

NSW FOREST AGREEMENTS AND INTEGRATED FORESTRY  
OPERATIONS APPROVALS

## NSW Forest Agreements

# Implementation Report

**Upper North East**

**Lower North East**

**Eden**

**Southern regions**

**2001/2002**



NEW SOUTH WALES GOVERNMENT



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APPROVALS

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# Implementation Report

Upper North East  
Lower North East  
Eden  
Southern regions

2001/2002

A report prepared by the Minister for Natural Resources  
as part of the implementation of the NSW forest  
agreements and integrated forestry operations approvals



NEW SOUTH WALES GOVERNMENT

## INFORMATION



This project has been coordinated by Resource and Conservation Unit within Premier's Department [formerly Forestry and Rural Industry Policy within the NSW Department of Natural Resources or Resource and Conservation Division within the Department of Planning].

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## Foreword

The Hon Dr Meredith Burgmann MLC  
President of the Legislative Council  
Parliament House  
Macquarie Street  
Sydney NSW 2000

The Hon Mr John Aquilina MP  
Speaker of the Legislative Assembly  
Parliament House  
Macquarie Street  
Sydney NSW 2000

Dear Dr Burgmann and Mr Aquilina

I have pleasure in presenting to Parliament the third annual report on the implementation of the NSW forest agreements and integrated forestry operations approvals. The report has been prepared in accordance with section 21(1) and 21(2) of the *Forestry and National Park Estate Act 1998*.

The report provides progress for the period 1 July 2001 to 30 June 2002 on:

- the achievement of milestones defined in the NSW forest agreements for the Upper North East, Lower North East and Eden regions;
- results of the monitoring of the ecologically sustainable forest management criteria and indicators by Forests NSW and the Department of Environment and Conservation; and
- compliance with the integrated forestry operations approvals for the Upper North East, Lower North East and Eden regions.

The report demonstrates continuously improving management of the New South Wales public forest estate and progress towards ecologically sustainable forest management.



**Minister for Natural Resources**



# Executive summary

**This is the third annual report on the implementation of the NSW forest agreements and compliance with the integrated forestry operations approvals (IFOA) for the Upper North East (UNE), Lower North East (LNE) and Eden regions.**

The forest agreements for the UNE, LNE and Eden regions were implemented in March 1999, and the IFOAs commenced in January 2000. The agreements and approvals set out strategic and operational frameworks for the management of public forests with the objective of achieving ecologically sustainable forest management (ESFM). The achievement of this objective is a cooperative process between the National Parks and Wildlife Service (NPWS), State Forests of New South Wales (SFNSW), the Environment Protection Authority (EPA), NSW Fisheries and the Department of Planning (PlanningNSW)<sup>1</sup>.

In order to achieve ESFM across the public forest estate, each agreement identifies a range of undertakings, or 'milestones', to be completed. Generally, milestones are management measures that must be developed and implemented to assist in the sustainable management of public forests. As an indicative measure of progress, 63% of milestones due to 30 June 2002 or required annually had been achieved across the UNE, LNE and Eden regions. This shows a notable improvement since 2000/2001, when only 56% of milestones due to the end of the reporting period or required to be completed annually were achieved. Ongoing collaboration between government agencies is largely responsible for this progress.

A major achievement during 2001/2002 was the completion of the Comprehensive Regional Assessment/Regional Forest Assessment (CRA/RFA) for the Southern region with the signing of the forest agreement and IFOA for the region. The Southern region CRA/RFA resulted in 328 000 hectares of land being added to national parks and reserves in the region and a further 58 000 hectares protected in informal reserves and by prescription in State forests.

The timber industry was also allocated \$2.5 million of Forest Industry Structural Adjustment Package (FISAP) funds towards a 'Sawlog Productivity Program – Silvicultural Program for the South East Region'. This initiative aims to improve the sawlog productivity of south coast forests.

The NSW Government also undertook to complete its assessment of public lands in the UNE and LNE regions, prompted by the release of the *Action for the Environment: NSW Government's Environment Statement 2001 (Action for the Environment Statement 2001)* in June 2001. This undertaking commenced in late 2001; it became known as the 'FMZ Assessment/Northern Additions' project and addressed a number of milestones detailed in the UNE and LNE region forest agreements.

The Assessment was led by the Resource and Conservation Division (RACD) of PlanningNSW and involved extensive discussions between the NPWS and SFNSW, and consultation with the Department of Mineral Resources (DMR) and the Department of Land and Water Conservation (DLWC). In May 2002, a proposal on possible land transfers was submitted to the Resource and Conservation

<sup>1</sup> References to agencies are as they were known at 30 June 2002.

Assessment Council (RACAC), which included key stakeholders such as the Nature Conservation Council, NSW Forest Products Association and NSW Minerals. The project is to be completed in 2002/2003.

The results of the Northern Wilderness Assessment, carried out by the NPWS, were described in the *Northern Wilderness Assessment Report* (NPWS, 2001a). The report detailed 253 152 hectares of identified wilderness and options for wilderness declaration boundaries in the UNE and LNE regions. Public exhibition of the report, between July and September 2001, resulted in over 42 000 submissions from a range of stakeholders and interest groups. At the end of the reporting period, the Minister for the Environment had begun considering further improvements to the reserve system in consequence of the Assessment.

In a major boost to the improve the status of threatened species, populations and communities, the Minister for the Environment approved 18 recovery plans during 2001/2002, bringing the total number of recovery plans approved across the State to 40.

Additionally, the first threat abatement plan completed under the *Threatened Species Conservation Act 1995* for the European red fox (*Vulpes vulpes*) was approved in December 2001 and subsequently implemented by the NPWS, SFNSW and DLWC.

Other cooperative undertakings commenced during 2001/2002, such as the landmark Arakwal Indigenous Land Use Agreement (ILUA). This was the first ILUA established in New South Wales, the result of seven years of consultation between the NSW Government and the Arakwal people. The Arakwal National Park was created under the Commonwealth *Native Title Act 1993* and will be jointly managed by the NPWS and Arakwal people.

Future co-management of public forests with Aboriginal people may be achieved with the commencement of discussions on the return and lease back of lands under Part 4A of the *National Parks and Wildlife Act 1974* for Biamanga and Gulaga national parks, Mount Grenfell Historic Site, Stockton Bight and Warrell Creek.

Timber volumes harvested from State forests have not exceeded the allowable volumes designated in the forest agreements for the UNE, LNE and Eden regions since implementation in 1999. The actual volume of Veneer and High Quality Large sawlogs harvested from SFNSW native forests and hardwood plantations was 101 944m<sup>3</sup> in the UNE region and 177 036m<sup>3</sup> in the LNE region. A further 25 329m<sup>3</sup> of Veneer and High Quality Large sawlogs and 279 854 tonnes of quota pulp grade logs were harvested from SFNSW native forests in the Eden region.

Forestry activities in State forests are carried out under the terms and conditions of the IFOAs. To ensure better compliance with the IFOAs, SFNSW is continuing staff training and internal compliance monitoring programs. Internal monitoring of compliance has shown a 12% decrease in the number of recorded incidents since 1999/2000.

SFNSW is also conducting a \$1.2 million Forest Harvesting Sector Training project through which forestry workers can gain their Forest Operator's licences, now mandatory for all workers in State forests or timbered Crown land.

Regulatory agencies are also improving their monitoring of SFNSW' compliance with licences contained in the IFOAs. Both the NPWS and EPA have established comprehensive auditing programs and employed additional compliance officers. As part of these auditing programs, the NPWS conducted eight proactive audits of compliance with conditions of the Threatened Species Licence, and the EPA



conducted 21 planning and operational audits of compliance with the Environment Protection Licence across the UNE, LNE and Eden regions.

Public allegations of breaches of the IFOA by SFNSW are now more effectively dealt with following the implementation of the inter-agency Coordinated Complaint Handling Protocol in late 2001. The protocol provides a standardised and systematic process for complaint investigation.

Overall, encouraging progress is being made by all parties involved in the implementation of the forest agreements and IFOAs. Cooperative approaches are being implemented wherever possible and increased opportunities for public participation, education and awareness now available. The success of the forest agreements and IFOAs in achieving ESFM is yet to be determined due to the limited period the documents have been in place. However, early gains indicate a move towards this goal.



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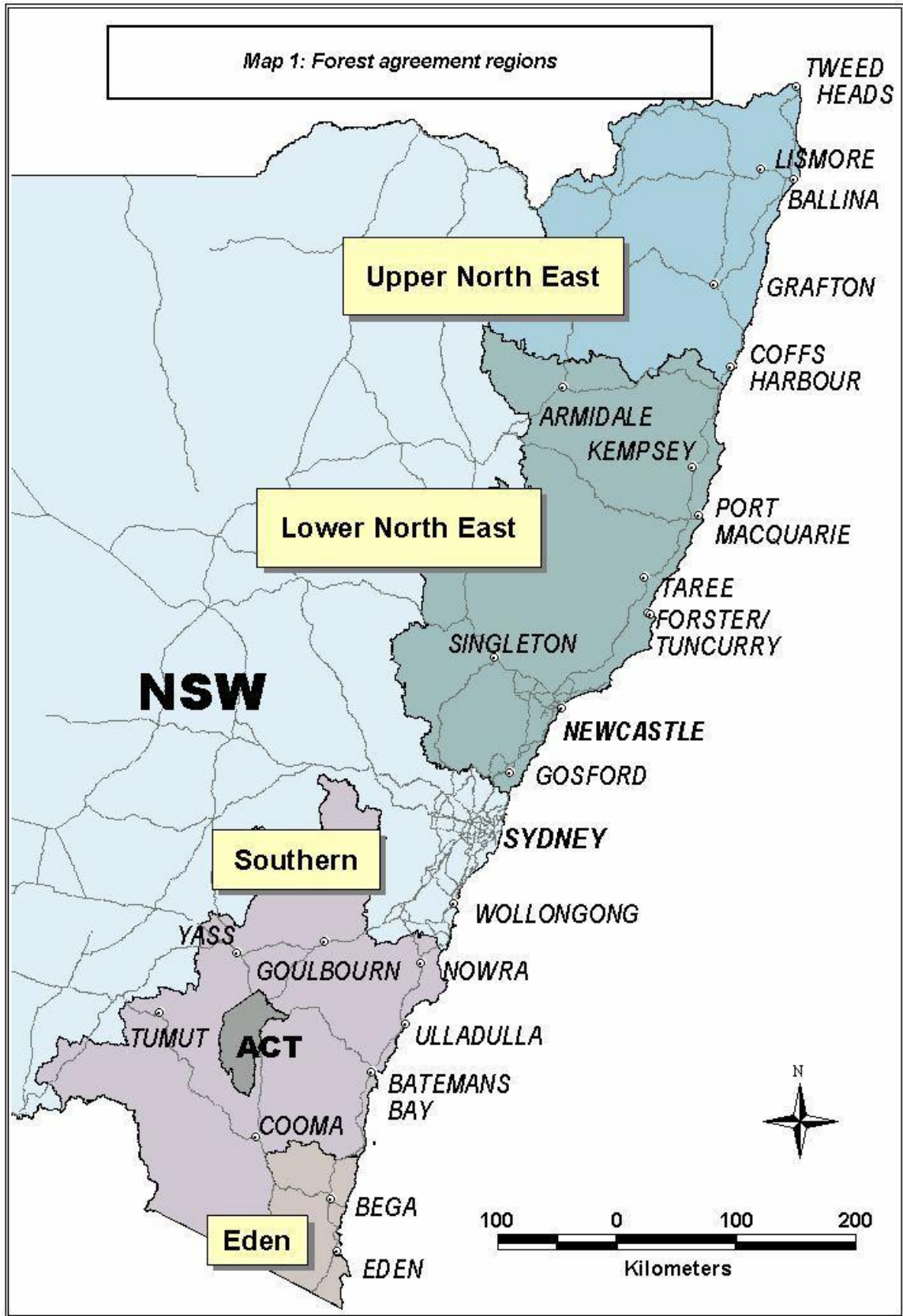
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# Acronyms and abbreviations

*Action for the Environment 2001*

*NSW Government Environment Statement: Action for the Environment 2001*

AGS	Australian Group Selection
API	Aerial Photographic Interpretation
AHIMS	Aboriginal Heritage Information Management System
AQIS	Australian Quarantine Inspection Service
BioNet	A whole of government internet-based biodiversity information system
CANRI	Community Access to Natural Resources Information
CAR reserve system	Comprehensive, Adequate and Representative reserve system
CERRA	Central Eastern Rainforest Reserves, Australia
CRA/RFA	Comprehensive Regional Assessment/Regional Forest Assessment
CRAFTI	Comprehensive Regional Aerial Photographic Interpretation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DLWC	Department of Land and Water Conservation
DMR	Department of Mineral Resources
ECCI	Eucalypt Canopy Condition Index
EMS	Environmental Management System
EPA	Environment Protection Authority
ESFM	Ecologically Sustainable Forest Management
FISAP	Forest Industry Structural Adjustment Package
FMZ	Forest Management Zone
FRAMES	Forest Resource and Management Evaluation System
FURCONS	Lands for further consideration
GIS	Geographic Information System
HHIMS	Historic Heritage Information Management System

IFOA	Integrated Forestry Operations Approval
ILUA	Indigenous Land Use Agreement
IUCN	World Conservation Union (formerly the International Union for the Conservation of Nature and Natural Resources)
JANIS	Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-Committee
LNE region	Lower North East region
MIG	Montreal Implementation Group
MOU	Memorandum of Understanding
NFEMS	Native Forest Environmental Management System
NFMS	Native Forest Management System
NPWS	National Parks and Wildlife Service
OH&S	Occupational Health and Safety
PHUP	Pacific Highway Upgrade Program
PlanningNSW	Department of Planning
RACAC	Resource and Conservation Assessment Council
RACD	Resource and Conservation Division
RFA	Regional Forest Agreement
SCA	State Conservation Area
SEEDS system	social, environmental and economic data storage system
<i>SEEding</i> report	Social Environmental and Economic report
SFNSW	State Forests of New South Wales
STS	Single Tree Selection
TEPCO	Tokyo Electric Power Company
TSAC	Technical and Scientific Advisory Committee
UNE region	Upper North East region
VCA	Voluntary Conservation Agreement
<i>Wildlife Atlas</i>	<i>Atlas of NSW Wildlife</i>
WRA	Western Regional Assessment



# Glossary

**biodiversity** - The variety of life forms, the different plants, animals and microscopic organisms, the genes they contain and the ecosystems they form.

**CAR reserve system** - The establishment of a CAR reserve system is one of a number of arrangements put in place as a result of the joint State/Commonwealth *National Forest Policy Statement* (Commonwealth, 1992). The national reserve system, or CAR reserve system, aims to ensure the protection of a range of forest values. The acronym 'CAR' defines the goals of the reserve system: *Comprehensive*: full range of forest communities recognised by an agreed national scientific classification at appropriate hierarchical levels; *Adequate*: the maintenance of ecological viability and integrity of populations, species and communities; *Representative*: those sample areas of the forest that are selected for inclusion in reserves should reasonably reflect the biotic diversity of the communities.

**carbon sequestration** - Carbon sequestration in terrestrial ecosystems can be defined as the net removal of carbon dioxide from the atmosphere into long-lived pools of carbon, such that the carbon dioxide originally in the atmosphere effectively can no longer physically or chemically act as atmospheric carbon dioxide. The pools can be living, above ground biomass (e.g. trees); products with a long, useful life created from biomass (e.g. lumber); living biomass in soils (e.g. roots and micro organisms); or deeper subsurface environments such as depleted oil and gas reservoirs, unmineable coal seams, deep saline formations or deep ocean (Oak Ridge National Laboratory website, 2002).

**Comprehensive Regional Assessment (CRA)/Regional Forest Assessment (RFA)** - Assessments undertaken by NSW and Australian government agencies and community stakeholders which looked closely at the impacts of changes to forest use and management on the environment, economy and community. Included an assessment of natural, cultural, social and economic values.

**dedicated reserve** - Reserve equivalent to IUCN Protected Area Management Categories I, II, III, IV as defined by the IUCN Commission for National Parks and Protected Areas (1994). The status of dedicated reserves is secure, requiring action by the NSW Parliament or in accordance with New South Wales legislation for reservation or revocation. In New South Wales, dedicated reserves include, but are not limited to, parks under the *National Parks and Wildlife Act 1974* and flora reserves under the *Forestry Act 1916*.

**ecological community** - An assemblage of species occupying a particular area.

**ecologically sustainable forest management (ESFM)** - The management of forests so they are sustained in perpetuity for the benefit of society, by ensuring that the values of forests are not lost or degraded for current and future generations.

**ecosystem** - Communities of organisms and their physical environment interacting as a unit.

**ecosystem health** - The state of an ecosystem's processes (energy, nutrient, hydrological and biological processes) which maintains the vitality of the system.

**ecosystem vitality** - The ability of an ecosystem to perpetuate itself.

**forest** - A vegetation type dominated by woody vegetation having a mature or potential mature stand height exceeding five metres, with an overstorey canopy cover greater than 20%.

**Forest Management Zoning (FMZ) system** - A land classification system which sets out management intent across State forests and differentiates between those areas of State forest set aside for conservation and those areas available for timber harvesting and other activities.

**forest type** - A class in the hierarchy of vegetation classification of forests characterised by the taxonomic and or structural composition of canopy trees (usually by a dominant species).

**habitat** - The living space of a species or community, providing a particular set of environmental conditions.

**informal reserve** - A reserve that contains and is managed for conservation values which contribute to the CAR reserve system and meets the principles for informal reserves as described in the JANIS report.

