout Australia (and to our overseas members). The Institute is pleased to offer its email broadcast facility to distribute forestry news in the Pacific region to all forest employees and employers, academics, government bodies and private enterprises. Sairusi has undertaken to arrange coordination of and contributions to the newsletter (your newsletter), and the Institute would be most happy to distribute it to all those who register their email address with us.

Another area where IFA might be able to provide some information to our Pacific friends is by granting honorary access to our 'Members only' website, which is normally accessible only to members of the Institute. The website contains the professionally peer-reviewed journal *Australian Forestry* (normal annual subscription is AUD240), a quarterly informal newsletter titled *The Forester*, access to IFA weekly national email bulletins, job vacancies, a members' bulletin board to discuss issues, and many more interesting facilities that are normally only available to IFA members. The public version of the website is available at www.forestry.org.au.

IFA is keen to have a friendly and professional relationship with our neighbours and we are open to other suggestions as to how this could be developed further. It is suggested that the above-mentioned services be provided free of charge for a 12-month trial period and then the matter be reviewed with no ongoing obligation to Pacific residents.

To start the process, please register your name and email address at ifa@forestry.org.au. The success of this arrangement will depend on a high registration rate of Pacific forestry personnel. I look forward to receiving advice of your details so that you may be registered to participate in this cooperative arrangement.

J. Adrian O'Loughlin, Executive Director, IFA, Email: ifa@forestry.org.au

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Country visit to Vanuatu and Samoa

Figure 2: Chipping of sandalwood in preparation for oil extraction at a private company in Port Vila, Vanuatu.

species' suitability, silvicultural requirements and productivity (nut production) before large-scale planting can be recommended. Thus, further research is required.

Research and development of sandalwood have been extensively covered under the SPRIG project in Vanuatu, from collections of seeds of known provenance to the establishment of seed and gene conservation stands, as well as sandalwood's suitability for vegetative propagation. This programme needs to be continued to ensure that adequate technologies are developed and made available to local industry for sustainable development of the species. Likewise, there is a need to conduct a nationwide inventory of the species, its natural distribution and the extent of plantings done so far, to determine the total resources of sandalwood available in the country. A strategy for conserving, managing and better utilising the genetic resources of the species has been formulated under the SPRIG project for adoption and implementation.

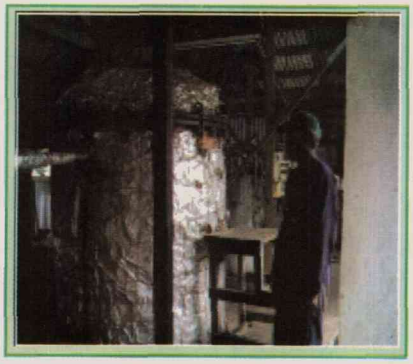

Figure 3: The distillation plant where oil is extracted from the sandalwood chips.

In Port Vila I had the opportunity to visit Sandalwood Estate, a large portion of which is now in the process of being developed into a sandalwood plantation as a promotion for prospective lot buyers, who will have an automatic share in ownership of the plantation. The species is being propagated by cuttings using the mist propagation system and mixed vermiculite and moss as the potting media. This is a new development, since there has been difficulty in the past in producing sandalwood planting materials by cuttings. The estate is planning to develop and plant about 100 hectares of sandalwood, in addition to the 5 hectares of older plantations already established.

Before my departure, Ioan and I visited a private company engaged in sandalwood oil processing. Using a simple distillation process and equipment (which requires minimal investment), the company can extract 25–30 litres of raw oil from about 580 kg of wood chips. The oil is sold for about 40,000VT per litre. The company also exports the used chips (Figures 2, 3 and 4). During our earlier chat, Ioan had told me that the Government of Vanuatu, through the Forestry Department, is currently implementing regulatory measures to avoid over-exploitation of sandalwood in the country.

Before leaving Santo, I made a side trip to the Butmas Community, a 40 km ride on an old logging road going to the centre of the island. The areas on both sides of the road are blanketed with thick Merremia vines, with hardly a tree of commercial value left in sight. The area was logged by a foreign company that left the country just a few years back. Luckily for Vanuatu, the company was unable to reach the thick virgin forests on the distant horizon; otherwise, the island could be completely devoid of its virgin forest cover by now.

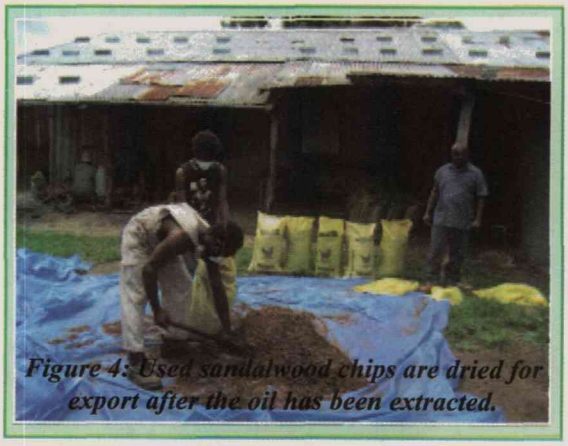

Figure 4: Used sandalwood chips are dried for export after the oil has been extracted.

Reaching the community, we were met by the village chieftain, who willingly showed us the farm cultivations. He has shown interest in planting trees, particularly whitewood – he has started interplanting his cultivation with whitewood seedlings.