**JANIS** - The Commonwealth, State and Territory governments agreed to the development of a National Reserve Criteria, in accordance with the *National Forest Policy Statement* (Commonwealth, 1992). The Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee (known as JANIS) produced a report outlining the criteria called *Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia* (Commonwealth, 1997). The report sets out the components of the CAR reserve system. These components are commonly referred to as the JANIS criteria. The criteria are linked to the IUCN guidelines for Protected Area Management Categories.

**national park estate** – As defined in the forest agreement: Land dedicated as a wilderness area under the *Wilderness Act 1987* or the *National Parks and Wildlife Act 1974*; or Land reserved or dedicated under the *National Parks and Wildlife Act*; or Land dedicated or set apart as a flora reserve under the *Forestry Act 1916*; or Lands dedicated or reserved for a similar purpose under the *Crown Lands Act 1989*.

**native forest** - Any locally indigenous forest community containing the full complement of native species and habitats normally associated with that community, or having the potential to develop those characteristics.

**old growth** - Forest that is ecologically mature and has little disturbance by activities such as logging, building roads or clearing. The definition focuses on forest in which the upper layer or overstorey is in the late mature to over mature growth phases.

**plantation** - Intensively managed stands of trees of either native or exotic species, created by the regular placement of seedlings or seed.

**public forest** - Any forest on Crown land for which management responsibility has been delegated to government agencies, local governments or other instrumentalities.

**species** - A group of organisms which are biologically capable of breeding and producing fertile offspring with each other but not with other organisms in other groups.

**State forest** - Land dedicated under the *Forestry Act 1916*.

**tenure** - Title to land as controlled by legislation.

**threatened species** - Any species of plant or animal listed under Schedule 1 Part 1 (endangered species), Part 4 (presumed extinct) and Schedule 2 (vulnerable species) of the *Threatened Species Conservation Act 1995*.

**threatening process** – A process that threatens, or may have the capability to threaten, the survival or evolutionary development of species, populations or ecological communities.



**i**

# Introduction

This is the third annual report on the implementation of the NSW forest agreements and integrated forestry operations approvals (IFOA). This report, prepared under section 21(1) of the *Forestry and National Park Estate Act 1998*, describes progress on:

- n the achievement of milestones identified in each forest agreement;
- n the monitoring of the ecologically sustainable forest management (ESFM) criteria and indicators;
- n compliance with the IFOAs.

The forest agreements for the Upper North East (UNE), Lower North East (LNE) and Eden region were implemented in 1999, providing a strategic framework for the management of public forests. The IFOAs for the UNE, LNE and Eden regions commenced in January 2000 and give an operational framework for forestry operations in State forests and Crown timber lands.

A fourth forest agreement and IFOA was implemented in the Southern region of New South Wales in May 2002. Reporting on the implementation of the agreement and approval for the region will commence in 2002/2003.

The implementation of the agreements and approvals is a cooperative undertaking between the National Parks and Wildlife Service (NPWS), State Forests of New South Wales (SFNSW), the Environment Protection Authority (EPA), NSW Fisheries and the Resource and Conservation Division (RACD) of the Department of Planning (PlanningNSW)<sup>2</sup>.

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<sup>2</sup> References to agencies are as they were known at 30 June 2002.



# 1 Significant Achievements

There has been continuing activity to improve management of the public forest estate; much of this is a direct requirement of the forest agreements, while other actions are part of broader government initiatives. The following details some of the significant undertakings of NSW Government agencies during 2001/2002 that relate to forest management.

## Comprehensive Regional Assessments/Regional Forest Assessments

Comprehensive Regional Assessments/Regional Forest Assessments (CRA/RFAs) were carried out on the east coast forests of New South Wales between 1995 and 2001. The assessments were conducted on behalf of the NSW Government by the Resource and Conservation Assessment Council (RACAC), and addressed the range of social, environmental and economic values of forest areas. The involvement of key stakeholders from both industry and conservation groups, and regular public consultation were essential components of the process.

The key achievement of the CRA/RFAs was the establishment of a Comprehensive, Adequate and Representative (CAR) reserve system in New South Wales which added more than 1 million hectares to the reserve system along the east coast of the State. A further 465 000 hectares of State forest was protected from logging through the establishment of a Forest Management Zoning (FMZ) system<sup>1</sup>.

Over 150 projects were completed as part of the assessments for the UNE, LNE, Eden and Southern regions. All projects completed as part of the CRA/RFAs are publicly available and accessible through the Australian Government's Regional Forest Agreement (RFA) website (<http://www.rfa.gov.au>) and by request through the Information Centre, PlanningNSW, Sydney.

### Southern region

In May 2002, the forest agreement and IFOA for the Southern region was signed by the Ministers administering the *Environmental Planning and Assessment Act 1979*, the *Forestry Act 1916*, the *National Parks and Wildlife Act 1974*, *Protection of the Environment Administration Act 1991* and the *Fisheries Management Act 1994*. The IFOA for the Southern region commenced on 13 May 2002.

The signing of the agreement and approval for the Southern region concluded the CRA/RFA for the region, and the reservation of 328 000 hectares into national parks and reserves was facilitated by the *National Park Estate (Southern Reservations) Act 2000*. Areas reserved included extensions to Deua National Park, the creation of Meroo National Park which conserved much of the catchment areas of five coastal lakes, and the extension of Conjola National Park to link with Morton National Park. A further 58 000 hectares of State forest were protected through informal reserves and by prescription.

The forest agreement and IFOA for the Southern region also provided for a sustainable timber supply arrangement for native forests in the region. Timber volumes were set at a minimum 48 500m<sup>3</sup> of High

<sup>1</sup> As described in *Managing Our Forests Sustainably: Forest Management Zoning in NSW State Forests* (SFNSW, 1999a).

Quality Large sawlogs per annum for the South Coast sub-region and 48 000m<sup>3</sup> of High Quality Large sawlogs for the Tumut sub-region.

Reporting on the implementation of the forest agreement and compliance with the IFOA for the Southern region will commence in 2002/2003.

## Forest Harvesting Sector Training

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The New South Wales forest industry will benefit from a \$1.2 million training strategy, the Forest Harvesting Sector Training Project, which is part of the NSW and Australian Government's Forestry Structural Adjustment Package (FISAP). The Department of Education and Training will train and assess more than 1 200 forestry workers for the Forest Operator's Licence, now mandatory for anyone working in State forests or Crown timber land. Training comprises of five components:

- n soil and water protection;
- n log grading;
- n assessment of log truck drivers and machine operators;
- n assessment of operator skills;
- n workplace supervisor training and assessment.

The forest soil and water protection component will involve 700 operators, increasing their knowledge of environmental management procedures to minimise disturbance during harvesting. As part of the log grading program, 200 operators will be trained, and 500 operators assessed. Better log grading will enable optimum value to be gained from sawlogs.

The project also covers the training and assessment of more than 200 log truck drivers and 300 logging machinery operators. Training will formally recognise the abilities of drivers and operators to reinforce environmental awareness and safe working practices. The workplace supervisor training and assessment component will improve the safety, planning and problem solving skills of 100 harvesting supervisors.

## Working with Aboriginal communities

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The NPWS and SFNSW are continuing to work with Aboriginal communities to better protect natural and cultural heritage while delivering social and economic benefits, such as greater Aboriginal involvement in forest management and a deeper public understanding of Aboriginal cultural heritage.

## Arakwal Indigenous Land Use Agreement

A key achievement in 2001/2002 was the registering of the Arakwal Indigenous Land Use Agreement (ILUA) by the National Native Title Tribunal on 28 August 2001. The agreement was the result of seven years of consultation between the Arakwal people and the NSW Government through the NPWS and the Department of Land and Water Conservation (DLWC), Byron Shire Council and a range of community groups. Arakwal National Park is the first national park to be created under the Commonwealth *Native Title Act 1993* and was gazetted on 26 October 2001.



Arakwal National Park will be jointly managed by the Arakwal people and the NPWS. The Arakwal National Park Management Committee has been established with three Arakwal people, three NPWS staff and a Byron Shire Councillor.

To date, the Arakwal people have been involved in the development of fire, pest and communications plans for the park and employed in the positions of ranger, field officer and trainee field officers for the park.

The possibility of other ILUA in northern New South Wales is being investigated on a whole-of-government basis.

## Negotiations for lease back arrangements

Discussions about the return and lease back of lands under Part 4A of the *National Parks and Wildlife Act* continued throughout the year for Biamanga and Gulaga national parks, Mount Grenfell Historic Site, Stockton Bight and Warrell Creek. During the year the Office of the Registrar, *Aboriginal Land Rights Act 1983*, registered a number of Aboriginal owners for Biamanga and Gulaga national parks and Mount Grenfell Historic Site. This is a key step in negotiating the return of lands to a local Aboriginal land council to hold on behalf of the Aboriginal owners and the lease back of those lands to the NPWS.

At Warrell Creek discussions continued between the NPWS and the Nambucca and Unkya local Aboriginal land councils on an agreement to return claimed land and establish part of the area as a nature reserve to be leased back to the NPWS. At Stockton Bight discussions continued between the NSW Government and the Worimi Aboriginal Land Council on the creation of a new national park, a new state recreation area and a regional park. Under the eventual agreement the reserves will be owned by the Aboriginal community, leased back to the NPWS, and jointly managed through a board of management established under the *National Parks and Wildlife Act*.

## Increasing Aboriginal involvement in State forests

SFNSW Aboriginal community liaison officers negotiate the increased use of forest resources by the Aboriginal community and ensure an Aboriginal perspective to forest management. These officers are supporting new Aboriginal Women's Networks that are assuming responsibility for gender specific cultural heritage sites and developing protocols for their management and visitation. The Darkinjung Aboriginal Women's Network has secured a 'Care for Country' grant for the management and protection of an important Aboriginal women's site on MacPherson State Forest in the LNE region. The Darkinjung Aboriginal Land Council has also obtained a grant to protect Aboriginal cultural heritage sites in the forest.

SFNSW has also assisted the Darkinjung Community Development Employment program by training Aboriginal participants in Aboriginal site identification and recording, and chainsaw use.

Consultation by SFNSW with all sections of the Aboriginal community has ensured that administrative boundaries and community concerns are overcome and that decision making is inclusive. Aboriginal Elders have approached the SFNSW Hunter Region about significant sites in State forests behind Newcastle and propose to use this area to ensure their heritage survives, is dynamic and is passed on to future generations. The Community has also secured funding for a 'Helping Hands' project where the Elders will use these forest sites to give young Aboriginal people a sense of identity.

SFNSW Aboriginal staff have also been involved in Aboriginal cultural heritage identification, recording and management, fire management, forest inventory, education, recreation, timber harvest planning and

harvesting supervision. They have also been active in developing policy and cultural heritage awareness programs which will be run in 2002/2003 and beyond.

## Threatened species planning

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### Recovery plans

The development of recovery plans for threatened flora and fauna species, ecological populations and communities listed under the *Threatened Species Conservation Act 1995* continued throughout 2001/2002. During the year, the Minister for the Environment approved 18 recovery plans, bringing the total number of approved recovery plans across the State to 40, covering 54 threatened species<sup>2</sup>. At the end of the reporting period no recovery plans for populations or ecological communities had been approved.

A further 15 draft recovery plans were or had been on public exhibition at 30 June 2002, and 27 draft plans were awaiting exhibition. Another 140 plans were in preparation. In total, over 300 threatened species, populations and ecological communities are currently being addressed in draft and approved recovery plans.

The NPWS is also progressively implementing approved recovery plans and is undertaking, or has successfully completed, more than 700 recovery actions. Many recovery actions are being undertaken before the recovery plan has been completed. These 'pre-recovery plan' actions are widely acknowledged to be essential and urgent. Actions include community and landholder awareness, feral plant and animal control, site protection (including fencing), habitat restoration, off-park conservation, monitoring, research and surveys.

### Threat abatement plans

Several weeds and vertebrate pests have been recognised as key threatening processes under the *Threatened Species Conservation Act*. These include predation of native fauna by foxes (*Vulpes vulpes*), feral cats (*Felis catus*) and plague minnow (*Gambusia holbrooki*), competition and grazing by rabbits (*Oryctolagus cuniculus*), and invasion of native plant communities by bitou bush (*Chrysanthemoides monilifera*).

Significantly, the first threat abatement plan to be completed under the *Threatened Species Conservation Act*, *Threat Abatement Plan for Predation by the Red Fox (Vulpes vulpes)* (NPWS, 2001d), was endorsed by the Minister for the Environment in December 2001. The plan is now being implemented across the State by the NPWS, SFNSW and DLWC.

The plan represents a fundamental change in fox control because it sets management priorities across all land tenures by identifying which threatened species are at greatest risk from fox predation and at which sites fox control is most critical. Best practice guidelines for fox control are also identified in the plan to maximise the effectiveness of control programs while minimising the impact of control methods on non-target species. Monitoring programs will measure the response of threatened species to fox control and test whether populations of threatened species are limited by fox predation.

Recovery plans and threat abatement plans can be viewed on the NPWS website at:  
<http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Recovery+plans>.

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<sup>2</sup> Some recovery plans are 'multi-species' plans.

## Flora monitoring plans

SFNSW, in consultation with the NPWS, is preparing monitoring plans for threatened flora species occurring on its estate that are locally very common, and have been observed colonising disturbed areas or appear to be otherwise resilient to disturbance.

At 30 June 2002, monitoring plans had been approved for five flora species, with another two plans in preparation. Plant populations are monitored before and after timber harvesting to determine the potential impacts or benefits. The data collected will lead to a better understanding of the ecology of these species and improved forest management practices.

An example of a monitoring plan which has been prepared is for the broad-leaved pepperbush (*Tasmannia purpurascens*). The broad-leaved pepperbush is found on the Barrington Tops Plateau in the northern tablelands of New South Wales. Although restricted to the plateau, 95% of this threatened species is protected within local national parks and Crown reserve, with small populations also occurring in Barrington Tops and Stewarts Brook State forests in the LNE region.

The broad-leaved pepperbush is listed as a threatened species due to its limited geographical distribution. However, the species is common-to-abundant on the plateau, sometimes occurring as the most common understorey shrub. In areas that have been disturbed through harvesting operations, the plant regenerates vigorously. The pepperbush is now one of a number of threatened plant populations monitored in the State's north to observe the impacts of timber harvesting.

## Forest Health

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### Remote sensing technology

SFNSW researchers are using cutting edge technology to better manage and conserve native and planted forests. About three years ago, SFNSW began to investigate the potential uses of remote sensing technology imagery obtained from planes or satellites for monitoring forest health. In collaboration with experts from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Forestry and Forest Products and the University of Wollongong, SFNSW set out to develop a reliable and robust indicator of the health of eucalypt forests that is cost-effective and practicable.

As many symptoms of poor forest health are invisible to the human eye, researchers have been working on a way to detect the early symptoms of canopy decline using remote sensing. Variations in the canopy can be detected by measuring reflected light within narrow regions of the electromagnetic spectrum. As it is digitised, this information can be mathematically evaluated.

#### Remote sensing: the Olney case study

A study site was established in a mixed-age, moist regrowth eucalypt forest in Olney State Forest, south of Newcastle (LNE region). Trees on the site were exhibiting a range of symptoms associated with canopy dieback.

High resolution imagery was obtained from the air and the imagery matched with identified trees on the ground. The imagery obtained from a spectrographic imager during a flyover was processed and found to be correlated with specific ground tree and leaf measures relating to the structural and physiological status of the vegetation.

An algorithm was then developed to give the Eucalypt Canopy Condition Index (ECCI) – a world-first measure of eucalypt forest health. Although it is yet to be tested across a range of forest types, the index will enable early detection and accurate monitoring of declining health in the type of forest found in the study area.

The work being undertaken by SFNSW will highlight areas that need on-site investigation. The value of this research is to improve the ability to measure forest health (as a measure of sustainable forest management). Application of the ECCI will allow not only the detection of unhealthy trees but provide the capacity to quantify the severity of the problem.

## State of the Parks

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The NSW *State of the Parks* reporting system is being developed by the NPWS to improve the quality and quantity of information available to people about natural and cultural heritage values, the pressures on those values, and the role the parks system is playing in the conservation of those values. The inaugural *State of the Parks* report, launched by the Minister for the Environment on 15 November 2001, represents the first stage in the development of the system. *State of the Parks 2001* (NPWS, 2001b) contained three sections:

- n an overview of the parks system and the legislative and policy framework of park management;
- n the desired outcomes of park management, setting the structure for future performance reporting;
- n selected individual park profiles.

The *State of the Parks 2001* (NPWS, 2001b) can be viewed on the NPWS website at:  
<http://www.nationalparks.nsw.gov.au/npws.nsf/content/state-of-the-parks+2001>.

## Wilderness assessments

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The *Northern Wilderness Assessment Report* (NPWS, 2001a) was publicly exhibited between 26 July and 20 September 2001. The report detailed 253 152 hectares in the UNE and LNE regions identified as wilderness and gave options for wilderness declaration boundaries. Public exhibition of the report resulted in over 42 000 submissions. Recommendations for declaration were provided to the Minister for the Environment in a Summary and Analysis Report in June 2002. At the end of the reporting period, no declarations had yet been made as the recommendations were still being considered by the Minister.

The wilderness assessment for Yengo National Park (LNE region) was also completed by the NPWS in 2001/2002, and commenced for the Murrin area (Goulburn sub-region). Although preliminary assessments were made of these areas during the CRA/RFAs, substantial additional study was required to bring these to a standard equivalent to other CRA/RFA wilderness assessments. The *Yengo Wilderness Assessment Report* (NPWS, 2001c) was placed on public exhibition in January and February 2002. Public exhibition of the report resulted in 957 submissions. At 30 June 2002, recommendations for declaration were being prepared.