The area is adjacent to the GTZ project area for "Sustainable Management of Natural Forests on a Community Level". In a later discussion with the Forestry staff assigned to the area, I learned that the community would be very interested in participating in an agro-forestry programme if given the proper assistance. This is a great opportunity to develop the

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Programme Desk News

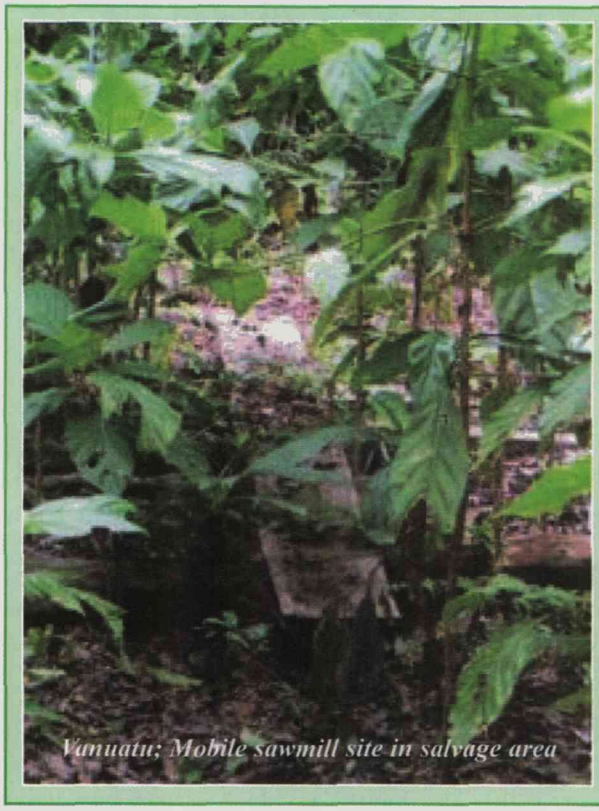
What difference have codes of logging practice made to the natural forests of the South Pacific?

Implementing sustainable forest management continues to be one of the most critical challenges facing wood-producing countries in the South Pacific. Responding to this challenge, many countries have developed and are implementing codes of logging practice for natural forests. Fiji took the lead as early as 1990, Papua New Guinea followed in 1996, Vanuatu in 1998, and the Solomon Islands published its revised code in 2002.

Delegates to the 1998 Pacific Islands Heads of Forestry Meeting recommended an assessment of the status of implementation of codes of logging practices in Fiji, Papua New Guinea, Solomon Islands and Vanuatu. The assessment review, published in 1999, showed positive results and indicated that, "Overall, while compliance is far from perfect, the individual countries should be encouraged to persevere and take heart that they have indeed come a long way."

If Fiji, Papua New Guinea, Solomon Islands and Vanuatu were on the right track to improving forest harvesting through the application of their logging codes in 1999, it is a fair question to ask where they stand now. A second assessment was therefore commissioned by SPC's Forests and Trees Programme in August 2006 and field visits to 12 sites in the four countries were organised in September and October 2006. Insights gained in the field were complemented by interviews with forestry officials and industry representatives. While the results of the review will be published as a working paper in early 2007, this article provides some preliminary results and food for thought.

If you assumed for a moment that there were no codes of logging practice, then without doubt you would think that logging in the South Pacific was of what has been termed a 'freestyle' nature. Uncontrolled logging would lead to unacceptably high damage to soil and residual stands, leave behind substantial quantities of logging residue and cause considerable environmental damage. Low occupational safety and health standards would result in high accident rates. Operators with low competency levels would push through the bush and not lean on any tree to make it fall against its natural lean. Logged-over forests, especially in the lowlands, would represent an invitation to anyone interested in agricultural crops such as oil palm.



Vanuatu; Mobile sawmill site in salvage area

Unfortunately, the picture described above is not too different from the current situation, although the codes of logging practice have been in place for many years and hundreds of operators have been trained. Why have we not seen more progress since 1999? What can be done to make a difference to the South Pacific's remaining natural forests – a resource that on some islands is disappearing with disturbing speed? The remainder of this article explores these two questions and provides some tentative answers that, as we will see, are neither a silver bullet nor a panacea.

Two serious problems are reinforcing each other: low capacities of public forestry agencies, and lack of political commitment to sustainable forest management. As a result, the capital stored in natural forests is being liquidated beyond the annual allowable cut. Due to the need to generate income, some governments and landowners are throwing caution to the winds. National codes of logging practice are viewed as an obstacle to generating much-needed revenue, and poorly funded and understaffed forestry agencies find it virtually impossible to monitor logging progress and quality. Many foresters have to rely on transport and/or housing offered by logging companies, which surely is a conflict of interest. Not surprisingly, law enforcement is weak, or the law specifies ridiculously low fines that might even act as an invitation to further breaches.

In general, companies, supervisors and logging operators are aware of

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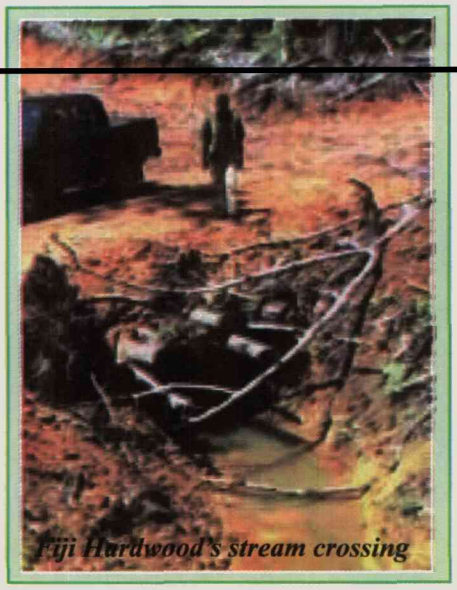
What difference have codes of logging practice made to the natural forests of the South Pacific?



Fiji Hardwood's stream crossing

national codes. There are some companies that try their best to follow the provisions by the book. However, the majority are either not aware of the individual provisions or key standards, do not understand them and/or just do not care – an unfortunate reality. Training has focused on skill development without the realisation that many operators have the skills but lack the attitude required to apply them. In their defence, incentives to log responsibly, and especially to build proper roads, are virtually non-existent.