## Voluntary Conservation Agreements

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Since their inception, Voluntary Conservation Agreements (VCAs) have become an important tool of the NPWS Conservation Partners program. These agreements, between landholders and the Minister for the Environment, outline how the land will be managed into the future and help landholders protect the natural and cultural values of their properties. Each agreement is registered on the land's title to ensure it is binding for successive owners.

During 2001/2002, 18 VCAs were signed, bringing the total area protected across New South Wales to over 8 880 hectares. Typically the lands covered by VCAs have at least one of the following features:

- n habitat for species listed as nationally endangered or as threatened in New South Wales;
- n declared wilderness;
- n high quality remnant vegetation;
- n sites of Aboriginal significance.

VCAs have been identified as a useful mechanism for conservation in a number of different areas. Within the NPWS, threatened species recovery plans, the Grassy Box Woodlands Conservation Network Project and wilderness assessments have all recognised the VCA program as a delivery tool for effective conservation outcomes on private land. Five VCAs linked to these programs were finalised at 30 June 2002, with 12 additional sites at various stages of negotiation.

## SFNSW Environmental Policy

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SFNSW' environmental policy statement reflects international, national and State commitments, policies and programs to ensure the agency operates its business and manages forests in a way that is environmentally sensitive, socially beneficial and economically viable.

SFNSW recognises that planted and native forests represent a wide range of values and uses to the people of New South Wales. It is a goal of SFNSW to conserve and protect forest values ranging from biodiversity and forest productivity to the ability of forests to act as carbon sinks and for the many recreational and cultural values they provide. This is reflected in SFNSW' commitment to ensure the achievement of ESFM by:

- n managing forests to maintain and enhance the full suite of forest values for the benefit of current and future generations;
- n working to ensure that its management is complementary to forest management on other tenures;
- n working with others to ensure the development and operation of a sustainable forest industry.

As part of its commitment to the delivery of ESFM, SFNSW is measuring and publicly reporting corporate performance in conservation of biodiversity; protection of soil and water quality; protection of cultural heritage; adapting forest management practices and systems in the light of auditing, monitoring and research information, changing expectations and regulatory requirements; providing training, professional development and accreditation and implementing world best practice in forest management by SFNSW staff and contractors. SFNSW will also be actively seeking global business opportunities relating to environmental services and environmental enhancement.

## Triple Bottom Line

SFNSW has adopted the concept of 'triple bottom line' accounting and reporting to monitor its progress towards sustainable forest management. This means measuring and reporting its performance in terms of social and environmental outcomes as well as financial results.

SFNSW took its first steps in this direction in 1998 with its *Environmental and Social Values* report, then produced its first sustainability report, the *Social Environmental and Economic (SEEing)* report, last year. The 2001/2002 period was the fifth year of reporting and the report has undergone a number of important changes. These changes have been designed to bring it into line with international sustainability reporting guidelines and to reflect the wider application of the triple bottom line philosophy across SFNSW business.

Some major advances were also made by SFNSW during 2001/2002 with the development of its social, environmental and economic data storage (SEEDS) system. The new SEEDS system will streamline the collection and collation of data required for the NSW forest agreement reporting process and others, such as *State of the Environment* and *State of the Forests*. This new database enhances data consistency, accuracy in data collation, and provides SFNSW Regions with improved access to data about their performance. The SEEDS system was fully operational throughout 2001/2002. Further development of the system is planned to link it with other SFNSW corporate systems.

Other noteworthy triple bottom line achievements during 2001/2002 include:

- n hosting the second Triple Bottom Line NSW Forum, attaining a strong positive result in the Australia and New Zealand Sustainability and Environmental Reports Benchmarking Program 2001/2002;
- n having a Triple Bottom Line case study profile included in the publication Best Practice in Financial Management Volume 5;
- n presentations at various Triple Bottom Line forums;
- n recently being invited to be a member of the Triple Bottom Line Senior Officers' Group convened by the NSW Premier's Department.

## Western Regional Assessment

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In 1999, through RACAC, the NSW Government initiated regional assessments across western New South Wales. The aim of the Western Regional Assessment (WRA) is to consider all values (social, economic, environmental and heritage) of forest and non-forested areas. Due to the nature of the landscape in western New South Wales, the WRA adopts a broader landscape and regional planning approach to that taken in the coastal CRA/RFAs, which principally focussed on public forest areas. The key aims of the WRA are to establish:

- n adequate and complete core data layers to inform regional land use planning and conservation and resource management;
- n enhanced partnerships between core agencies and interest groups concerned with natural resources and ecological sustainability, to increase sharing of information and to reduce duplication;
- n a comprehensive, adequate and representative network of protected and managed areas for western New South Wales.

Information collected will support and complement a range of other planning processes, including the *NSW Biodiversity Strategy* (NPWS, 1999a), *NSW Salinity Strategy* (DLWC, 2000), related vegetation, water and catchment action planning, and strategic regional planning.

Due to the size of the area to be assessed, the WRA is being undertaken by bioregion. The Brigalow Belt South bioregion was the first to be assessed. Located in the central north of the State, the Brigalow Belt South bioregion covers an area of about 52 400 km<sup>2</sup>, and extends from Dubbo to the Queensland border. Major towns in the bioregion include Merriwa, Coonabarabran, Narrabri and Dubbo. The assessment was undertaken in two stages. Stage 1 commenced in 1999 and had a special focus on the Pilliga and Goonoo groups of State Forests. Stage 2 broadened the assessment to include the whole of the bioregion and commenced in 2000.

Community participation, a core component of the WRA, has included workshops to identify key regional issues important to the local communities. Representatives come from various stakeholder groups (such as local government, farmers, conservation representatives, Aboriginal groups, forest industry representatives, minerals industry and beekeepers) who have also contributed technical input to projects undertaken as part of the assessment.

At 30 June 2002, assessment projects were being finalised, in preparation for data integration and options development stage of the assessment. Data integration and options development with stakeholder input is scheduled between July and September 2002. Preliminary planning for the second bioregion, Nandewar had commenced at the end of the reporting period.





## 2

# Implementing the forest agreements

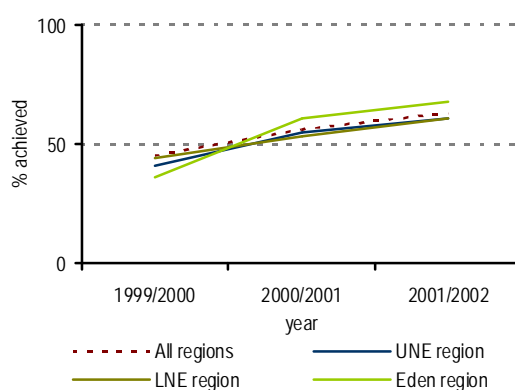
## Introduction

The forest agreements for the UNE, LNE and Eden regions detail 375<sup>1</sup> tasks, or 'milestones', that must be completed or implemented over the terms of the agreements; 133 are directly applicable to the UNE region, 132 to the LNE region, and 110 to the Eden region. These milestones involve a range of undertakings, such as the development of management plans, monitoring processes, and on ground activities to assist progress towards ESFM.

Some milestones have a specific due date or must be completed annually, whilst others are required on an ongoing basis. This latter group generally involves the establishment of ongoing monitoring systems, or aspects of the agreement that must be reviewed/applied at various intervals.

Progress towards achieving these milestones has been improving each year (**Figure 2-A**). Since the implementation of the forest agreements for the UNE, LNE and Eden regions in 1999, 63% of milestones due to 30 June 2002 or required annually have been completed. This compares favourably to the completion of 56% of milestones this time last year.

By region, 61% of milestones required to be completed by 30 June 2002, or on an annual basis, had been achieved for the UNE region, 61% for the LNE region and 68% for the Eden region. A further 48% of milestones were achieved across the three regions that are required to be completed or implemented on an ongoing basis.



\* Figure 1 illustrates the achievement of milestones required to be completed on or by the end of each reporting period and those required on an annual basis.

Figure 2-A: Progressive achievement of forest agreement milestones – all regions

<sup>1</sup> The total number of milestones has been amended due to a principle in the forest agreements being incorrectly identified as an undertaking.

**Table 2-A** provides a statistical summary of the status of all milestones defined in the forest agreements for the UNE, LNE and Eden regions, at 30 June 2002. **Table 2-B** provides a description of the terms used to describe the status of milestones contained in **Table 2-A** and **Appendix 2.1**.

*Table 2-A: Status of forest agreement milestones at 30 June 2002 – all regions*

Reporting required	Status	Region		
		UNE	LNE	Eden
To be completed by 30 June 2002 or annually	Completed/ implemented	61%	61%	68%
	Draft	5%	5%	5%
	In progress	29%	29%	21%
	Deferred	5%	5%	6%
	No reporting required	0%	0%	0%
	Total	100%	100%	100%
To be completed after 1 July 2002	Completed/ implemented	0%	0%	0%
	Draft	9%	10%	17%
	In progress	64%	60%	66%
	Deferred	9%	10%	0%
	No reporting required	18%	20%	17%
	Total	100%	100%	100%
Ongoing	Completed/ implemented	48%	48%	50%
	Draft	0%	0%	0%
	In progress	33%	33%	34%
	Deferred	0%	0%	0%
	No reporting required	19%	19%	16%
	Total	100%	100%	100%

*Table 2-B: Definitions of milestone status.*

Completed	Indicates the milestone required the production of a document or plan and that document or plan has been produced
Implemented	Indicates the milestone required a process or system to be put in place and that process or system has been put in place
Draft	Indicates either a product or process that has been developed to draft stage, but not yet finalised
In progress	Indicates a product or process is still being developed
Deferred	Indicates the action required by the milestone has been postponed
No reporting required	Indicates an action which is to be reported in another way, for example in a five year review or on an 'as needed' basis

## Managing the Forests

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### Environmental Management Systems

As part of the continuous improvement of environmental management across the public forest estate, SFNSW and the NPWS each continued to develop an environmental management system (EMS) throughout 2001/2002.

SFNSW' draft Native Forest Management System (NFMS) Strategic Framework (which forms part of its EMS) was placed on public exhibition in 2000. The NFMS has since been renamed the Native Forest Environmental Management System (NFEMS) to better highlight the intent of the system.

During 2001/2002, an external ISO 14001 certification company undertook a gap analysis (or audit) of the NFEMS. A key focus of the gap analysis was to identify management areas needing further development. The NFEMS was also 'rolled out' to all SFNSW native forests regions, followed by an awareness and training session in each region. Simulated (training) EMS audits (10-15 auditor days in each region) were then conducted in each native forest region to further improve regional staff knowledge and familiarity with the EMS and demonstrate what an EMS audit would address. The audit outcomes have since been used to focus on the continuous improvement of the NFEMS in each SFNSW Region. At 30 June 2002, development of the NFEMS was continuing with an objective of obtaining ISO 14001 certification.

Development of the NPWS EMS is progressing and is intended to cover all areas of NPWS operations. The *State of the Parks* report will comprise a major component of the system. Components of *State of the Parks* reporting were trialled during 2001/2002. Further information on the NPWS *State of the Parks* report is provided in Chapter 1 of this report.

### Forest Management Zoning

The FMZ system<sup>2</sup> is an important tool used to manage State forests for both economic and environmental values. Developed in 1999, the system allows for the classification of State forests for harvesting and conservation purposes and provides the basis for all operational planning and activities.

Maps of proposed FMZ areas were placed on public exhibition with the draft Regional ESFM Plans for the UNE, LNE and Eden regions in September 2000. The FMZ system has since been finalised for the Eden region. However, the final area of State forest and any required changes to FMZ classification in the LNE and UNE regions was deferred, awaiting the completion of the FMZ Assessment which was being undertaken throughout 2001/2002 as part of the *Action for the Environment: NSW Government Environment Statement 2001 (Action for the Environment 2001)*.

Maps of proposed FMZ classifications are available at SFNSW regional offices.

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<sup>2</sup> The FMZ system is described in the document, *Managing Our Forests Sustainably: Forest Management Zoning in NSW State Forests* (SFNSW, 1999a).

## Plans of Management

### Management plans for the national park estate

Plans of management for all dedicated reserves under the *National Parks and Wildlife Act* are being progressively completed by the NPWS. Each plan defines objectives and strategies to manage the land to which it applies. Each plan is subject to a period of public exhibition and consideration by the National Parks and Wildlife Advisory Council<sup>3</sup> prior to endorsement by the Minister for the Environment. Once a plan is implemented any activity undertaken in the reserve must be in accordance with the plan (NPWS, 2002).

At 30 June 2002 there were 287<sup>4</sup> national parks, nature reserves, state recreation areas, historic sites and Aboriginal sites situated in the UNE and LNE regions requiring management plans to be prepared. At the end of the reporting period, the Minister for the Environment had adopted 65 plans of management for areas in the UNE and LNE regions (including seven plans that were being revised). Plans adopted included those developed for the Boonoo Boonoo National Park and Cathedral Rock National Park in the UNE region, and Wollemi National Park in the LNE region. A further 133 plans of management were in preparation.

In the Eden region, there were 19 national parks, nature reserves and historic sites that required management plans to be prepared. At 30 June 2002, the Minister for the Environment had adopted eight plans of management (including one plan that was being revised). These included plans for Bournda National Park, Bournda Nature Reserve and Mount Imlay National Park. A further six plans were in preparation (including three which had been publicly exhibited). The plan for the Biamanga National Park was deferred pending the finalisation of co-management arrangements with the Aboriginal community (see Chapter 1 of this report).

Management plans can be viewed on the NPWS website:

<http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Fire+and+park+management+plans+by+title>.

## Regional ESFM Plans

SFNSW' Regional ESFM Plans provide a framework for the management of a range of forest values across State forests, including; biodiversity, harvest planning, and indigenous and non-indigenous cultural heritage. Draft plans for the UNE, LNE and Eden regions were placed on public exhibition in September 2000. Since then, the plans are being finalised following input from regulatory agencies and the public exhibition period. Supplementary model management plans<sup>5</sup>, addressing fire, weeds, feral animals, roads and grazing, are being finalised concurrently following further discussions with regulatory agencies during 2001/2002. They will be released with the final Regional ESFM Plans.

### Flora reserves

Flora reserves in State forests are classified by SFNSW' FMZ system as 'FMZ 1 – Special Protection'. The FMZ 1 classification prohibits logging and provides the highest level of protection within the system. These reserves must have a working plan, or protection plan, implemented to ensure the significant natural and cultural values contained within them are maintained.

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<sup>3</sup> National Parks and Wildlife Advisory Council provides advice to the Minister for the Environment on matters relating to the management of parks and reserves (NPWS website). Membership includes representatives from NSW Farmers, SFNSW, the Australian Museum, CSIRO, the National Parks Association and the Nature Conservation Council.

<sup>4</sup> The increase in the number of areas requiring plans of management to be prepared has increased since 2000/2001 due to additions to the national park estate since the end of the previous reporting period. Total number of areas includes both forest and non-forest areas.

<sup>5</sup> Model management plans required under the IFOA for each region.

At 30 June 2002, there were 48 flora reserves located in State forests in the UNE, LNE and Eden regions. Of these reserves, 19 were situated in the UNE region, 17 in the LNE region and 12 in the Eden region. The Minister for Forests had approved 43 working plans for flora reserves across the three regions under the requirements of the *Forestry Act 1916*. The remaining working plans had yet to be completed.

Working plans for flora reserve are being developed and included as part of SFNSW' Protected Area Strategy for the Regional ESFM Plans. The working plans will be formally released with the final Regional ESFM Plans.

Informal reserves, high conservation value old growth and areas managed by prescription  
A strategy for the management of informal reserves, areas managed by prescription and large areas of high conservation value old growth forest was incorporated into SFNSW' draft Regional ESFM Plans. The strategy provided a framework for the management of various conservation values. However, continuing negotiations throughout 2001/2002 about areas of State forest for potential transfer to the national park estate, and classification of additional areas of forest as high conservation value old growth, meant the extent and composition of informal reserves and areas to be managed by prescription changed during the reporting period, particularly in the UNE and LNE regions. Following the completion of these negotiations in 2002/2003, the working plans will be finalised with the Regional ESFM Plans.

## CAR reserve system

### Additions to the national park estate

The NSW Government allocated \$1.4 million per year over four years to the NPWS to voluntarily purchase leasehold and freehold lands as required by the forest agreements for the UNE and LNE regions. During 2001/2002, seven properties in the UNE region and ten properties in the LNE region were purchased. All of the areas purchased were at least part leasehold. Acquisition of these lands provides for the protection of a number of forest values, including; wilderness, old growth, under target ecosystems and threatened species habitat.

In the Eden region, the NPWS did not make any purchases of leases on State forest tenure where the State forest tenure had been revoked. Although one lease was available for purchase during 2001/2002, the timing of the land being placed on the market did not coincide with the NPWS' land acquisition funding cycle and therefore was unable to make the purchase.

Areas purchased by the NPWS are gazetted into its estate as soon as possible following acquisition. During 2001/2002, six purchased Crown leases were gazetted.

## FMZ Assessment

The NSW Government's *Action for the Environment Statement 2001*, released in June 2001, summarised some of the Government's key achievements in, and its plans for, the State's most important environmental issues. This included a number of commitments, or milestones, identified in the forest agreements for the UNE and LNE regions. Some of the milestones adopted by the Statement related to identifying opportunities to improve conservation outcomes in the north east regions. One commitment included in the Statement was that the NSW Government will:

*complete its assessment of public lands in consultation with stakeholders, and decide which areas should be added to the formal reserve system. These areas include those set aside for further consideration in 1998, Crown land, rainforest and other high conservation value old*

*growth forests, which would qualify for addition to the reserve system due to their size (greater than 500 hectares) and location (adjacent to existing reserves).*

The assessment commenced towards the end of 2001 and became known as the 'FMZ Assessment/Northern Additions' (the Assessment). The Assessment was to also consider the protection of areas of State forest with high conservation values without impacting on timber supply.

Land considered in the Assessment covered about 245 000 hectares, including:

- n State forests FMZ 1, 2 and 3a, including lands identified in an earlier process called 'FURCONS'<sup>6</sup>;
- n vacant Crown lands.

The Assessment was carried out by an inter-agency working group (the Working Group), led by RACD of PlanningNSW, with representation from SFNSW and the NPWS. The Department of Mineral Resources (DMR) was also consulted throughout the Assessment.

The Working Group undertook to assess relevant information on each FMZ 1, 2 and 3a area under consideration and whether those areas should be:

- n transferred to the national park estate;
- n remain as State forest and be upgraded to a higher FMZ category;
- n remain unresolved.

In considering the land in the Assessment, the Working Group reviewed the following information:

- n a map illustrating the size and location of each area under consideration;
- n conservation values within the area;
- n reserve design and links with adjoining reserve system;
- n presence of occupation permits and grazing leases;
- n ability to manage with adjoining State forest;
- n ability to protect timber resources from fire (including adjoining plantations);
- n DMR's position on the transfer of lands to the national park estate.

FMZ 1, 2 and 3a

Some lands identified in the earlier process, called 'FURCONS' as being available for transfer to the national park estate were automatically included as land to be transferred to the NPWS.

Consultation occurred between the Working Group and DMR for areas with mineral interests and the potential transfer of these areas to the national park estate or upgrading within SFNSW' FMZ system.

Areas identified as having mineral interests were provided in the form of a data layer which illustrated DMR's position on whether the identified areas were agreed for transfer or not. Further analysis of the data and discussions between DMR and the Working Group established which areas were to be transferred to the national park estate and the use of the 'state conservation area' (SCA) reserve category as a means to deal with those areas with mineral issues.

For lands agreed for transfer to the national park estate by the Working Group, further discussion occurred on the appropriate NPW reserve category. Similarly, for lands identified as remaining as State forest the appropriate FMZ classification was discussed. Proposed reserve category of lands for transfer

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<sup>6</sup> FURCONS – lands for further consideration. Described in Attachment 2 of the NSW forest agreements for the UNE and LNE regions.

to the national park estate and the FMZ classification of those areas to remain as State forests considered issues such as the presence of grazing leases, DMR's position and conservation values.

#### FMZ Assessment: proposed outcome

Following negotiations between the Working Group and DMR and DLWC (discussed above), stakeholder consultation was facilitated through RACAC<sup>7</sup>. The Council was presented with a proposal on the possible transfer of areas in June 2002 (as shown in **Table 2-C**) and invited to provide feedback to the Working Group. At 30 June 2002, RACD of PlanningNSW was awaiting feedback from RACAC on the proposed land transfers.

Final areas transferred to the national park estate or upgraded within SFNSW' FMZ system as a result of the Assessment will be provided in the report for 2002/2003.

*Table 2-C: Summary of the FMZ Assessment proposal (June 2002)*

Assessment outcome	Area (ha)
Total land area considered in the assessment	245 558
Total land area agreed to by NPWS*	110 922
SFNSW and NPWS agree to remain as State forest	92 116
SFNSW agree to NPWS but DMR possible State Conservation Area**	5 533
SFNSW agree to NPWS but DMR do not agree	44 186
Further discussions required between SFNSW and NPWS***	9 797

\* this area is made up of the following:

- Agreed to NPWS as national park/nature reserve – 67 691ha (includes 37 554 ha of leases)
- Agreed to NPWS as SCAs – 26 231 ha (includes 12 32 ha of leases)
- Possible 17 000ha of Vacant Crown land (yet to be negotiated with DLWC)

\*\* includes 893 ha of leases

\*\*\* DMR agree to 5 113 ha of the land to transfer to NPWS

Source: RACD, PlanningNSW

#### Crown land

An assessment of forest conservation values on all remaining vacant Crown land has been completed by the NPWS. As identified in the forest agreements for the UNE and LNE regions, the assessment was required to be undertaken for Crown land areas with conservation values not adequately represented in the existing reserve system. In determining land for transfer the following issues were considered:

- n presence of grazing leases;
- n management of land by Reserve trust;
- n required by local councils for expansion of urban infrastructure.

At 30 June 2002, consultation between the NPWS and DLWC and DMR was continuing. The NPWS had received preliminary feedback from DLWC on the results of the assessment, with further responses anticipated in 2002/2003. DMR had yet to respond at 30 June 2002. Other areas of Crown land were still being considered by the NPWS for referral to DLWC at the end of the reporting period.

<sup>7</sup> Non-government representatives on RACAC include; Forest Products Association, NSW Farmers, NSW Aboriginal Land Council, CFMEU, NSW Minerals and the Nature Conservation Council.

Additionally, Crown reserves, created by the *Forestry and National Park Estate Act*, may be converted to SCAs. SCAs are a new conservation reserve under the *National Parks and Wildlife Act* that allows for mining and mineral exploration. A conservation reserve, such as SCAs, did not exist at the time the Crown reserves were created under the *Forestry and National Park Estate Act*. This has recently been facilitated by amendment to the *National Parks and Wildlife Act* in 2001.

## Crown reserves

It has previously been reported that the formation of a management committee for the management of Crown reserves was deferred pending the completion of negotiations between NSW government agencies over the potential transfer of all Crown reserves to SCAs (refer FMZ Assessment). As negotiations continued throughout 2001/2002, the Committee was not formed.

The continuation of these negotiations during the year also meant that preparation of management plans for Crown reserves adjacent to land dedicated or reserved under the *National Parks and Wildlife Act* did not commence. Following the completion of these negotiations, plans of management will be progressively prepared.

## Cooperative approaches for threatened species management

### Assessment of species

Processes to assess conservation requirements in relation to important new information about the biology and ecology of a species and the effectiveness of licence conditions were implemented in 1999/2000. The processes adopted mirror those for species newly listed in schedules of the *Threatened Species Conservation Act* (as stipulated in condition 1.3 of the Threatened Species Licence<sup>8</sup> contained in Appendix B in the IFOAs for the UNE, LNE and Eden regions).

A process was also in place for the review of flora and fauna conditions of the Threatened Species Licences. This process includes the exchange and assessment of new information by the NPWS, SFNSW and, where appropriate, independent experts. Recommendations from such reviews are provided to the relevant Ministers for approval as they arise.

This process was applied during 2001/2002, where SFNSW undertook a study into the home range and habitat requirements of the brush-tailed phascogale (*Phascogale tapoatafa*) in the SFNSW Mid North Coast Region (falls across part of the UNE and LNE regions). This was significant as no research targeting this species had previously been undertaken in State forests on the north coast of New South Wales. On the basis of the study's outcomes, and advice from a NPWS expert, the NPWS and SFNSW agreed to a new prescription in the Threatened Species Licence. The new prescription:

- n introduced the option of a landscape approach to habitat conservation for areas 1 000 hectares or greater;
- n reduced the size of the exclusion zone that must be retained within 500 metres of records, for the site-based approach from 50 hectares to 20 hectares;
- n changed the categories of habitat to be retained in the site approach, generally, from being based on models to being based on forest type mapping.

This new prescription formed part of proposed amendments (amendment 2) to the IFOAs for the UNE and LNE regions, details of which are to be provided in the report for 2002/2003.

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<sup>8</sup> Threatened Species Licence – made under the *Threatened Species Conservation Act* and contained in each IFOA.



When the Scientific Committee makes a final determination to list a threatened species, population and/or ecological community not already covered by licences and is considered likely to occur on State forests and be affected by logging activities, the NPWS advises SFNSW of the determination and the need to apply condition 1.2 of the Threatened Species Licence.

Regular updates of the NPWS *Atlas of New South Wales Wildlife (Wildlife Atlas)* are provided to SFNSW of all threatened species under its data licence with the NPWS. The provision of this information assists SFNSW in planning its logging operations. If SFNSW find a newly listed species present in a compartment planned for logging, the relevant NPWS office is contacted, who then assess the conservation requirements of the species and advises SFNSW of an appropriate condition.

During the 2001/2002, the NPWS advised SFNSW of 24 new listings to the *Threatened Species Conservation Act* schedules, including fauna species, eastern pygmy possum (*Cercartetus nanus*) and grey-headed flying-fox (*Pteropus poliocephalus*), and flora species, *Eucalyptus oresbis* and *E.ciliolata*.

To illustrate the application of the process, during 2001/2002 the NPWS developed a site-specific condition for the eastern pygmy possum and grey-crowned babbler (*Pomatostomus temporalis*). Conservation requirements of the grey-headed flying-fox were also assessed during the year which determined that the existing conditions were adequate.

It should be noted that endangered populations and ecological communities are not covered by the Threatened Species Licence, therefore SFNSW is not authorised to conduct activities that may affect endangered populations and ecological communities.

For non-licence components of the *Threatened Species Conservation Act*, inter-agency cooperation occurs as required. This includes nomination of species, populations, ecological communities, key threatening processes and critical habitat (refer to 'Management/recovery planning' section below).

#### Management/recovery planning

The *Pine Creek Koala Management Plan* (SFNSW, 1999b) for Pine Creek State Forest in the UNE region was implemented in 2000/2001 and continued to be implemented in 2001/2002. The plan contains provisions for the protection of koala (*Phascolarctos cinereus*) habitat, harvesting in specified areas and ongoing monitoring and research on the impact of harvesting on koala populations. The plan is due for an initial review in 2004 and a major review in 2005.

No further joint management plans have been developed to date. However, cooperation between the NPWS and SFNSW has continued through recovery and threat abatement planning, as well as agency-based management actions.

Examples of cooperative activity include the completion and implementation of the *Threat Abatement Plan for Predation by the Red Fox (Vulpes vulpes)* (NPWS, 2001d) and various recovery plans such as those for the Nightcap Oak (*Eidothea hardeniana*), Hastings River mouse (*Pseudomys oralis*), *Elaeocarpus* sp minion and the yellow-bellied glider (*Petaurus australis*). Other involvement has occurred through participation in recovery teams (Hastings River mouse and Nightcap Oak), or where there is not a formal recovery team established (*Elaeocarpus* and yellow-bellied glider) consultation during the drafting and public exhibition stages of plan development. Pre-recovery plan management actions<sup>9</sup> for *Quassia* sp Moonee Creek and *Euphasia scabra* were also cooperative.

Further information on recovery plans by the NPWS is provided in Chapters 1 and 3 of this report.

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<sup>9</sup> Recovery actions undertaken prior to the completion of a recovery plan.

## Pest, weed and feral animal control

The NPWS and SFNSW are continuing to take a cooperative approach to the management of pests, weeds and feral animals on the public forest estate. Approaches taken by the agencies include the development of management plans which define a strategic direction for the control of these agents, the recovery of threatened species, and the development and implementation of cooperative programs with other State agencies, non-government organisations and community groups.

During 2001/2002, consultation occurred between SFNSW and the NPWS, EPA, NSW Fisheries and RACD of PlanningNSW, to further refine its draft model management plans for the management of weeds and feral animals (included in the draft Regional ESFM Plans). SFNSW is now finalising the plans in response to these discussions, following which final endorsement will be sought from RACD of PlanningNSW.

In the Eden region, cooperative weed and pest management programs have been established directly with SFNSW and the NPWS, and indirectly via the South East Catchment Board with Bega and Bombala Shire Councils, DLWC and private landholders. In addition, local pest management committees comprising the NPWS, South Coast Rural Land Protection Board and landholders have been established to manage particular pest issues.

Other cooperative programs are being established by the NPWS with a variety of landholders, land management agencies and interest groups for the management of pest animals (such as foxes, wild dogs (*Canis familiaris*), and feral horses, pigs (*Sus scrofa*) and deer) and weeds [such as bitou bush, lantana (*Lantana camara*), Asparagus species and scotch broom (*Cytisus* spp.)].

Regional pest management strategies are also being prepared outlining how the NPWS will cooperatively manage pest issues along with other land managers. In the UNE and LNE regions, pest management strategies have been prepared for all five NPWS Regions in its Northern Directorate. Pest animal and weed control programs are also integrated into plans of management, recovery plans and threat abatement plans.

SFNSW participates in local weed management committees and works in close cooperation with rural lands protection boards and wild dog associations in determining local control priorities and cooperative control programs.

The Forest Health Advisory Committee has also been established as a forum for those who own or manage forests or forested areas to discuss and provide advice on policy and action for all matters pertaining to the health of forests. The Committee, formed under the terms of the joint State and Federal Ministerial Council Generic Incursion Management Plan, comprises representatives from SFNSW, NPWS, NSW Forest Products Association, Australian Quarantine and Inspection Service (AQIS), NSW Agriculture and the Royal Botanic Gardens, Sydney.

The Committee's terms of reference include providing advice on:

- n reducing the risk of exotic pest incursions;
- n early detection of pests;
- n management of established pests;
- n equitable arrangements for the funding of forest health protection measures such as pest detection surveys and eradication of new pest incursions.

Further details on the extent and management of pests, weeds and disease on the national park estate and State forests are detailed under Criterion 3 in Chapter 3 of this report.

## Private land

### Regional Native Vegetation Committee

The Regional Native Vegetation Committee<sup>10</sup> was formed in 2000 to promote the protection of important ecosystems on private land in the UNE, LNE and Eden regions. The Committee, represented by PlanningNSW, NPWS, SFNSW and DLWC, agreed to identify current voluntary conservation mechanisms and financial incentives to promote conservation on private land.

Agencies have since continued to participate in a range of activities to improve conservation on private lands. This has included \$2 million for funding initiatives for the voluntary conservation on private land of priority ecosystems in the Eden region. The funds have assisted with the development of a voluntary biological diversity conservation strategy by the NPWS, DLWC and the South East Catchment Management Board, and the establishment of a local management team to implement it. Other groups working with the NPWS, DLWC and the South East Catchment Management Board include; the Bega Valley Shire Council, NSW Agriculture, the Far South Coast and Towamba River Landcare Associations and the Bega Environment Network. The Local Management Team is working to reduce the complexities of incentives available to private landholders by promoting cooperative approaches between local groups, organisations and authorities (NPWS, 2002a).

Refer also to Criterion 1 in Chapter 3 of this report.

### Identification of lands of conservation priority

The forest agreements require the identification of forest ecosystems on private land for inclusion in the CAR reserve system [lists contained in Attachment 2 of the Regional Forest Agreement for North East New South Wales (Commonwealth/State of New South Wales, 2000)]. As stated in the forest agreements for the UNE and LNE regions, this required the completion and incorporation of the Comprehensive Regional Assessment Aerial Photographic Interpretation<sup>11</sup> (CRAFTI) data into regional databases.

Revision of CRAFTI linework for UNE and LNE regions was completed in 2000. At 30 June 2002, refinement of the CRAFTI data was continuing. In the meantime, the NPWS has derived an interim data layer and provided this to regional vegetation committees and catchment management boards.

## World Heritage and wilderness

### Wilderness

The *Northern Wilderness Assessment Report* (NPWS, 2001a) was completed in May 2001. Details are provided in Chapter 1 of this report.

### World Heritage

Possible additions to the World Heritage Register located in the UNE and LNE regions were presented at a meeting of the Central Eastern Rainforest Reserves, Australia (CERRA) Committee in September 2000. The Committee decided that it would not pursue these additions, pending the establishment of an independent CERRA Technical and Scientific Advisory Committee (TSAC). Members have now been appointed to the Advisory Committee.

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<sup>10</sup> Committee formed under section 2.9.1 of the forest agreements for the UNE and LNE regions and section 2.8.1 of the Forest Agreement for the Eden Region. The Committee is not connected to the community-based Regional Vegetation Committees formed under the *Native Vegetation Conservation Act 1997*.

<sup>11</sup> CRAFTI – Comprehensive Regional Assessment Aerial Photographic Interpretation. A project undertaken as part of the CRA/RFA process where forest areas were mapped using raw data and aerial photography.

The NPWS will refer the possible additions to the inaugural meeting of the CERRA TSAC, scheduled for August 2002.

In the Eden region, a preliminary assessment and review of potential areas for World Heritage listing commenced during 2001/2002.

Further information on CERRA is available through the Australian Government Department of Environment and Heritage website at <http://www.deh.gov.au>.

## Cultural heritage

### Historic Heritage Information Management System

A new Historic Heritage Information Management System (HHIMS), being developed by the NPWS, is to be completed in August 2002. The system will replace the NPWS Historic Places Register (which was still in use and updated as necessary throughout 2001/2002). The new system will improve the section 170 register (*Heritage Act 1977*) by providing additional and better linked information on NPWS heritage assets. It will enable field staff and consultants to add or amend information related to heritage items they manage and also incorporate necessary technology such as Geographic Information Systems (GIS) into the database.

At 30 June 2002, SFNSW was entering preliminary information into the section 170 register. Details and the format required in the register by the NSW Heritage Office will require further field investigation. As resources permit, and in conjunction with operational field investigations, the records for places of heritage significance will be further reviewed. Management actions are determined according to the nature of sites and potential threats.

### SFNSW policy on cultural heritage

SFNSW' draft policy on indigenous and non-indigenous cultural heritage was incorporated into the draft Regional ESFM Plans and outlined strategies for the protection and management of cultural heritage on State forests. The final policy will be released with the final Regional ESFM Plans.

SFNSW' NFEMS Strategic Framework (exhibited in 2000) also included policies on 'Cultural Heritage', 'Protection of Indigenous Interests and Values' and 'Protection of Non-Indigenous Cultural Heritage'. These documents were reviewed with regional stakeholders such as local Aboriginal land councils, Elders groups, conservation groups and comment received from interested individuals. Formal release of the policies will coincide with the final NFEMS.