Monitoring and auditing, while improving, continue to be a major weakness. Most countries have adopted a scoring system for assessing code compliance. The maximum score for full compliance with national codes is 100. It is not expected that this score is necessarily reached. However, the repercussions of achieving a much lower score are unclear, pointing to a serious weakness in enforcement. If operations can continue when a score of only 50 is reached, one might argue that something is wrong. There continues to be a lack of transparent systems for code breaches, and most operators and licence holders can evade fines.

One may also dare to ask whether compliance with current key standards of national codes would really make much of a difference. Logging intensities in many areas are so high that even the application of reduced-impact logging would leave behind a residual forest with little capacity to produce a second crop in the foreseeable future.

Overall, no country has developed a coherent implementation strategy for their code of logging practice, which relates back to a lack of political commitment. Training strategies are also in short supply. The impact of training is therefore disappointing.

Finally – and this is particularly disturbing, although understandable – in some countries, the morale of forestry staff is very low. Departments are underfunded and understaffed, and the staff's efforts are not recognised. As a result, some perform their duties with little enthusiasm and others have relinquished attempts to put their mark on improving forest harvesting.

The usual remedy prescribed for better application of codes of logging practice is training. However, instead of more training, what is needed is *effective* training that distinguishes between developing skills, increasing understanding, raising awareness and changing attitudes. The last two objectives are by far the most important in the South Pacific, while the first two are the focus of current training.

Notwithstanding the importance of proper training, the first priority is to raise the awareness of decision-makers of the negative effects of the current, more or less uncontrolled, logging practices. This has to happen at the highest political level and would probably be most effective as a concerted regional effort led by the Forest and Trees Programme of SPC. It needs to be accompanied by activities at the national level that are orchestrated by concerned stakeholders, not just forestry agencies. It also needs to be accompanied by a review of current codes (Fiji is currently going through a review process and Papua New Guinea intends to follow suit) and, wherever necessary, their simplification (see for example the 2002 Revised Code of Logging Practice). Any revision should also consider silvicultural prescriptions with the aim of reducing logging intensities.

If public forestry sector agencies remain understaffed and underfunded, then the number of licences needs to be reduced in most countries. There are apparently better and worse operators. Hence a logical first step would be to eliminate the latter.

The results of the review clearly show that in the first instance the decision to move from uncontrolled logging practices to responsible forest management lies with national policy-makers at the highest level. The clock is ticking. It may not be five to midnight yet, but without any decisive action it will be soon – as the example of the Solomon Islands vividly shows. In 10 years' time, that country's wood supply will approach zero from a current high of more than 1.1 million cubic metres. Even the most refined code and most competent operators are unable to help situations where the annual allowable cuts are overruled by political expedience that may or may not be in the best interest of a country's people and its forests.

By Dr Thomas Enters, COLP Consultant, Bangkok, Thailand. Email; Thomas.Enters@fao.org

Country Updates

Forest Certification in Fiji, November 2006

The development of the Fiji Standard for Forest Management and Certification is underway with the first nationwide public consultations. Three consultation/awareness workshops were held in Suva, Lautoka and Labasa in November, attended by stakeholders with social, environmental and economic interests. The Standard was well received, especially by native landowners.

The public consultation phase will run to the end of 2006, during which any feedback on the Standard is welcome.

The next phase is field testing. This is planned for early next year, when the application of the Standard will be trialled with a plantation forest management company, a large native forest management company, and a small community-based native forest management company.

If you would like more information, please contact Deborah Sue at ffc@unwired.com.fj. Phone +679 3301611; fax +679 3318692 or +679 3300435

Above; Participants of the NWFP May 2006 workshop pictured with the Minister of Fisheries and Forests, Hon Minister Mr Ilaitia Tuisese at ColoiSuva, Fiji

Developing Fiji's Non-Wood Forest Products Strategy 2007-2016

Background

The Fiji Forestry Department has taken the lead in formulating a non-wood forest products (NWFP) strategic planning framework. A series of workshops and meetings have been held to ensure participation by all key stakeholders, including government line ministries, regional organisations, non-government organisations, landowners, communities and private enterprise. The national 10-year development plan is believed to be the first NWFP strategy in the Pacific region.

There are many good reasons for developing a national NWFP strategy for Fiji. Encouraging and enhancing cross-sectoral collaboration and pooling resources are significant drivers. Avoiding duplication and combining efforts will achieve more efficient implementation of the various projects envisaged under the strategy. NWFP (also called minor forest products) and their benefits deserve more attention and need promotion and lobbying through such a strategy. In addition, the Forestry Department's Cooperate Plan 2005 lists the promotion of the commercialisation of NWFP and services as one of its activities. This was the driving force for the broad stakeholder consultations and the decision to develop a national strategy.

Objectives

The objectives of the NWFP Strategy are to:

- promote NWFP research, development and sustainable management, thereby increasing socio-economic benefits and biodiversity conservation, enhancing food security and contributing to alleviation of poverty;
- provide a long-term planning and monitoring framework for NWFP development strategies; and
- facilitate effective stakeholder collaboration.

Plan development process

The first draft of the plan was developed during an inception workshop held from 12 to 14 October 2005 at the Fiji Forestry Training Centre, Colo-i-Suva. The draft was distributed widely to all relevant stakeholders for further input and comments. During a follow-up workshop in November 2005, input from stakeholders was incorporated and the planning framework was reformulated. The workshops were organised by the Forestry Department and facilitated by the SPC/GTZ Pacific-German Regional Forestry Project.

The last workshop, in May 2006, was opened by the Minister of Fisheries and Forests, the Honourable Ilaitia Tuisese. In his speech he highlighted the potential

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Developing Fiji's Non-Wood Forest Products Strategy 2007-2016

for NWFP to contribute to improved rural livelihoods, poverty reduction and sustainable forest management. It was very encouraging for participants to see the minister's interest in minor forest products.

A multidisciplinary task force has been set up to finalise the strategic plan. After a number of consultations and meetings, the final draft will be made available for comment in early 2007. It will then be endorsed by government based on a cabinet paper submission, published, launched and widely distributed throughout the country.