The protection of Aboriginal cultural heritage by SFNSW involves liaison with the Aboriginal community and identification in the field of known and previously recorded sites. Field investigations are undertaken during planning to identify whether additional sites or objects are present. The discovery of sites can be limited by ground visibility, due to understorey vegetation, bark and leaf litter. Site protection measures are developed following liaison with community representatives and incorporated in operational plans.

SFNSW supervisory staff and contractors have also undertaken cultural heritage training. Where potential cultural sites are identified during operations, any further activity ceases until the item or place is investigated and a decision made on the appropriate management of the site.

### Places of Aboriginal cultural heritage

NPWS' Aboriginal cultural heritage processes for consents and permits are being reviewed to ensure a landscape approach is adopted. The review is considering broadening the scope of cultural heritage

values that are identified and assessed, and impacts on these values, rather than focussing on the archaeological significance of a site in isolation from the rest of the landscape.

The integration of natural and cultural values in the landscape is a goal of the NPWS and the identification and assessment of a landscape's cultural heritage values is vital to the effective management of the landscape. To assist NPWS staff, and the consultants and contractors the NPWS employs, in managing its cultural heritage responsibilities, strategic information, community consultation and other policies form part of a broader package aimed at better integrating cultural heritage into NPWS conservation objectives and operations. Management processes for both natural and cultural heritage through management planning and impact assessment are taking a landscape approach as recommended in *Visions for the New Millennium* (NPWS, 1998) and the NPWS Corporate Plan.

Improvements to the management of indigenous heritage were assisted by the finalisation of the new Aboriginal Heritage Information Management System (AHIMS) by the NPWS. Released in July 2001, the AHIMS was developed by the NPWS with extensive consultation with Aboriginal communities across the State. The system will better manage information on Aboriginal sites, heritage permits and the catalogue of heritage reports and Aboriginal places, and also has the capacity to restrict access to sensitive information. The system was fully implemented for most of 2001/2002.

## Aboriginal interests

### Aboriginal involvement in forest management

The NPWS and SFNSW are each engaging in, or pursuing, a range of mechanisms to facilitate the involvement of Aboriginal people in forest management, assisted by appropriate strategies and policies.

Specifically, SFNSW' draft policy in relation to Aboriginal involvement in forest management (contained in the NFMS Strategic Framework), aims to ensure the protection of places of Aboriginal significance and ongoing consultation and liaison with Aboriginal people on matters of their interest. This includes the protection of cultural knowledge and places, and ensuring obligations under relevant legislation are met. During the year, consultation between SFNSW and the Aboriginal community resulted in changes to the policy to ensure Aboriginal people are consulted when operations are near items of Aboriginal cultural heritage. It also provides economic and cultural opportunities for Aboriginal communities.

During 2000/2001 in the Eden region, a draft Memorandum of Understanding (MOU) was prepared by SFNSW and the Eden Local Aboriginal Land Council. The draft MOU identified a number of interests held by the Aboriginal community. In preparing the draft, it has assisted shared understandings between SFNSW and the Aboriginal community in relation to preferred arrangements for Aboriginal involvement in forest management, protection of cultural heritage and access to resources on State forests. At the end of 2001/2002, the MOU had been enthusiastically endorsed by the Eden Local Aboriginal Land Council.

For the national park estate, no progress was made by the NPWS on its strategy for Aboriginal involvement in forest management in the UNE and LNE regions during the year. However, it has been identified as a priority task for 2002/2003. In the meantime, the NPWS has continued to consult with the Bundjalung and Githabul communities to improve NPWS management of areas and ensure the agency's sensitivity to cultural issues.

In the Eden region, a joint strategy by the NPWS and SFNSW identifies scope for involvement and access to resources by Aboriginal people, and provides for their input into planning decisions. The strategy also identifies steps to encourage employment and industry development for Aboriginal people.

It was proposed that consultation take place with the Aboriginal community before the document was finalised. However, consultation did not occur during 2001/2002 due to involvement of local community people with other matters. It is expected the joint strategy will be completed in 2002/2003.

Although strategies and policies for Aboriginal involvement in forest management have yet to be finalised, SFNSW and the NPWS are continuing to pursue initiatives with Aboriginal people. For example, SFNSW is developing a number of projects with Aboriginal people, drawing on previous SFNSW/Aboriginal community partnerships, through pre-harvest inspection work and the building of new relationships. In the LNE region, contact with a number of Aboriginal Elders has led to an exciting venture with the Keepa Keepa Elders. This project is centred on an area near Mount Sugarloaf in Heaton State Forest, which is being used as a base for a number of activities, including cultural learning with Aboriginal youth.

In SFNSW Mid North Coast region (across part of UNE and LNE regions), Aboriginal interests have been promoted by delivering Aboriginal cultural awareness programs to workers involved in the construction of the new correctional centre near Kempsey. As part of this program, companies and tradesmen have been encouraged to include Aboriginal youths when engaging apprentices.

In the Eden region, joint management arrangements by the NPWS with local Aboriginal communities have included two cultural camps established on national parks in the region. This includes one in Ben Boyd National Park. While cultural camps may vary, both address the issues of 'who we are and where we come from' for the Aboriginal participants, with a focus on respect for self and others. Activities may include:

- n the sharing of cultural heritage knowledge;
- n re-acquainting people with land and culture;
- n the development of self-esteem among young people through outdoor adventure and cultural activities;
- n teaching of traditional skills.

The NPWS provide support and assistance for culture camps wherever possible and often have a direct involvement in their organisation and conduct.

#### Joint venture and co-management opportunities

In the UNE region, SFNSW and Aboriginal communities have been discussing the future management of specific areas of State forest, building trust and rapport that is fundamental to joint developments.

Joint management arrangements and ventures between the NPWS and Aboriginal communities include 10 joint management, access or hunting and gathering arrangements in the UNE and LNE region (at 30 June 2002), and the establishment of the first ILUA in the State at Arakwal (details provided in Chapter 1).

An informal management agreement was also put in place by the NPWS with the local Aboriginal community for Nungguu Mirrall Aboriginal Area, in the Nambucca Valley (LNE region). Advisory committees have also been formed for Mount Warning (Wollumbin) and Bundjalung national parks that will focus on developing co-management arrangements for these parks.

The NPWS will employ a cultural heritage project officer in Coffs Coast Area in 2002/2003 as a pilot to foster better partnerships with communities in the management of Aboriginal cultural heritage.

Aboriginal land surveys have also been completed by the NPWS and results returned to communities along with a series of management recommendations for their use in future management. An additional funding application will be prepared to implement some of the recommendations of the previous survey work. The NPWS will also investigate options for the ongoing management of the Aboriginal lands delivered to communities as part of the Forest Agreement for the Eden Region.

#### Access for traditional and cultural purposes

Aboriginal access to materials for traditional and cultural purposes (such as art, craft, food, medicine and firewood) is a key to the protection and preservation of Aboriginal culture. To establish a strategic approach to facilitating Aboriginal access to such resources in forests in the Eden region, a joint strategy has been drafted by the NPWS and SFNSW. The strategy will be finalised during 2002/2003 following consultation with the Aboriginal community. The strategy for the Eden region is to be considered when developing the strategy for access and use arrangements in the north east regions.

Until strategies are finalised for all regions, Aboriginal access to forest resources for traditional purposes is being facilitated by SFNSW and the NPWS, including through joint venture arrangements and participation in forest management described above. SFNSW is continuing to issue section 30I permits (under the *Forestry Act*) for the non-commercial collection of materials from State forests. Licences/permits for hunting native animals are also issued in accordance with other legal requirements where required.

Additional details are provided in Chapter 1 of this report.

#### Employment opportunities

A joint strategy by the NPWS and SFNSW to facilitate employment and development programs for Aboriginal people has yet to commence for the UNE and LNE regions. In the meantime, both agencies are continuing their own internal initiatives.

Internal initiatives include the NPWS' new Aboriginal Employment and Training Strategy which examines cross-agency approaches to training. Seven additional Aboriginal staff were recruited by the NPWS during the year; an Aboriginal ranger, a field officer and four trainee field officers at Arakwal National Park, and a field officer at Dorrigo National Park. A further six staff who identify as Aboriginal were also employed by the NPWS in non-identified positions. At 30 June 2002, persons who identify themselves as Aboriginal comprised 6.3% of the NPWS workforce in the UNE and LNE regions (a total of 37 people). The NPWS will be pursuing further employment opportunities for Aboriginal people as part of the finalisation of the forest agreements for the UNE and LNE regions. It is expected that these positions will become available in 2002/2003.

In the Eden region, the NPWS appointed four Aboriginal staff as a result of funding provided for the management of additions to the reserve system. These positions were: a trainee field officer, two Aboriginal sites officers (one male and one female) and one project officer to manage handback of Biamanga and Gulaga National Parks. Additional employment areas in the region include the *Discovery* Ranger program where two field officer training positions for young Aboriginal persons and one ranger training position for an Aboriginal person have been appointed.

The NPWS has identified tourism guiding in the Eden region as a venture with potential to provide income for the Aboriginal community. As part of the NPWS *Discovery* program and in an independent commercial capacity, funds have been directed towards supporting Bega Aboriginal community members in cultural tour operator training. This training will help build the capacity of these communities to deliver high quality tourism products.

The Aboriginal *Discovery* program continued across New South Wales throughout 2001/2002. The program aims to enhance community appreciation and understanding of Aboriginal cultural heritage and the importance of its protection in the landscape. The NPWS contracts the Aboriginal community to supply *Discovery* Rangers for the program. In 2001/2002, 39 Aboriginal *Discovery* Rangers were employed to deliver 1 290 Aboriginal cultural heritage and other educational activities in the program.

SFNSW has also implemented its Aboriginal employment and industry program. Employment of Aboriginal people by SFNSW during the year included two trainees involved in tertiary studies (one in environmental management at Newcastle and another in forestry at Lismore). One of the trainees was working as a trainee supervising forest officer and the forestry trainee was provided with field-based training opportunities during university course breaks. A field-based trainee in SFNSW North East Region was given opportunities to gain experience in timber inventory, ecological assessment and marketing work, and a clerical trainee located at Coffs Harbour shifted to a new position in SFNSW Mid North Coast Region at Wauchope. Aboriginal cultural heritage officers appointed under forest agreement funding continue their work from Taree and Coffs Harbour/Grafton. Further employment has also been provided by SFNSW for Aboriginal people in other areas of SFNSW' operations, including inventory work and ecology field investigations.

## Managing for other forest values and uses

### Recreation and tourism

In 2000/2001 a reference group was established to prepare joint SFNSW and NPWS recreation and tourism plans for the UNE and LNE regions. The project was to build on the draft Recreation Management Strategy prepared by the NPWS Northern Directorate. As SFNSW was unable to commence the joint undertaking during 2001/2002, the NPWS Northern Directorate prepared a draft Recreation Framework to manage visitor impacts and experiences. The framework is an internal working document to be circulated amongst interest groups before being finalised in 2002/2003. The framework takes a strategic approach to recreation planning and the methodologies used would be suitable for application by other land managers should they wish.

For the Eden region, a draft recreation and tourism plan to manage visitor impacts and experiences has been prepared by the NPWS and SFNSW. Development of the joint plan commenced following the signing of the Southern RFA in April 2001, having been deferred to enable the South Coast sub-region of the Southern region to be included in the plan. The final plan is to include coastal areas north to Batemans Bay. With this path being adopted, consideration is also being given to how best to deal with areas further north of Batemans Bay and areas to the west (i.e. the remainder of the Southern region).

The NPWS and SFNSW are continuing to develop and implement individual planning measures to manage for recreation and tourism on each estate.

### Carbon sequestration opportunities

A MOU was entered into by the Minister for the Environment and the Minister for Forestry in July 2000 that provided for the sharing of expertise and information to expand carbon sequestration rights and environmental markets. In order to operationalise the MOU with SFNSW, the NPWS undertook a study to identify potential reforestation areas lands managed by the NPWS. These areas were ranked according to gross area, site productivity and conservation value. More than 44 individual parcels of cleared land (mostly ex-farmland), totalling over 9 400 hectares, were verified as suitable for reforestation. Three candidate areas have since been identified in three regions for further detailed study by the NPWS and SFNSW. The study included an assessment of the environmental, legal and



economic feasibility of using carbon sinks for ecosystem restoration for each of the sites. The results of this study will be available in 2002/2003.

Further carbon sequestration opportunities are being pursued by SFNSW through the establishment of plantations for carbon sinks under various partnerships. One opportunity was realised in 2000/2001 following successful negotiations between SFNSW and the Tokyo Electric Power Company (TEPCO). As part of this partnership, SFNSW has so far established 2 000 hectares of plantations as carbon credits in the Hunter Valley. Further carbon sequestration opportunities are being pursued by SFNSW.

#### Occupation permits on State forests

The majority of occupation permits were phased out of State forest areas zoned FMZ 1 and FMZ 2 by July 2001 following consideration by the Occupation Permit Taskforce<sup>12</sup> (formed in November 2000). Finalisation of exclusion or management arrangements was expected by December 2001. However, this was deferred until the completion of the FMZ Assessment.

#### Plantation areas within national parks

Following the establishment of the CAR reserve system in the UNE and LNE regions, the transfer of lands from State forest to the national park estate resulted in some plantation areas remaining within the new reserve system. These areas are to be harvested and rehabilitated through the sale of royalties.

The NPWS has assessed five plantations; Myall Lakes, Knappinghat, Koreelah, Mebbin and Toonumbar, and found that the conservation values of two would benefit from harvesting. Before harvesting in these areas, a Review of Environmental Factors under Part 5 of the *Environmental Planning and Assessment Act* and community consultation were required.

The timeframe for harvesting of these plantation areas was extended to February 2002. However, at 30 June 2002, no harvesting had been undertaken because of its limited economic viability.

#### Roads and trails

In January 2000, SFNSW and the NPWS entered a MOU on joint roads and trails maintenance and access arrangements in the UNE and LNE regions. During 2001/2002 an interagency workshop was held to implement the MOU and finalise the implementation guidelines, including field-testing.

A draft MOU between SFNSW and the NPWS for the Eden region was completed in 2000/2001. It has since been reviewed to ensure compatibility with a similar MOU for the Southern region. At 30 June 2002, the MOU for the Eden region had yet to be finalised.

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<sup>12</sup> The function of the Taskforce was extended to address issues specific to the Eden region.

## Managing timber supply

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### Monitoring of timber supply

#### Timber volumes harvested

The forest agreements require SFNSW to report annually on the volume of logs harvested from its estate and to monitor supply levels against provisions contained in the forest agreements and IFOAs. The actual volume of Veneer and High Quality Large<sup>13</sup> sawlogs harvested from State forests during the year is provided below:

- n 101 944m<sup>3</sup> of Veneer and High Quality Large sawlogs were harvested from SFNSW native forest and hardwood plantations in the UNE region;
- n 177 036m<sup>3</sup> of Veneer and High Quality Large sawlogs were harvested from SFNSW native forest and hardwood plantations in the LNE region;
- n 25 329m<sup>3</sup> of Veneer and High Quality Large sawlogs were harvested from SFNSW native forests in the Eden region.

Pulp grade timbers<sup>14</sup> also form part of committed volumes for the Eden region. Quota pulp grade and chipwood timbers harvested from SFNSW native forests in the Eden region during 2001/2002 was 279 854 tonnes.

Further details on timber volumes against supply provisions contained in the forest agreements and IFOAs for each region are detailed under Criterion 2 (indicators 2.1.d and 2.1.b) in Chapter 3 of this report.

#### Actual versus predicted

A review of actual versus predicted timber volumes was undertaken by SFNSW in 2000/2001. Although the results were not available for inclusion in this report, SFNSW advised that the analysis did not reveal results that significantly questioned the Forest Resource and Management Evaluation System (FRAMES)<sup>15</sup> estimates. In 2001/2002, SFNSW further examined previous actual versus predicted methodologies and identified problems with these processes that severely limit their usefulness. Key issues identified included:

- n FRAMES reported predicted yields are based on average figures that assume a whole stratum is harvested. The *Yield Simulator report* (SFNSW, 2000) outlined issues associated with such interpretation. Compartments that contain a mix of stratum are harvested, with localised environmental and marketing factors influencing the extent and intensity of harvesting.
- n Understanding actual versus predicted performance requires consideration of the whole stand, including what trees are left behind in order to make a valid comparison. Evidence from previous studies has demonstrated that harvested yields tended to remain consistent to prediction. However, the structure and volume in the retained stands tended to differ significantly from predicted. Post-CRA/RFA monitoring work completed to date, has not considered the nature of the retained stand.

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<sup>13</sup> High Quality Large sawlogs - sawlogs having a centre diameter under bark of at least 40 centimetres.

<sup>14</sup> Pulp grade timbers - timber suitable for the manufacture of reconstituted products including paper and panel board and does not include timber suitable for high quality sawlogs, poles, piles or girder logs.

<sup>15</sup> FRAMES - a computer modelling system for strategic level wood supply forecasting. It assists SFNSW to determine forest management schedules for native hardwood forests.

In order to address the issues described above, a comprehensive monitoring study is proposed by SFNSW. This study will incorporate the following projects:

- n Net Harvest Area Study that will consider the spatial extent of harvesting under the new CRA/RFA-based regulatory framework. This study will enable any changes in harvest accessibility to be detected and if differences are present then the study will also permit the Net Harvest Area<sup>16</sup> calculation system to be re-calibrated and improved.
- n Silviculture and harvesting study designed to enable the dynamics of harvesting and relationships between pre-harvest and post-harvest stands to be quantified. Where the Net Harvest Area Study is designed to look at the impact of terrain and regulation on area availability for harvest, the silviculture study is designed to look at tree availability for harvest. The study will also inform on the intensity of tree removals and therefore allow monitoring of the CRA/RFA estimates for these variables.
- n Additional strategic inventory plots are to be measured to supplement those lost due to land tenure change and to improve the precision of volume estimates.
- n Additional tree measurements for defect and utilisation will allow more powerful analysis of defect trends and re-calibration of defect modifiers.
- n Recently collected permanent growth plot data will be added to the growth model database and used to review and improve growth model processes in FRAMES.

Enhancements to the FRAMES tool-set are also planned to complement these new monitoring studies. These improvements will not only make FRAMES easier to use but also provide a range of more meaningful reports for yield prediction and monitoring.

Overall, the combination of these monitoring studies and improvements to the FRAMES system will better inform SFNSW and the NSW Government of the performance of FRAMES parameters and assumptions. The results will also allow any variations in these assumptions to be fed back into the prediction tools to enable their impact on long-term timber supply estimates to be determined.

#### Supplementing timber supply

Discussions have occurred between SFNSW, the NPWS and RACD of PlanningNSW on the development of a process for selecting land for purchase by SFNSW for timber supply that considers unmet CAR conservation targets and will not hinder the overall purpose of the Private Property Timber Supplementation Program (UNE and LNE regions)<sup>17</sup>. The process had yet to be finalised through agreement between the NPWS, SFNSW and RACD of PlanningNSW at the end of the reporting period.

The approach taken by SFNSW, to date, has evolved as properties have been identified for purchase, and includes:

- n consideration of flora and fauna values follow prescriptions in the Threatened Species Licence of the IFOA area applied to all private property purchases;
- n application of a protocol (developed by SFNSW and NPWS) for high conservation value old growth where ever possible prior to purchase;
- n application of a process which allows for consideration of under-represented forest ecosystems on private property.

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<sup>16</sup> net harvest area - sum of areas within the tract of forested land or part that contains timber, excluding any area in which logging is prohibited by or under an Act (as defined in the IFOAs).

<sup>17</sup> Private Property Timber Supplementation Program funded through FISAP.

The process developed by SFNSW that deals with key under-represented forest ecosystems on private property has considered modelling constraints identified in the CRA/RFA report *Forest Ecosystem Classification and Mapping* (NPWS, 1999b) and the processes and outcomes of Regional Vegetation Management Plans and their consideration of vegetation types. This has resulted in the following methodology undertaken prior to purchase:

- n identify forest ecosystems on the property;
- n identify forest ecosystems listed in Attachment 2 of the North East RFA;
- n identify forest ecosystems listed in Attachment 2 of the North East RFA that are classed as rare or endangered in Table 1 of the North East RFA Attachments 1(A) and 1(B);
- n consider the relevant regional vegetation management plan targets and objectives for priority ecosystems;
- n mapping of forest ecosystems requiring protection.

Field assessment/verification is undertaken where needed to identify the presence and location of the forest ecosystems for protection.

#### Production of timber products

Timber products, other than quota sawlogs, harvested from State forests during 2001/2002 are presented in **Table 2-D**. Details on non-timber products harvested from State forests are provided under Criterion 2 in Chapter 3 of this report.

Table 2-D: Volumes of timber products other than quota sawlogs from State forests – 2001/2002

Log type	Unit	UNE region			LNE region			Eden region	
		native forest	hwd pltn	swd pltn*	native forest	hwd pltn	swd pltn*	native forest	swd pltn
High Quality Small	m <sup>3</sup>	27 836	1 946	0	13 754	2 108	0	1 125	0
Low quality	m <sup>3</sup>	64 962	15 007	14 832	107 423	16 563	14 832	9 294	0
Poles/piles and girders	m <sup>3</sup>	15 680	1 037	0	10 642	2 103	0	0	0
Preservation logs	m <sup>3</sup>	0	0	0	0	0	0	0	45 912
Mining timber (round)	m <sup>3</sup>	0	0	0	0	0	0	0	0
Fencing/landscape/sleepers (sawn)	m <sup>3</sup>	240	0	0	38 642	0	0	279	0
<b>Total</b>	m <sup>3</sup>	<b>108 718</b>	<b>17 990</b>	<b>14 832</b>	<b>170 461</b>	<b>20 774</b>	<b>14 832</b>	<b>10 698</b>	<b>45 912</b>
Pulp grade and chipwood	tonnes	899	15 996	6 839	67 848	26 632	6 839	n/a	31 520

\* combined volume of softwood harvested from SFNSW softwood plantations in the UNE and LNE regions.

Source: SFNSW

## FRAMES improvement

The forest agreements for the UNE, LNE and Eden regions identify a number of specific areas that should be the subject of FRAMES improvement. SFNSW has undertaken an internal assessment of objectives and outcomes of the FRAMES review process and is to commence discussions with stakeholders and agencies to determine priorities for the future development of FRAMES. Information from these sources will be used to develop a FRAMES improvement strategy that will direct future work and be the basis for future reporting of progress.

Since the signing of the forest agreements for the UNE and LNE regions in 1999, significant effort has been expended on measuring additional inventory plots and gathering additional data to underpin net harvest area estimates. This information is currently being incorporated into the databases that underpin FRAMES and being written up in technical reports for wider distribution.

At 30 June 2002, a SFNSW review of projected timber yields for the UNE and LNE regions was underway. It is expected the review to be completed by July 2002. No further work had been conducted for the Eden region at the end of the reporting period.

## Silvicultural practices

### Eco-field guides

SFNSW has been preparing its eco-field guides for the UNE and LNE regions in two parts:

- n Part 1 - Overview of Forest Management in North East New South Wales;
- n Part 2 - Diagnostic component.

At the end of the reporting period, Part 1 of the eco-field guides was under review following its application and the content and approach of the revised Regional ESFM Plans. Part 2 of the eco-field guides had been finalised and was being applied in the field. Part 2 will be updated on an ongoing basis. A review of the eco-field guides and their effectiveness is planned for early 2004.

### Demonstration areas

The establishment of silviculture demonstration areas to assist in the training of forest operators continued in the UNE and LNE regions during the year. Sites selected by SFNSW are of an operational scale and represent the major north coast forest types (Blackbutt, Dry Hardwood and Tablelands forests). Other factors considered in selecting sites include forest structure, location and presence of IFOA exclusion areas.

Each silvicultural demonstration area is subject to a non-routine comprehensive pre-harvest inventory to assess silvicultural condition, followed up with post-harvest assessments. Results of the inventory are used to demonstrate varying applications of IFOA silviculture conditions. The assessment includes the establishment of pre- and post-harvest photo points.

The demonstration areas form part of a four-tiered approach to silviculture training for planning and supervisory staff. The four tier approach includes:

- n preparation of three operational-scale silviculture demonstration areas demonstrating the implementation of the *Native Forest Silviculture Manual* (SFNSW, 2000a) and the conditions of the IFOA;
- n development and delivery of regional silviculture training days utilising the demonstration areas;

- n development of the elements and syllabus for silvicultural training package;
- n continued delivery of informal silviculture field days for planners and supervising forest officers.

The demonstration areas also provide opportunities to:

- n enhance staff training to ensure the consistent application of best practice silviculture in the forest;
- n refine the planning processes to deliver the forest agreement and IFOA silviculture conditions;
- n show stakeholders and the broader community the implementation of the forest agreements and IFOA silviculture conditions.

At 30 June 2002, two demonstration sites had been established at Queens Lake and Kiwarrak. These sites were used for six training courses during the year, as well as using non-established sites to address silvicultural skills. SFNSW Mid North Coast Region trained 76 personnel at the sites (including foresters, managers, ecologists and field workers).

A third demonstration site in tablelands forest types (on a purchased property) is yet to be established as it awaits the resolution of the application of the High Conservation Value Old Growth Protocol.

#### Audit and compliance

The audit process for silvicultural practices applied by SFNSW has been integrated into its corporate compliance monitoring and audit process.

SFNSW' internal audit policy was included in its NFEMS Overview and comprises of a four-tiered system of compliance monitoring to be implemented in all regions. Application of the audit system provides for:

- n T1 - on-site monitoring by the supervising forest officer, to ensure compliance with operational conditions;
- n T2 - on-site checking of the T1 level by the supervising forest officer's supervisor and correct application of standards;
- n T3 - independent audit of the T1 and T2 levels by regional staff not directly involved in the operation, and/or independent audit by SFNSW' EMS audit team;
- n T4 - independent audit by SFNSW Management Audit and Review Branch.

All operations are covered by the audit procedure with risk assessments determining the focus of T1 and T2 monitoring and of the T3 and T4 audits. Any non-compliance requires a corrective action request to address the non-compliance and minimise any future re-occurrences. Results from T1 and T2 monitoring checks are kept in SFNSW' Harvest Tracking System. A summary of the results of internal monitoring undertaken by SFNSW is provided under Criterion 7 in Chapter 3 of this report.

## Implementation, review and community awareness

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### Staff training, employment and industry initiatives

#### Staff training

Competency-based, nationally recognised training has been developed by SFNSW. In association with the timber industry, SFNSW has developed Supervising Forest Harvesting Operations and Forest Harvest Operations manuals to assist in training. Another program, the Field Supervisors Safety Training course<sup>18</sup>, was drafted in 2001 and piloted through a series of workshops across SFNSW in the first half of 2002.

SFNSW has been continuing to implement its Staff Development and Training Policy and Staff Development program to assist in developing a highly skilled and efficient workforce (developed in 2000). Objectives of the program are to:

- n provide employees with a clear statement of their role, responsibilities and expectations in line with its Corporate Plan;
- n assist SFNSW achieve its business objectives by helping employees to understand where they fit in the organisation and the role they play in ensuring its success;
- n provide a framework that enables managers and employees to actively participate in the development of employees;
- n facilitate regular two-way feedback between employees and managers;
- n assist employees to achieve their maximum potential within SFNSW and support their development for their current and future career;
- n contribute to a positive workplace environment and the overall Human Resource Plan;
- n employees under the *Public Sector Management Act 1988* are covered by the Staff Development Program and there is a continual process of monitoring and evaluation to promote its effective continued implementation.

At 30 June 2002, SFNSW was providing 44 in-service training programs to staff on a regular basis, with many of these programs available to external individuals and organisations. These courses include training in cultural heritage, wildlife identification and management, systems management, fire management and suppression, and other various human resource areas. During 2001/2002, 499 staff received training in 72 courses, ranging from occupation health and safety (OH&S) to machine operator skills.

A second phase of the program is to be implemented with those employed under section 10 of the *Forestry Act*. The second phase will occur after full consultation with the relevant union and employee consultation groups.

Ongoing training programs for NPWS staff cover natural and cultural (including Aboriginal) heritage management, and operational, technical and safety matters. Programs range from technical training related to OH&S requirements to statewide capacity building initiatives targeted at particular staff classifications. Cultural awareness training throughout NPWS was a focus for 2001/2002, with objectives to improve employees' knowledge and understanding of Aboriginal culture, and using this to improve the

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<sup>18</sup> Field Supervisors Safety Training course was not to national accreditation standards.

way the agency does its business. Documents on professional and ethical conduct are made available to all new and current NPWS staff.

Refer also to 'Silviculture Practices' section of this chapter and Chapter 1 of this report.

### Employment

Capital works outsourced by the NPWS since the forest agreements were signed in 1999 have included bridge construction, road maintenance, road rehabilitation works, vegetation and fauna research and monitoring, construction of directional and interpretive signs, campsites, walkways, viewing platforms and day use areas, and Review of Environmental Factors documentation. Actual seasonal/temporary/contract employment figures related to the above activities were unavailable.

Employment opportunities for Aboriginal people are also a component of the initiatives. Further details on employment by the NPWS are provided under Criterion 6 (MIG indicator 6.5.a and 6.4) in Chapter 3 of this report. Specific details on the NPWS activities in relation to Aboriginal employment are detailed in the 'Aboriginal Interests' section of this chapter.

### Industry initiatives

As a result of the forest agreement process, FISAP funding was extended for further five years to assist industry and employment opportunities for forest-based industries in the UNE, LNE and Eden regions. FISAP funding was allocated to two initiatives in the north east regions (UNE and LNE regions) and two in the Eden region.

Initiatives in the UNE and LNE regions included \$7.5 million allocated to the Private Property Timber Supplementation program. The program was established to assist SFNSW purchase timbered property as a means of providing additional resources to the native timber industry, due to the reduction in resource following the establishment of the CAR reserve system. At 30 June 2002, eight properties had been purchased in the UNE and LNE regions under the program, covering an area of 10 930 hectares of native forest, with an estimated 97 100m<sup>3</sup> of quota sawlogs purchased. It is anticipated the program is to be finalised in 2002/2003.

The second initiative for the UNE and LNE regions was the Log Haulage Assistance program. Funds of \$1 million per year over five years were allocated to assist native forest quota sawmilling companies meet additional log haulage costs incurred where they have to obtain quota sawlog supplies from outside their usual areas of supply (as a result of the establishment of the CAR reserve system). The program continued to be implemented across the UNE and LNE regions throughout 2001/2002.

Initiatives for the Eden region were the Eden Recovery Mill and the Commercial Regrowth Thinning program. The Eden Recovery Mill initiative was completed in 2000/2001. The Commercial Regrowth Thinning program had not yet commenced at 30 June 2002.

### Community education and awareness

Providing opportunities for community participation, and increasing the public's knowledge and awareness, of ESFM is crucial to its achievement. By increasing the community's knowledge and understanding it can assist in better management of public forests and have potential flow-on effects into private land. Both the NPWS and SFNSW are continuing to provide a range of opportunities for public participation and education, many of which are well received and patronised.



The NPWS address ESFM indirectly as part of the broader conservation awareness and understanding promoted by the agency, rather than being a specific component. Public education programs with NPWS participation have included:

- n the development of education resources on biodiversity and associated teachers' resource kits;
- n guided walks and tag-along four-wheel drive tours;
- n ranger talks and on-site inspections;
- n training, planning and control programs for pest species;
- n preparation of a three-year plan for environmental education in New South Wales.

The NPWS *Discovery* program also continued throughout 2001/2002, focusing on providing community education opportunities for the general public and interested groups on natural and cultural heritage. In 2001/2002, nearly 71 650 people participated in the program through 2 346 educational walks, talks and tours conducted in 176 locations, with a very good to excellent rating from participants on their experience. Two key themes addressed in 2001/2002 were threatened species and pest management.

SFNSW continued to provide a range of education and awareness classes and programs to students and teachers to increase awareness of the ecologically sustainable management of forests. During 2001/2002, SFNSW spent \$4.6 million on education and awareness programs and activities across the State. Over 2 600 opportunities for public involvement were provided, including guided interpretive walks, public displays and volunteer programs. These programs are well attended attracting over 6 000 students and teachers annually. Free bus trips are available for interested teachers to find out about forest management and SFNSW. The information provided on these trips is relevant to primary and secondary teachers with resource packs provided. In 2002 tours will take in native hardwood forests, in addition to hardwood and softwood plantations.

Cumberland State Forest in Sydney is the focus of SFNSW education and awareness programs. Attendance at a range of primary, secondary and tertiary education and school holiday programs, community forest activities, at-school visits and community bushcare activities, attracted nearly 10 500 participants during the year.

Educational opportunities provided by SFNSW are assisted by two forest studies centres located in Sydney and Newcastle (LNE region). These centres provide educational opportunities for schools, and provide an enjoyable learning environment for teachers and students. The centres provide a range of opportunities, including; an overview of forest management and forest ecology, programs for all classes K-12, programs in the forest, worksheets tailored to field activities, guest lecturers and field trips for tertiary groups, and access to timber harvesting and regeneration sites.

Other public involvement activities by SFNSW include participation and presentation at regional shows, development and sponsorship of competitions promoting timber and timber use (e.g. SFNSW South East Workers competition) and participation in landcare and rivercare programs to promote the role of trees and forests in environmental rehabilitation.

## Complaint handling

The Coordinated Complaint Handling Protocol was developed by the NPWS, NSW Fisheries, EPA and RACD of PlanningNSW, to establish a standardised, coordinated and efficient process to respond to complaints received from the public relating to the IFOAs. The protocol was endorsed in October 2001. As detailed in the protocol, its objectives are to:

- n efficiently receive and record information;

- n ensure the confidentiality of a complainant;
- n ensure that the information is forwarded to and received by the appropriate response agency/agencies for action;
- n ensure that regulatory agencies are fully accountable for handling of all relevant complaints;
- n ensure that appropriate management actions are undertaken by SFNSW;
- n ensure that the complainant is informed about the progress and final outcome of the investigation.

Since the implementation of the protocol in 2001, all complaints received from the public about the IFOAs have been dealt with in accordance with the protocol. Further details on compliance with the IFOAs are provided in Chapter 4 of this report.

## Informing the public

### Additional reporting mechanisms

All parties involved in the implementation of the forest agreements and IFOAs are continuing corporate level reporting in order to provide statewide information on the activities of each agency each financial year.

Reporting by the NPWS was enhanced in November 2001 with the release of its first *State of the Parks* report. The report provided an overview of the conservation values of New South Wales and the NPWS' management of the parks system. This information was supported by a series of case studies for parks around the State. Further development of the indicators by which the NPWS' management effectiveness is measured is continuing. The next *State of the Parks* report is to be released in early 2005.

SFNSW' *Environmental and Social Values* report has been replaced by the *SEEing* report. The first *SEEing* report was published in 2001/2002. SFNSW' periodical, *Bush Telegraph* is continuing to be published every two months.

In addition, all agencies are represented on a range of international, national, state and local groups related to forests and forest management. Both the NPWS and SFNSW are represented on the Australasian Fire Authorities Council, NSW Bushfires Coordinating Committee and Greening Australia (among others).

Other consultative and reporting mechanisms include the NPWS District Advisory Committees which continue to provide advice to the National Parks Advisory Council and the NPWS on range of natural and cultural heritage conservation matters both on and off reserve. Membership of these committees includes Aboriginal communities, women, local government and farmer groups.