A multi-stakeholder steering committee will be formed to oversee and facilitate working groups that will address specific activities. The proposed groups cover four key result areas:

Group 1: Policy

- Improved policy and legislative framework, institutional capacity, enabling environment
- NWFP resource assessment
- Promotion, awareness raising and general capacity building
- Possibility of carbon credits

Group 2: Fibres

- Handmade paper fabric, sinnet, dye, handicrafts
- Bamboo, rattan, coco wood, bark, other potential fibres

Group 3: Edibles

- Nuts, fruit, wild honey, mushrooms and other forest edibles
- Wild game (feral pigs, goats)

Group 4: Essences

- Essential oils (yasi, dilo), medicine, herbs
- Resin, gum (uto, pine, other potential resin-yielding trees)
- Ornamentals (ferns, flowering/fragrant plants, gymnosperms)

Stakeholder interest and participation

Around 30 stakeholders of different backgrounds and with different needs, including entrepreneurs, landowners, community workers, government officials, researchers and farmers, showed high interest in the strategy. During the workshops they expressed their appreciation to the government for taking such an initiative for their sake and including them in the process. There was lively participation, especially during group work, where more specific elaborations took place within the particular NWFP interest groups.

The interest and participation of regional organisations, including SPC, USP, the SPC/GTZ Pacific-German Regional Forestry Project and WWF South Pacific, were particularly encouraging. The Forestry Department's established contacts facilitated the involvement of rural community-based NWFP initiatives like the Butikau bamboo enterprise and the Wainimakutu women's handmade paper group that is supplying products to Pure Fiji for export.

As usual, networking was well practiced and contacts and networks were extended. A contact database will be maintained to facilitate networking and improve cooperation. Furthermore, a specific section in the strategy is envisaged to optimise communications.

Expected benefits

The Department of Forestry now realises that trends in forest use in the past, which focused only on timber production, must change for the betterment of the country, if economic benefits and environmental services from forest sources are to be sustained or increased.

Through the publication and distribution of the national NWFP Strategy, it is expected that more people will become aware of NWFP and their benefits. Demand and consumption of NWFP may increase with ongoing promotion and lobbying. Private-sector investors and donor agencies may identify through the strategy projects suitable to them.

NWFP have high potential to generate additional income for rural dwellers. There are promising opportunities for cottage industry development with established NWFP, such as essential oils from sandalwood

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Developing Fiji's Non-Wood Forest Products Strategy 2007-2016

(*Santalum yasi*), dilo (*Calophyllum inophyllum*) and sekeci (*Aleurites moluccana*) or processed edibles like noni (*Morinda citrifolia*), nuts (*Canarium* spp., *Barringtonia* spp.) and dawa oil. If managed sustainably, NWFP can contribute to rural economies and answer the need for optimal land utilisation to gain socio-economic benefits. Rural communities are targeted for developing village-based industries to improve living standards and mitigate urban drift. They will be the main beneficiaries of planned projects under the NWFP Strategy. NWFP production systems are suitable cost-effective land use options for Fiji.

It is strongly believed that NWFP can positively contribute to poverty alleviation, food security and sustainable livelihoods by providing a source of additional income or alternative livelihoods for people living in rural areas. Through NWFP development, significant socio-economic benefits can be achieved by creating income opportunities or employment for women and disadvantaged community groups who do not have any other source of income.

As a tropical island country and a favourable tourist destination, Fiji Islands can become a significant producer of various NWFP given the right policies, environment and programmes. Fiji is presently importing some NWFP that could be produced locally and strengthen the economy. Some NWFP, such as sandalwood oil, have high export potential and these are given priority in the strategy. The future of NWFP raw material production might see more domestication and more efficient agroforestry farming systems. Maintaining usage of NWFP of medicinal value and edibles of good nutritional value will have a good impact on public health.

An appropriate change in natural forest use with forest product diversification will reduce pressure on the environment and generate multiple-use forests, maintaining ecosystems' biodiversity and natural forest habitats.

The strategic plan is planned to be finalised around March 2007 and will be available for interested people (also for downloading from SPC's Land Resources Division website). For further information, please contact the authors.

by Ms Sobha Kumar, Acting Forestry Officer, Fiji Forestry Department Utilisation Division, P O Box 2218, Suva, Fiji and Markus Streil, Operations Specialist, SPC/GTZ Pacific-German Regional Forestry Project

Training in bamboo weaving and furniture making in Vusuya, Fiji

In the 1970s, the Fiji Government began a bamboo project in Naitasiri province in collaboration with the Chinese Government. It started with the development and processing of local bamboo resources into furniture products. Infrastructure for the project was set up and processing continued for a while, but interest in the project died when overseas support ceased. Since then, local utilisation of bamboo has been restricted to the production of cultural artefacts.

A 2000 review of the forest sector in Fiji by the International Tropical Timber Organisation highlighted the need to improve skill levels of workers in the sector. Wide consultation with stakeholders from 2002 to 2004 and an in-depth industry training analysis resulted in the identification of key areas in which people needed training. One of them was landowner education to upgrade skills, specifically in bamboo processing.

Presently, the government is showing commitment to the development of non-wood forest products, including bamboo, with the formation of a five-year strategic plan. The plan addresses the need to develop local bamboo resources into high-quality products through proper training, the acquisition of specific tools and machines and infrastructure support to promote production and use locally and, eventually, overseas export.

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Figure 1: Opening of the six-month bamboo training in Vusuya

Country Updates

Pohnpei: Between a sakau rock and a hard place

Sakau is ever present here on Pohnpei. Down many streets, just past sunset, one can hear the pounding of rock on stone, or see women and men selling bottles of what appears to be chocolate milk. This is all for sakau, the most popular beverage on the island. People buy it off the stone in bars, or take it home in bottles to share with friends. Sakau is the local name for kava, or *Piper methysticum*. Its use on Pohnpei dates back hundreds upon hundreds of years, but shifts in usage patterns are now causing widespread environmental problems.