The NPWS is also represented on:

- n NSW Council on Environmental Education;
- n NSW Heritage Council;
- n Native Vegetation Advisory Council;
- n North Coast Noxious Weeds Advisory Committee;
- n Aboriginal Advisory Committee;
- n Biological Diversity Advisory Council.

SFNSW is also represented on:

- n Australian Forest Quarantine Consultative Committee;
- n Emissions Trading Working Group;
- n Forest Industry Council;
- n Noxious Animal Advisory Council;
- n Plantations Infrastructure Committee.

Full lists of groups each agency are represented are provided each year in each agency's corporate annual report.

## Monitoring of the ESFM criteria and indicators

Monitoring of the ESFM criteria and indicators defined in each of the forest agreements has been underway since 1999/2000. Results of monitoring undertaken by the NPWS and SFNSW are compiled into a monitoring report each year and summarised in Chapter 3 of this report. The refinement and improvement of data collection techniques by the NPWS and SFNSW is being undertaken on an ongoing basis.

The NPWS has established a central coordinating group to administer the implementation and monitoring of the ESFM criteria and indicators, in conjunction with its own *State of the Parks* monitoring stream. Focus areas being monitored by the NPWS related to the ESFM criteria and indicators include:

- n forest ecosystems and growth stages through validation of baseline vegetation mapping undertaken during the CRA/RFA for the Eden region;
- n threatened plants and animals through recovery planning programs and the *Threat Abatement Plan for Predation by the Red Fox (*Vulpes vulpes*)* (NPWS, 2001d);
- n weeds through region-wide collation of weed population locations, area impacted, density, treatments, monitoring and annual rates of change;
- n cultural sites through the new AHIMS database;
- n legislation and policies.

SFNSW' ability to effectively monitor the ESFM criteria and indicators was improved during 2001/2002 following the development of its SEEDS computer application. The SEEDS system was fully operational in 2001/2002 and utilised by all SFNSW Regions for data entry and reporting purposes. It is understood that the NPWS is considering purchase of SFNSW' SEEDS system for its use, providing a standard platform for reporting between SFNSW and NPWS. Further information on SFNSW SEEDS system is provided in Chapter 1 of this report.

## Data management

To improve the integration and coordination of data between government and increase public awareness of natural resource management, the Community Access to Natural Resources Information (CANRI) website was launched in March 2001. The CANRI site is the result of a whole-of-government program which was first proposed in 1999 and subsequently allocated nearly \$4 million over four years to develop (NSW Government, 2001).

The site is of use to community groups, industry groups, landholders, government agencies and students, providing easy access to maps and other natural resource information. It also allows stakeholders to contribute information to the site and as a source for data sharing.

The site aims to adopt a cooperative approach to integrate existing data and information systems and provide the community with access to a range of natural resource information by:

- n unlocking the potential of existing natural resources information holdings by storing them in a consistent way that allows ready comparison and integrated use;
- n harnessing the power of the internet to provide access to the State's natural resource information to the widest audience at minimal expense to both government and the community;
- n streamlining processes for the creation of information by drawing on sources of dispersed data for user analysis at a single point;
- n applying common standards and protocols, allowing improved sharing of agency information;
- n applying advanced information technologies;
- n allowing natural resource agencies to focus on their data custodianship obligations, using resources previously spent on data supply (NSW Government, 2003).

SFNSW' Biodiversity Information Working Group is also addressing the issue of information sharing as a necessary part of its function. Such work is a starting platform for further data sharing.

The development of a whole of government internet based biodiversity information system (BioNet) commenced in 2002. BioNet is a NSW Government system involving the NPWS (which also manages the system), the Australian Museum and SFNSW. The system provides a consolidated view of species data collected by the different agencies.

## Research

The NPWS is planning to develop an agency-wide Corporate Research Framework during 2002/2003. The framework will address five key areas:

- n natural heritage;
- n cultural heritage;
- n economic;
- n park visitation and tourism;
- n social, education and public relations.

The NPWS Northern Directorate, which includes the UNE region and the majority of LNE region, will also be developing a Research Plan during 2002/2003. This will be achieved by detailing all current research projects, then developing structure and processes to facilitate the coordination of future research efforts. The project will have wide involvement of NPWS staff in its Northern Directorate.

A Biodiversity Research Strategy is also being developed under the *NSW Biodiversity Strategy* (NPWS, 1999a). An interagency working group has been established to progress this task.

SFNSW' draft monitoring and reporting strategy was exhibited with the Regional ESFM Plans in 2000. The strategy is being finalised as part of the Regional ESFM Plans and is in addition to the strategic plan for SFNSW' research division which is revised each year.

SFNSW' Research and Development Division provides strategic research support and scientific leadership to the organisation's operational and policy divisions. Its primary focus is on innovative scientific development in fields which can add value to the planted forests, investment services and

native forests businesses of the organisation. The Division is structured around five scientific programs:

- n Tree Improvement;
- n New Forests;
- n Silvicultural Systems;
- n Forest Health Management;
- n Biodiversity in Managed Forests.

Research priorities and strategies are established with input from all sections of the organisation through regular planning meetings, and are published as a strategic plan. This plan provides direction for research projects undertaken by the Division in the following three-year period, as well as collaborative and contracted research. As SFNSW' goals re-focus on attracting private investment to expand the State's planted forests, research emphasis has shifted towards establishing the benefits of planted forests for such purposes as carbon sinks, bio-energy and the development of sustainable land use practices for salinity-prone areas.

Each of the Division's programs is led by an experienced scientist who is accountable for the planned outcomes specified in the strategic plan. The programs are coordinated by the Division's Program Management Team which comprises the Division's senior managers and the program leaders. Priority is given to integrating the objectives of all programs through multi-disciplinary project teams. Project teams are staffed by scientists drawn from a wide range of scientific disciplines central to modern, sustainable forestry including; genetics, plant physiology, growth modelling, ecology, pest and disease management, soil science and chemistry.

Research outcomes for 2001/2002 are provided in the *SFNSW Research and Development Report 2001/2002* which may be viewed on SFNSW' website:

[http://www.forest.nsw.gov.au/publication/research/annual\\_report/default.asp](http://www.forest.nsw.gov.au/publication/research/annual_report/default.asp).

A new proposal for an operational research trial to be undertaken in the Eden region regarding selective harvesting from some filter strips<sup>19</sup> has been developed by SFNSW. The new proposal was submitted to the EPA in November 2001. Following feedback received from the EPA in February 2002, SFNSW and the EPA have held a number of meetings to discuss an appropriate research design. Certain technical aspects have been established as a result of these discussions. However, further consultation will finalise all aspects of the research trial, including site selection and field implementation.

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<sup>19</sup> Filter strip - a strip of vegetation or groundcover along each side of a watercourse to reduce runoff, sediment movement and erosion of the stream bank.



## 3

# Monitoring ecologically sustainable forest management

## Introduction

The key objective of the NSW forest agreements and IFOAs is the achievement of ESFM. To help determine whether this objective is being achieved a set of criteria and indicators are applied. The ESFM criteria and indicators are a long-term monitoring tool which measure changes in the environmental, social and economic values of forests. Data collected over a number of years will enable an assessment of progress towards ESFM to be made.

The ESFM criteria and indicators were developed during the CRA/RFAs specific to each region. The indicators are defined in Table 1 of the forest agreements for the UNE, LNE and Eden regions. Many of the indicators have been based on the Montreal Implementation Group (MIG) set of regional (sub-national) indicators<sup>1</sup>. Therefore there is a degree of alignment between the two monitoring streams. These indicators are identified by the prefix 'MIG'.

Monitoring of the ESFM criteria and indicators for the UNE, LNE and Eden regions has been carried out, principally by the NPWS and SFNSW, since 1999/2000.

The following chapter provides a summary of the results of monitoring for the UNE, LNE and Eden regions in 2001/2002. Full details are provided in a supplementary report, *ESFM Criteria and Indicators Monitoring Report 2001/2002* (NSW Government, 2006).

## Criterion 1 – Biodiversity

### Forest type

MIG<sup>2</sup> indicator 1.1.a: Extent of area by forest type and tenure (UNE, LNE regions)

Indicator 1.1: Extent of forest ecosystem types and vegetation types by growth stage (Eden region)

Only minor changes to the extent of modelled forest ecosystems<sup>3</sup> have been recorded in the UNE, LNE and Eden region since 1999/2000. The changes have been primarily due to changes in land tenure.

In the UNE region, 65 of the 163 forest ecosystems identified on the national park estate recorded an increase in extent, thereby increasing the percentage of the target achieved in the reservation of these forest ecosystems. Increases in the extent of forest ecosystems in the region were due to new gazettals<sup>4</sup> of NPWS land during 2001/2002. New gazettals included a 680 hectare addition to Torrington State Recreation Area and a 1 344 hectare addition to Bald Rock National Park. The

<sup>1</sup> Defined in *A Framework of Regional (Sub-National) Level Criteria and Indicators of Sustainable Forest Management in Australia* (Commonwealth, 1998).

<sup>2</sup> MIG – indicators beginning with the prefix 'MIG' indicates is based on the MIG set of regional (sub-national) indicators.

<sup>3</sup> Modelled forest ecosystems calculated during the CRA/RFA for each region and contained in Table 1A and Table 1B Attachment 1 North East RFA and Table 1 Attachment 1 Eden RFA.

<sup>4</sup> The formal process of land becoming national park estate by the publication of notices in the *NSW Government Gazette*.

reservation of these areas has provided protection to the poorly conserved woodlands dominated by *Eucalyptus caleyi* spp *ovendenii* Ironbark in Torrington State Recreation Area and other forest ecosystem types including New England Blackbutt and New England Stringybark forest and woodland in Bald Rock National Park. Protection of a number of rare and threatened plant species, including *Macrozamia plurinervis*, *Phebalium rotundifolium* and *Hibbertia* sp *B* have also resulted from the reservation of the addition to Torrington State Recreation Area.

In the LNE region, the extent of 35 of the 200 forest ecosystems identified on the national park estate were recorded, increasing the percentage of the target achieved in the reservation of these forest ecosystems. Increases in the extent of forest ecosystems in the LNE region were also due to new gazettals of NPWS land during the reporting period. Additions to the national park estate included the World Heritage-listed New England National Park (15 kilometres south west of Dorrigo, 83 hectares added). This addition reserves one of the few areas on the Dorrigo Plateau where *Nothofagus moorei* Cool Temperate Rainforest remains on the plateau surface.

For the Eden region, 13 of the 72 identified forest ecosystems on the national park estate recorded an increase in extent. This in turn increased the percentage of targets achieved in the reservation of these forest ecosystems. Since the Forest Agreement for the Eden Region was signed in 1999, 1 374 hectares have been added to the national park estate. This includes a 1 219 hectare addition to the Kybeyan Reserve<sup>5</sup> following the signing of the NSW/Commonwealth Southern RFA in April 2001. This addition added 850 hectares of Monaro Dry Grass Forest raising the total percentage of target achieved for this forest ecosystem to 67%.

On State forests, minor changes to the size of the estate following new land purchases, revocations or transfer of management for planted forest objectives resulted in small changes in the percent of ecosystem within the different management zones. Changes to the extent of forest ecosystem types within State forests are obtained from its FMZ system. SFNSW' FMZ system, adopted in 1999, is based on nationally agreed reserve criteria (JANIS<sup>6</sup>) and is linked to the IUCN<sup>7</sup> categories for reserve protection.

Monitoring changes to forest type extent will in time support better management of a range of forest types/ecosystems. New data sets for this indicator are being applied as they become available, thereby improving the accuracy of measurements of change in forest type extent.

Aerial Photographic Interpretation (API) of forest areas in north east New South Wales was undertaken as part of the CRA/RFA process, which resulted in typing large areas of forest as rainforest. During 2001/2002, the NPWS undertook a project to classify these areas into 13 alliances. Following completion of this project, the NPWS will liaise with the Queensland Parks and Wildlife Service to correlate rainforest mapping of the border region between the two states.

In the LNE region, the NPWS extensively mapped vegetation communities in the Watagans National Park using a vegetation community model. Three rare eucalypts have been found and it is likely that there are two other new species records in the park.

In the Eden region, the NPWS, supported by the South East Catchment Management Board, is in the third year of a five year program to validate and remap vegetation type and growth stage of ecosystems on the national park estate and private land. This will be completed in time for the first five year review of the Eden RFA and the Forest Agreement for the Eden Region.

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<sup>5</sup> Addition made on 1 January 2001.

<sup>6</sup> JANIS - Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-Committee.

<sup>7</sup> IUCN – World Conservation Union (formerly the International Union for the Conservation of Nature and Natural Resources).

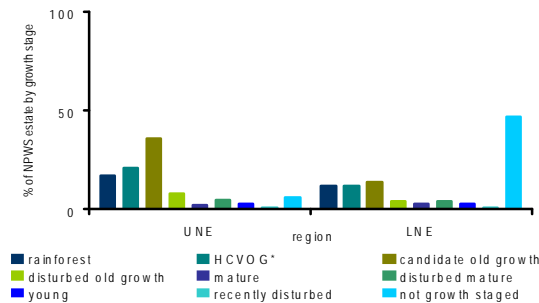


## Growth stage

MIG indicator 1.1.b: Area of forest type by growth stage distribution by tenure (UNE, LNE regions)  
 Indicator 1.1: Extent of forest ecosystem types and vegetation types by growth stage (Eden region)

Like forest ecosystem types, the extent of growth stages in the national park estate and State forests has remained relatively stable since 1999/2000. Minor changes identified have been the result of new growth stage interpretation, particularly for newly purchased areas.

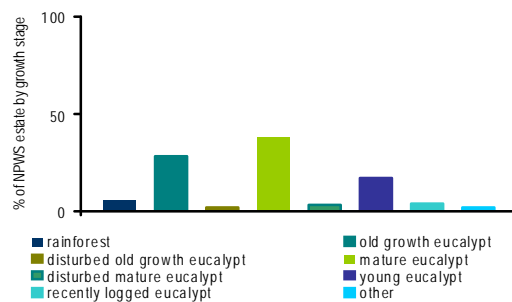
There was little measurable change to the extent of each growth stage category across the national park estate during 2001/2002. As shown in **Figure 3-A**, a large portion of the national park estate in the LNE region remains 'not growth staged'. This area falls within the southern part of the region where growth stage analysis was not carried out during the CRA/RFA. It accounts for the notably lower proportion of the estate categorised as rainforest, high conservation value old growth and mature forest compared to the UNE region.



Source: NPWS data

Figure 3-A: Growth stages on the national park estate – UNE and LNE regions 2001/2002

The Eden CRA/RFA old growth mapping criteria suggests there was no significant change in growth stage of eucalypt forest ecosystems (**Figure 3-B**). However, in validating the Eden CRA maps of young and regrowth forests in NPWS-managed lands, the NPWS found a few systematic errors in the baseline data. When these errors were corrected the area of regrowth and young forests increased while mature and old growth forest areas decreased.



Source: NPWS data

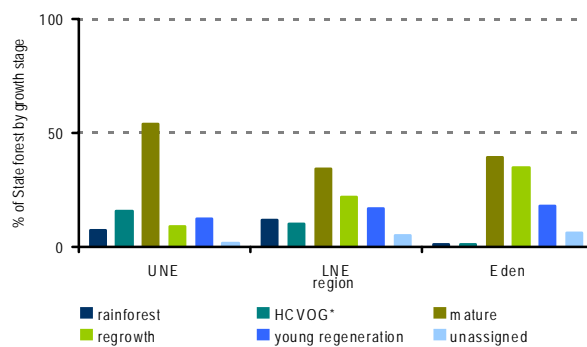
Figure 3-B: Growth stages on the national park estate – Eden region 2001/2002

For the UNE region, of the 163 forest ecosystems there was an increase in the percentage of candidate old growth for 55 forest ecosystems on NPWS lands.

In the LNE region, of the 200 forest ecosystems the percentage of candidate old growth on NPWS lands increased for one forest ecosystem, Smoothbarked Apple.

For the Eden region, four new inclusions to the Mimoso Rocks National Park added less than 10 hectares of old growth Dune Dry Scrub Forest to the national park estate. This added 5.6% toward the total conservation target achieved for old growth forest ecosystems. The inclusion of Kybeyan Reserve to the national park estate in the region added 850 hectares of Monaro Dry Grass Forest, of which 192 hectares was old growth. This increased the total percentage of target achieved for old growth forest ecosystems by an additional 40% to 88%.

On State forests, the greatest fluctuation in growth stage extent was identified in the UNE region. Between 2000/2001 and 2001/2002, the total area of mature forest situated in State forests in the region increased by about 6%. This increase in the area of mature forest is primarily due to growth staging of types previously unassigned to mature. Growth stages on State forests as recorded in 2001/2002 are illustrated in **Figure 3-C**.



\* high conservation value old growth

Source: SFNSW

Figure 3-C: Growth stages on State forests - All regions 2001/2002

## Fragmentation

MIG indicator 1.1.e: Fragmentation of forest types (UNE, LNE, Eden regions)

Indicator 1.2: Extent of connectivity in the forest landscape in relation to threatened species, habitat, general retained habitat on private land and conservation reserves (Eden region)

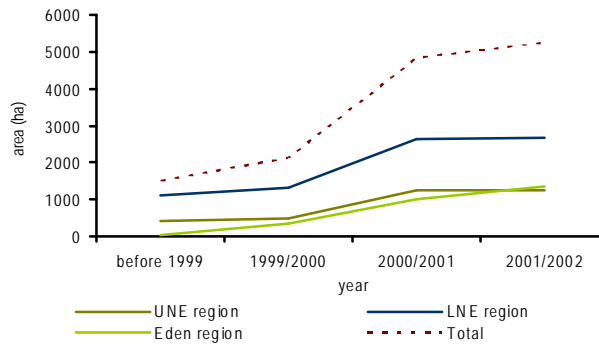
Increasing the level of connectivity (or decreasing the level of fragmentation) between forest areas will help improve the diversity of species habitat and increase potential species movement between forest areas. As there is presently no formal measure of connectivity of forested areas across the forest agreement regions, data are obtained from two readily available sources:

- n interpretation of additions to the forest estate, through new purchases of native forest and the establishment of plantations;
- n application of voluntary conservation mechanisms across private land.