Pounding sakau

Traditionally, sakau was consumed only during ritual occasions. Its preparation was a necessary part of feast times, funerals, consulting with traditional leaders, proposals of marriage and asking for forgiveness. Sakau is still used for these purposes today. Even now, if a man seriously injures another man, the only offering the man can bring when apologising to the victim's family is sakau. Lack of forgiveness is rare. Sakau is held in such high esteem because it represents wahu, or respect power.

Things change. Back in the 1960s and '70s, violence was rife on Pohnpei. Alcohol introduced many problems on the island, and no one was sure what to do. In the mid-70s the first sakau bar opened selling sakau for money, which was unheard of in Pohnpei society. Traditional leaders protested at first, but as the young men began to switch to sakau for their nightly drink instead of alcohol, the violence calmed and people stopped complaining. It seemed a good adaptation at the time. Exports of sakau began in the late 1980s.

But things have since gone wrong. Our forests here on Pohnpei are fast disappearing, and erosion and deadly landslides are increasing. The extra sediment stresses the reefs around the island to the point where some die, and dirties water for drinking and bathing. What happened?

In 1982 and 1983 there was a savage drought here, on one of the rainiest islands on earth. Less than two inches per month fell during a period of five months, on an island that usually receives over 300 inches a year. The lack of rainfall was driven by the El Niño cycle of the Pacific. By this time, some farmers were growing sakau commercially. Many of them lost heavily during the drought. Sakau likes rain and fertile soil, and the drought killed the crops. Unfortunately, a few farmers realised that the upland forests had stayed moist throughout the drought, and planting of sakau began.

Sakau grows faster in the upland forest, but it has less flavour and is less strong. It also doesn't hold the soil as well as the native trees. The soil loses its fertility much faster than lowland soil and is more prone to erosion. Many farmers combat this by shifting to another plot of forest after a few crops. There are few traditional techniques for farming on this soil, as there is little traditional history of farming in the upland region. The result has been shifting cultivation and deforestation of the upland forests.

Today, much of the interior forest has been lost, and landslides are deadlier and more common than ever before. There are many reasons for this, but a key one is sakau cultivation. Between 1975 and 2002, 42 per cent of the upland forest disappeared. It continues to disappear today.

Some projects have been implemented to try to get the growers out of the upland forests. One initiative of the Conservation Society of Pohnpei (CSP), the "Grow-Low" campaign, has managed to teach farmers techniques for increasing yields of sakau grown in the lowlands. CSP and the State Forestry Department have also demarcated a Watershed Forest Boundary in two of the five municipalities on the

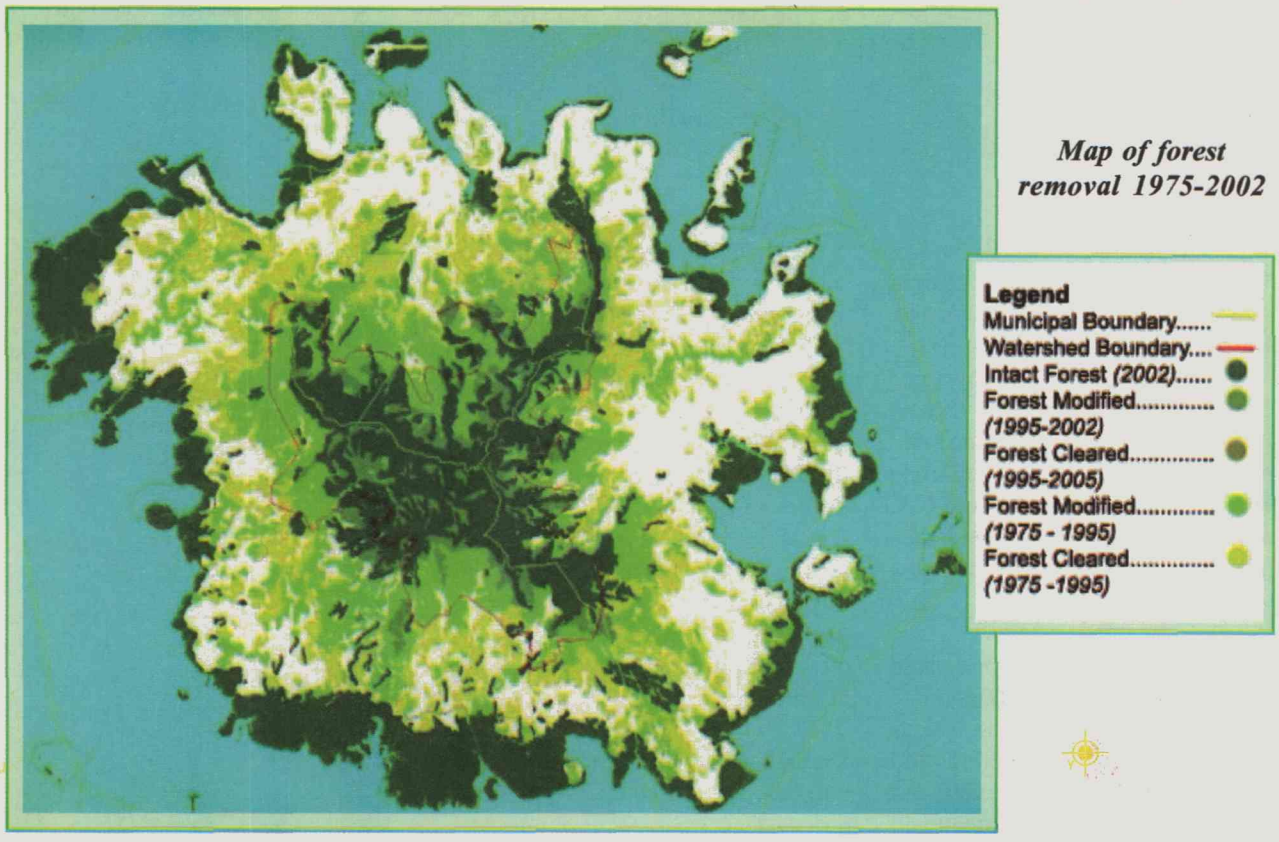
Country Updates

Pohnpei: Between a sakau rock and a hard place

island, and is educating the public on the forest's importance to a healthy environment, providing clean water for people and healthy reefs for fish and coral. Although the Watershed Forest Reserve has existed in law since 1987, none of it was marked until the recent efforts. Areas where the boundary has been demarcated have less cleared forest than non-demarcated areas, but the trend overall is for fewer clearings. In the first forest monitoring activity, in 2000, there were more than 1000 new clearings; in 2005 there were only 11.

Sakau is one of the only crops local farmers have a guaranteed market for. As such, it will remain a vital cash crop for the foreseeable future. There are at least 50 licensed sakau bars on the island, and unlicensed bars as well. The local sale market is estimated at 477,000 kg/year. Estimates of traditional consumption for customary use and sakau grown for household consumption are 660,000 kg/year. The export market was thought to be around 40,000 kg/yr in 2002 (Gallen 2002). Exports go to Pohnpeian expatriate communities across mainland USA, Hawaii and Guam. One possibility for reducing the amount of sakau grown in the uplands is introducing some kind of certification for growers. It is hard to say how much of an effect this would have on patterns of consumption.

Those who remember the 1960s and '70s don't want to see a return to the violence, and many parents state that they would rather their teenagers went to the sakau bar then drank alcohol. The trick, then, is harmonising the culture of Pohnpei as it exists today with the preservation of the island's important ecological assets. With proper techniques and a change in forest management practices, this is still a possibility.



Map of forest removal 1975-2002

Gallen, Jane. 2002. Sakau and Forests: The Challenge of Sustainable Upland Forest Management in Pohnpei, Federated States of Micronesia. Dissertation, University of Waikato, New Zealand.

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Country Updates

Parkia korom: An endemic tree of Pohnpei on the brink?

Current research at the Conservation Society of Pohnpei (CSP) seems to show that the local tree kurum is in danger of becoming extinct. Field work has found a handful of dead trees, and possibly three young living trees. Since the study began, no trees have been found with either flowers or fruit.

Seeds and pod of Parkia korom

Kurum, scientifically known as *Parkia korom*, is found only on Pohnpei. Pohnpeians have traditionally used the wood in canoe building, and the bark in some local medicines. Botanists had not collected the tree for over 50 years until CSP began its current project on endemic species. Local botanists Primo Eperiam, Epipanio Lengsi, Relio Lengsi and Francisca Sohl of the ethnobotany unit found the plant in a few locations on Pohnpei. Kurum is already listed as vulnerable on the IUCN Red List, a resource containing information on all known threatened species in the world.

Kurum is believed to be pollinated by bats. The serehd is known to preferentially perch on the tree as well. The flowers are yellow and globe shaped. The fruits are pods 25–32 cm long, including the stem, and 3.5–4.5 cm wide. Each pod has 20 or more seeds. There should be fine red–brown hairs on the pods and on the young twigs, and tiny white hairs on the leaflets. The leaflets appear tiny; just over 1 cm long and about half a centimetre wide. The tree can grow up to 20 metres tall and the trunk can be as wide as 1 metre. People have said kurum prefers wetter-than-average places on Pohnpei, and although it grows in the upland forest, it prefers to grow in areas not as high as the current watershed protected area. It grows best in areas that have been steadily converted to agroforestry since 1975.

Many of the trees were cut down during the Japanese occupation. In the last 15 years, locals who know the tree say they have watched a decline in its numbers. The Forestry Department of Pohnpei and a few local landowners have expressed interest in planting the seeds to ensure the tree's future. Efforts are also being made to grow individual trees outside of Pohnpei.

Kurum has been growing here since long before Nan Madol was built. The tree is a legacy passed down through the ages to the current generation of Pohnpeians. With support from the community, future generations will know this beautiful tree.

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Efforts to protect the world's last Terminalia carolinensis *forest*

The scene

Imagine a tropical forest on the equator that filters 300 inches of rain every year and is filled with towering trees that rise into the blue sky like majestic, ancient columns of life and diversity. It is a place that has remained undeveloped since the beginning of time – where nature and island ecology have been allowed to run their course undisturbed for generations. The forest is thick with the sounds of moving water, the breeze through the canopy of leaves high above, and the hooting of fruit pigeons and whistling of songbirds. It is shady and cool and wet. Ferns, lichens and moss drip with moisture.

In front of the forest lies a swath of magnificent, green mangroves where mud crabs and juvenile barracuda, groups of mullet and rabbitfish thrive, and beyond them a nursery of seagrass beds that extend for a mile out into coral-rimmed and fish-laden blue holes. Further out still is a deep opening into one of the world's most colourful reefs, teaming with giant parrotfish and reef sharks and silver trevally, where the nutrient-rich freshwater meets the warm abundance of the sea.

Now let us go back into the forest, where shafts of tree-filtered sunshine shimmer on the myriad streams and rivers that glide peacefully through the untouched valley, down from the world's lowest-elevation cloud forests and watersheds of the steep-ridged mountain range, where river eels and freshwater shrimp abound and the flying fox and wild boar roam.

This is not the stuff of fantasy, but of reality – or perhaps a little of both.

Country Updates

Efforts to protect the world's last Terminalia carolinensis *forest*

This place exists, in Micronesia, on the geographically isolated island of Kosrae.

The place

The place is known as the Yela Ka forest, and it is the last of its kind in the world. The dominant species, *Terminalia carolinensis*, or Ka as it is locally known, is a large, towering tree when mature, with a straight trunk, giant buttressing swamp roots that meander into the wet soil, and a branch system that extends straight out near the top of the tree, creating a shady, umbrella-like canopy over the forest floor. The canopy provides a haven for nesting sea birds, the threatened Micronesian pigeon and a host of other animal and bird life. It also shelters the forest and riparian systems below.

The forest has traditionally had many uses. The Ka tree is a valuable cornerstone to the Kosraean way of life in that it is the primary source for carving the local canoe, a prominent and central part of Kosraean celebrations and daily life even today. The tree also yields the srihfacf, a tropical nut that tastes similar to an almond and is a local delicacy, prized by children especially. The trees, strong and straight, have also traditionally been one of the most popular trees for making lumber. The nuts and fruit can be used for medicinal purposes as well as the production of oil.

FSM regards the forest as one of its highest-priority areas for protection, designating it and 24 other high-biodiversity and highly threatened places throughout the nation as Areas of Biodiversity Significance to be saved. Formerly, Kosrae had a total of 13 such ecosystems. Pohnpei, Kosrae's sister island in FSM some 480 kilometres (300 miles) to the northwest, also had these forests at one time. All of them save for Yela have been destroyed or impacted due to agricultural, development or urbanisation activities. Yela sits in the middle of an 8 km (5 miles) swath of Kosrae that has remained unroaded throughout history and is inaccessible except by boat or on foot. This is about to change.

The people

On this island in FSM – the easternmost high island in the Caroline archipelago and one of the rainiest places on earth – live about 8000 people. It is a place where farming and fishing continue to predominate in the daily life of villages. In one village on the western coast of Kosrae are the landowners and caretakers of a chunk of land that many have not seen. This community of 10 families and their relatives, which numbers somewhere close to 200 people, is committed, along with adjacent landowners and other communities and local agencies, to saving the Yela forest and its surrounding ecosystems from the watersheds to the reef. In an effort to sustain the cause, they have recently created the Yela Environment Landowners Authority (YELA), a community-based organisation recognised by the local and state governments as a valid NGO, complete with an official position paper, articles and by-laws.

The threat

The single greatest threat to the world's last remaining intact Ka forest is the impending construction of a circumferential road on the island – a massive and potentially destructive development that is planned to go through the forest some time in 2007. Although the landowners have agreed to allowing the road to be built through the forest, they are committed to working with international, regional and local partners and the state government to do so in the most progressive and environmentally sustainable way possible, one that meets the needs of a growing island economy and population while also protecting the ecological wealth of this unique forest and its surrounding ecosystems.

The challenges

The challenges, as with all geographically isolated and distant islands throughout the world, are both financial and technical. Other primary challenges are creating a broader awareness of both the threats and the importance of the forest locally and internationally, and building partnerships with adjacent landowners for the common cause of protection.

The YELA group is nearly as unique as the forest it seeks to protect. Cases of such an organised, unified and committed organisation in a Micronesian community are rare. The group is trying to implement a potential conservation easement for the area – a move that is the first of its kind in the nation, with the potential to allow landowners to set aside the forest in exchange for much-needed continuing financial support in the form of some sort of conservation trust to be administered by the state or another local environmental NGO. The group is actively seeking regional and international partnerships in order to achieve its goal of saving the forest as a protected area, not only for the children of the community but for all people in Kosrae, in FSM and around the world.

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Flashback - South Pacific Forestry newsletter No. 1 - May 1991

Regional Forestry Newsletter

Participants at last November's Heads of Forestry (HOF) Meeting in Suva recommendeed that the Project Newsletter of the South Pacific Foresgtry Development Programme (RAS/86/036) be expanded into a quarterly regional forestry newsletter to promote closer and more effecitve communication among forestry personnel and agencies in the area. The Heads of Forestry agreed to nominate a local contact person to supply the regional newsletter with regular national forestry information.

So far, the following local contact persons have been nominated:

Cook Islands:
Mr William Hosking, Secretary of Agriculture;

Kiribati:
Mr Roti Teaotai, Chief Agricultural Officer;

Niue:
Mrs CST Talagi, Director of the Department of Agriculture, Forestry and Fisheries; and

Vanuatu:
Mr Godfrey Durahi, Head of the Research and Technical Support Services, Department of Forestry.

We hope that the rest of the nominations and information for future issues will arrive soon. Information on any forestry or related activities within the region will be welcome from any interested persons, not just from the official nominees.

1990 Heads of Forestry Meeting

Heads of Forestry (HOF) from eight Pacific countries met in Suva from 26-28 November 1990 to share their knowledge and experiences; identify priorities for development aned conservation; discuss forestry problems and develop programmes for national action and regional cooperation.

Represented at the meeting organised by the UNDP/FAO South Pacific Forestry Development Programme (RAS/86/036) were Cook Islands, Fiji, Marshall Islands, Niue, Western Samoa, Solomon Islands, Tonga and Vanuatu. Representatives from the Federated States of Micronesia and Papua New Guinea were scheduled to attend, but were unable to because of urgent, unforeseen circumstances.

Observers from various regional and international organisations also participated. These included the Asian Development Bank (ADB); the Food and Agriculture Organisation (FAO), Port Vila (South Pacific Forestry Development Programme - RAS/86/036); FAO, Rome, the Forum Secretariat, the Fiji-German (GTZ) Forestry Project, the International Laobur Organisation (ILO)/Fiji Forestry Department Logging School Lololo; the Environment Division of the New Zealand Ministry of External Relations and Trade; the South Pacific Commission (SPC); the United National Development Programme (UNDP); the UNDP/UN Water Resources Assessment & PLanning Project (RAS/87/009); the United States Agency for International Development (USAID) and the United States Department of Agriculture (USDA) Forest Service.

Recommendations

The following recommendations were endorsed by the meeting:

A. Role of forests and trees in national economies

1. Forestry Departments should accord high priority to improving communications with Government leaders, officials of other Departments and Non-Government Organisations (NGOs) and the general public with the view to improving their understanding and appreciation of the role and contributions of forests and trees to the national and rural economies and to the well-being of the people.

2. Forestry Departments should improve their communication skills and capability to achieve recommendations (1) and (2) above.

RAS/86/036 should assist Forestry Departments in achieving recommendations (1) and (2) above.

B. Forestry policies and legislation

1. Compile experiences of countries in the formulation, implementation and enforcement of forestry policy and legislation. RAS/86/036 to assist in this.

2. Ensure adequate legilsation to protect interests of land and/or timber owners and of future generations.

3. Forestry Deparments should communicate to their Governments the need for all relevant agencies to more effectively control land clearing operations within their respective jurisdictions.....

Extracted from the first quarterly newsletter

Country Updates

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Efforts to protect the world's last Terminalia carolinensis forest

Indeed, if the Yela forest can be saved, protected and managed effectively, it will go a long way towards fulfilling the nation's recent high-level commitment – one that has garnered worldwide attention – called the Micronesia Challenge. FSM is joined in the Challenge by Palau, the Marshall Islands, the Commonwealth of the Northern Mariana Islands and Guam. It is a commitment to effectively protecting at least 20 per cent of the forests and 30 per cent of the reefs in Micronesia by 2020.

The future

The future holds the great promise of hope – at least, this is how YELA views it. They are passionate about conserving this small but significant part of Micronesia for the benefit of all. It will be a precedent for the rest of the region, and perhaps for the world, to follow. YELA needs international cooperation, collaboration and partnership to achieve its goals: long-term preservation; creating sustainable livelihoods through ecotourism, sustainable development activities and alternative income-generating opportunities in the way of aquaculture projects; and the potential of producing, marketing and selling forest-based products.

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Country visit to Vanuatu and Samoa

community into an agro-forestry model area. Likewise, the development of whitewood plantations in such areas can restore the productivity of the land and contribute significantly to raising the socio-economic status of the people living in the community.

In Samoa I was met by Tolusina Pouli, the Principal Research and Utilisation Officer of the Forestry Department, who was formerly SPRIG Project Scientist in Samoa. The visit was capped with a trip to Savaii Island, where most of the SPRIG projects were established. The project sites were located in the Falelima and Masamasa forest reserves. Unfortunately the sites were heavily damaged by a cyclone in 2004. The majority of the mahogany trees have broken tops, while the teak plantings are mostly branchy, which is an indication that the species could be in the wrong site. Recent plantings of large-leaf mahogany by cuttings, however, are growing very well (Figure 5). The seed production area for *Terminalia ritchii* is still intact and fruiting, and the ground has been cleared in preparation for seed collection.

I observed that extensive areas of *Eucalyptus* plantations around the island, which were established and developed by the New Zealand Government as a technical aid to the Government of Samoa and are now maintained by the community, are heavily covered with Merremia vines and are in dire need of maintenance.

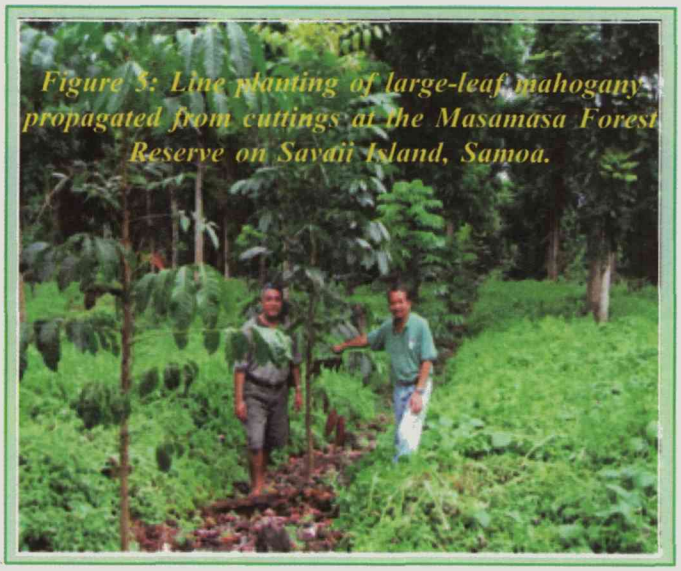

Figure 5: Line planting of large-leaf mahogany propagated from cuttings at the Masamasa Forest Reserve on Savaii Island, Samoa.

My visit to Vanuatu and Samoa, though limited by time, gave me some perspective on the level of interest our partners have in forest genetic resource conservation and the management and improvement of forest and tree genetic resources in their respective countries. I hope other member countries of the Pacific Community have the same feeling of concern and that we can keep and maintain continuous dialogue and good working relations towards a common goal – that is, sustainable development through sound management conservation and improvement of forest and tree genetic resources in the region.

by Cenon Padolina, Regional Forest Genetics Resources Officer, Forests & Trees Programme, Land Resources Division, Secretariat of the Pacific Community

Other News

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Training in bamboo weaving and furniture making in Vusuya, Fiji

At the moment, the government is in the process of finalising a bamboo project proposal that will see the establishment of a partnership between the government and bamboo resource owners for the development of this commodity into an economically viable industry.

Figure 2: Bamboo training in progress in Vusuya.

The training that began on 13 November 2006 is taking place at Bitukau Enterprises in Vusuya, Kuku, Nausori, and is funded by SPC and assisted by the Indonesian Embassy with a bamboo consultant from Indonesia. The commencement of the training was a milestone indeed and a step towards reactivating interest in the processing and manufacturing of our local bamboo resources.

The six-month training will see a change from the market being wholly dependent on the processing of solid wooden products, as well as a rise in the manufacture and marketability of bamboo products. Local bamboo products have great market potential overseas and ultimately we hope to be able to compete with existing overseas suppliers once we have acquired the proper training and expertise to do so.

We wish to acknowledge the efforts of Mr Usaia Korodrau, owner of the Vusuya workshop, for initiating this training programme.

by Semi Drani, Forestry Department, Fiji Ministry of Fisheries and Forests

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Forests and Trees Programme
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