Additions to the reserve system through voluntary land purchases and land transfers have helped improve connectivity (details provided for the previous indicator), as have new plantations established

by SFNSW. In 2001/2002 about 3 000 hectares of new plantations were established across the UNE, LNE and Eden regions.

Private landholders have also been assisting to improve connectivity across the landscape by entering into various voluntary conservation mechanisms. VCAs are one such mechanism. Administered by the NPWS, the total area of land protected by VCAs has increased by over 3 000 hectares since 1999/2000 (**Figure 3-D**).



Source: NPWS

Figure 3-D: Area (ha) of VCAs signed by the Minister for the Environment

During 2001/2002, 11 VCAs were signed for areas in the UNE, LNE and Eden regions, covering a total area of 420 hectares. Much of the total area newly protected by VCAs during the year was situated in the Eden region (352 ha). Refer also to Chapter 1 of this report.

To determine real change in connectivity between forest areas, a landscape approach is needed. The NPWS' successful trial of a GIS-based technique for assessing vegetation configuration in a number of places in the State may produce helpful data in the near future. A further trial will assess whether the methodology is both workable and a meaningful measure of ecological sustainability. A detailed scientific analysis of connectivity will be undertaken in the Eden region using this technique to review conservation priorities for private lands in conjunction with the Eden Local Management Team of the South East Catchment Management Board.

## Forest dwelling species

MIG indicator 1.2.a: A list of forest dwelling species (UNE, LNE, Eden regions)

Indicator 1.3.b: List of representative species by abundance. Representative sample to include threatened species, key functional groups and indicator species (Eden region)

In the *2000/2001 ESFM Criteria and Indicators Annual Report* (RACD, 2004), the NPWS and SFNSW presented lists of forest dwelling species identified across each tenure. These lists are updated each year to include new records and results of on-ground surveys.

Species lists for the national park estate were derived from the *Wildlife Atlas* records from within the forest agreement regional boundaries for the gazetted estate. The revised 2001/2002 species lists, based on those for 2000/2001, are now the baseline for NPWS reporting. These lists of forest dwelling species recorded on the national park estate contain:

- n 2 890 fauna and flora species in the UNE region;
- n 2 681 flora and fauna species in the LNE region;
- n 1 783 flora and fauna species in the Eden region.

In 2001/2002, 107 species of vertebrate fauna, one mollusc species, one insect species and 212 species of vascular flora were newly recorded in the UNE, LNE or Eden regions. These data include newly recorded introduced vertebrate species identified on NPWS tenure during the year.

It is unlikely the NPWS final regional lists will contain all forest dwelling species for the region as the *Wildlife Atlas* relies on government staff and the public contributing their observations and survey and research data. Any significant increase in the number of forest dwelling species in a region for a given year is most likely due to the contribution of large data sets, such as those from other state government agencies. Such datasets may contain records dating back over many years, so reported increases may include species recorded prior to the reporting period.

Preliminary lists of forest dwelling species occurring on State forests were provided in 2000/2001. These lists were compiled from results of various fauna and flora surveys carried out across State forests. The lists identified 28 vertebrate fauna species and six vascular flora species in State forest in the UNE region, 232 vertebrate fauna species and five vascular flora species in the LNE region, and seven vertebrate fauna species in the Eden region. No new species have been added for 2001/2002.

SFNSW forest dwelling species lists are developed through on ground survey work, therefore any change to the number of species recorded on the estate is likely to reflect research and survey effort rather than true species richness of forest areas.

## Threatened species, ecological populations and ecosystems

MIG indicator 1.2.b: The status (threatened, rare, vulnerable, endangered or extinct) of forest dwelling species at risk of not maintaining viable breeding populations, as determined by legislation or scientific assessment (UNE, LNE, Eden regions)

Sub-indicator 1.2.b.1: The status of endangered populations and ecosystems as determined by legislation or scientific assessment (UNE, LNE regions)

- This indicator should be interpreted with care.

### Listings of flora and fauna species

During 2001/2002 a number of additions were made to Schedule 1 (endangered species, populations and communities) and Schedule 2 (vulnerable species) of the *Threatened Species Conservation Act*. Relevant to both the national park estate and State forests, listings for each forest agreement region at 30 June 2002 is provided in **Table 3-A**.

### Listing of populations and ecological communities

At 30 June 2002, there were six forest dwelling endangered populations listed under Part 2, Schedule 1 of the *Threatened Species Conservation Act*. None of these forest dwelling endangered populations were newly listed during 2001/2002.

There were also 13 forest dwelling endangered ecological communities listed under Part 3, Schedule 1 of the Act. One of these, White Box Yellow Box Blakely's Red Gum Woodland, was newly listed during 2001/2002.

### Listing of key threatening processes

Key threatening processes are listed under Schedule 3 of the *Threatened Species Conservation Act*. At 30 June 2002, 11 key threatening processes relevant to forest dwelling species were listed. Of these, three were newly listed during 2001/2002 being relevant to the UNE, LNE and Eden regions:

n Clearing of native vegetation;

- n Competition and grazing by the feral European rabbit *Oryctolagus cuniculus*;
- n Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands.

Table 3-A: Summary of species listed on schedules of the Threatened Species Conservation Act 2001/2002

Region	No. species listed before 2001/2002	No species newly listed during in 2001/2002	No. species listed before 2001/2002	No species newly listed during in 2001/2002
	Schedule 1		Schedule 2	
Fauna				
UNE	17	0	87	4
LNE	12	0	71	4
Eden	9	0	36	1
Flora				
UNE	55	12	49	0
LNE	26	0	47	2
Eden	1/8	0	16	0

Source: NPWS data

#### Threatened species surveys on State forests

Surveys for threatened species listed on schedules of the *Threatened Species Conservation Act* are routinely carried out by SFNSW during the planning phase of forestry operations. These pre-harvest surveys are carried out in accordance with the conditions of the Threatened Species Licence. The surveys record the presence or absence of threatened species, and used as an indicator of adverse and beneficial impacts of management activities on forest ecosystems. The number of sightings recorded by these surveys determines the area of forest to be available for, or excluded from, harvesting.

During 2001/2002, pre-harvest surveys were carried out across 55 345 hectares of State forest in the UNE, LNE and Eden regions. The surveys resulted in 2 591 individual sightings of 40 different threatened fauna species. Of these, 1 254 individual sightings were recorded in the UNE region, 1 220 individual sightings in the LNE region and 117 individual sightings in the Eden region.

Improved reporting methods applied in the UNE region resulted in a significant increase in the number of greater gliders (*Petauroides volans*) recorded. Surveys conducted in 2001/2002 resulted in 193 individual sightings compared to nil sighted in 2000/2001.

The NPWS is continuing to improve knowledge of threatened species and ways to improve their status. There were a number of surveys undertaken in the north east regions during the year. One such survey, conducted in the Barrington Tops National Park and adjacent reserves in the LNE region assisted by *NSW Biodiversity Strategy* funding, identified up to 15 possible new or unnamed plant species and the number of rare species known for the national park increased from 15 to 35.

Around Bouddi National Park in the LNE region, surveys were carried out to determine the impact of fire on glider populations in the area. Four species of gliders were targeted, two of which are listed as vulnerable under the *Threatened Species Conservation Act*. 2001/2002 was the first year of an ongoing survey project.

SFNSW research into forest biodiversity has included long-term studies that indicate bats can be efficiently monitored over time, using either banding techniques or infra-red counters at known roosts. The information gathered is extremely valuable. For example, riparian buffers have been demonstrated to be effective in mitigating the immediate effects of logging on the large-footed myotis (*Myotis adversus*).

## Species management measures

Indicator 1.3: Management measures in place to maintain species extent and abundance (interim for the first five years of agreement) (Eden region)

- This is an Eden region indicator. For consistency of reporting, all information about the development and implementation of management measures for all regions are reported.

Agencies are undertaking a range of activities to improve the status of threatened species, populations and ecological communities. These include the development and implementation of recovery and threat abatement planning under the *Threatened Species Conservation Act* and collaborative on-ground activities with other land managers and landholders.

The NPWS lead the development of recovery and threat abatement planning in collaboration with SFNSW, DLWC and local landholders and interest groups. Recovery plans are prepared for flora and fauna species listed under Schedules 1 and 2 of the *Threatened Species Conservation Act*, and prescribe management actions to maintain and secure threatened species, endangered populations and ecological communities.

At 30 June 2002, 40 recovery plans had been developed and approved by the Minister for the Environment across the State. Although no plans for flora and fauna species relevant to the UNE, LNE and/or Eden regions were approved during the year, the development of many plans are underway. Plans already approved for forest dwelling species relevant to the forest agreement regions include those for yellow spotted bell frog (*Litoria castanea*), peppered frog (*Litoria piperata*), and *Boronia granitica* (UNE and LNE regions) and the long-footed potoroo (*Potorous longipes*) and *Viola cleistogamoides* (Eden region).

During the year, the initial planning for, and preparation of, recovery plans for the endangered Koala population, Hawks Nest and Tea Gardens and Tusked Frog (*Adelotus brevis*) population in the Nandewar and New England Tablelands Bioregions commenced. Recovery planning for other endangered populations is in the initial planning stage or has not yet begun. Recovery planning for forest dwelling endangered ecological communities has also not yet begun.

Threat abatement plans are also prepared for key threatening processes listed under Schedule 2 of the *Threatened Species Conservation Act*. The first threat abatement plan to be completed under the Act, *Threat Abatement Plan for Predation by the Red Fox (Vulpes vulpes)* (NPWS, 2001d) was endorsed by the Minister for the Environment in December 2001. Refer to Chapter 1 of this report for further details.

Public exhibition of the draft plan for the key threatening process, Predation by *Gambusia holbrooki* Girard, 1859 (Plague Minnow or Mosquito Fish) was also made during the reporting period. Preparation of the threat abatement plan for bush rock removal commenced.

A range of other activities are also being undertaken across the forest agreement regions, such as a joint research project between the NPWS and the Southern Cross University Centre for Plant Conservation Genetics, which is investigating the genetics of three rainforest species in the genus *Elaeocarpus*. The NPWS is also continuing a scotch broom (*Cytisus* spp.) containment program, funded by the *NSW Biodiversity Strategy*. The key aim of the program is to protect 35 flora species, six

listed as threatened (*Threatened Species Conservation Act*) and 29 RoTAP (Rare or Threatened Australian Plants) from the impact of this weed species.

## Criterion 2 – Productive capacity of forest ecosystems

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### Land available for timber production

MIG indicator 2.1.a: Area of forest land and net area of forest land available for timber production (UNE, LNE, Eden regions)

SFNSW manages over 1.2 million hectares of native forest and plantation across the UNE, LNE and Eden regions. About half of this area is zoned as available for harvest, with half protected for conservation purposes or other values. Although there have been changes to SFNSW tenure due to various land purchases and revocations and the re-classification of land through its FMZ system, the proportion of native forest available for timber production across the regions has not changed significantly since 1999/2000. At 30 June 2002:

- n 48% (206 078 hectares) of SFNSW native forest in the UNE region was available for timber harvesting, with the remaining 52% (224 532 hectares) reserved within the FMZ system for conservation purposes;
- n 46% (240 754 hectares) of SFNSW native forest in the LNE region was available for timber production, with the remaining 54% (281 800 hectares) reserved within the FMZ system for conservation purposes.
- n 68% (114 692 hectares) of SFNSW native forest in the Eden region was available for timber harvesting, with the remaining 32% (52 807 hectares) reserved within the FMZ system for conservation purposes.

A further 21 061 hectares of SFNSW hardwood plantation was situated in the UNE, LNE and Eden regions. Most of this area (20 722 ha) was situated in the UNE and LNE regions, with the remaining 339 hectares of hardwood plantation in the Eden region.

The total area of SFNSW softwood plantation in the UNE, LNE and Eden region was 70 645 hectares. By region, 39 000 hectares of SFNSW softwood plantation was situated in the Eden region, and 31 645 hectares in the UNE and LNE regions.

It should be noted that the area of land available for harvesting does not represent the actual area of native forest harvested. The actual area harvested will be less because additional areas are excluded to protect various values, or for operational reasons, such as Aboriginal or historic sites, wildlife corridors, protected land and non-commercial forest types.

### Total growing stock

Indicator 2.1.b: Total growing stock of both merchantable and non-merchantable tree species on native forest land available for timber production (UNE, LNE, Eden region)

No data or discussion available.

## Timber products compared to sustainable volume

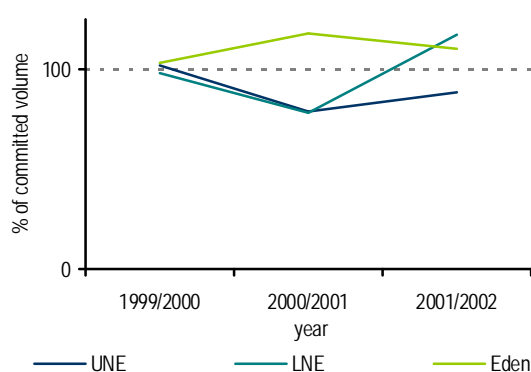
Indicator 2.1.d: Annual removal of wood products compared to sustainable volume (UNE, LNE, Eden region)

Indicator 2.1.b: Annual removal of timber and non-timber products from forest ecosystems compared with those estimated to be ecologically sustainable by tenure (Eden region)

Indicator 2.1.d: Annual removal of timber products and non-timber products from forest ecosystems by volume (Eden region)

### Committed/sustainable volumes harvested

Under the terms of the forest agreement and IFOA for each region, the actual volume of native timber harvested may vary from the committed volume<sup>8</sup> by 25% within any one year, but not exceed this volume by more than 5% over a five year period. This provision accommodates for fluctuations in environmental and economic circumstances. In accordance with this provision, the total volume of quota sawlogs (Veneer logs and High Quality Large sawlogs) harvested has not exceeded the annual variation permitted for any forest agreement region since 1999/2000 (**Figure 3-E**).



Source: SFNSW data

Figure 3-E: Timber volumes harvested against committed volumes

The total volume of Veneer and High Quality Large sawlogs harvested from SFNSW native forest and hardwood plantation during 2001/2002 totalled 304 309m<sup>3</sup> across the UNE, LNE and Eden regions. Specifically:

- n 101 944m<sup>3</sup> of Veneer and High Quality Large sawlogs were harvested from SFNSW native forest and hardwood plantation in the UNE region, representing 88% of the committed volume, calculated using a sustainable volume of 115 800m<sup>3</sup> per annum as extrapolated from the IFOA [109 000 per annum + 19 770 per first five years (pro rata 3 954)].
- n 177 036m<sup>3</sup> of Veneer and High Quality sawlogs were harvested from SFNSW native forest and hardwood plantations in the LNE region, representing 104% of the committed volume, calculated using a sustainable volume of 170 592m<sup>3</sup> per annum as extrapolated from the IFOA [160 000 per annum + 23 407 per first five years (pro rata 4 681)].
- n 25 329m<sup>3</sup> of Veneer and High Quality Large sawlogs harvested from SFNSW native forest in the Eden region, representing 110% of the committed volume, calculated using a sustainable volume of 23 000 m<sup>3</sup> per annum as designated in the IFOA.

<sup>8</sup> Committed volume – the volume of timber that may be harvested each year under the terms of the forest agreements and IFOAs.



A further 279 854 tonnes of quota pulp grade logs were harvested from SFNSW native forest in the Eden region during 2001/2002. This represents 81% of the committed volume based on a sustainable volume of 345 000 tonnes per annum as designated in the IFOA.

Non-quota sawlogs harvested from SFNSW native forest and plantation totalled 328 641m<sup>3</sup>. This included 126 708m<sup>3</sup> non-quota sawlogs harvested from native forest and hardwood plantations in the UNE region; 191 235m<sup>3</sup> non-quota sawlogs harvested from native forest and hardwood plantations in the LNE region; and 10 698m<sup>3</sup> non-quota sawlogs harvested from native forest in the Eden region.

A further 111 365 tonnes of non-quota pulp grade timbers were harvested from native forest and hardwood plantation in the UNE and LNE regions.

Non-quota Veneer and High Quality Large sawlogs harvested from SFNSW softwood plantations during 2001/2002 was 258 185m<sup>3</sup>. A further 38 359 tonnes of pulp grade sawlogs were harvested from SFNSW softwood plantations across the three regions.

### Standing volume of species logged

Indicator 2.3: Standing volume of log stocks by species groups and diameter at breast height class for multi-aged and regrowth native forest and available for timber production by land tenure (Eden region)

No data available. The full implementation of SFNSW SCION system will enable reporting of species, volume, royalty and tenure in future years.

### Species and royalty of logs harvested

Indicator 6.1: Average volume and royalty value of logs harvested per annum by species grade by tenure (Eden region)

- *This indicator was defined in the Eden region set of criteria and indicators under Criterion 6 – Socio-economic benefits. For continuity of reporting it has been included under Criterion 2 – Productive capacity of forests.*

No data or information available.

### Volume of non-timber products

Indicator 2.1.b: Annual removal of timber and non-timber products from forest ecosystems compared with those estimated to be ecologically sustainable by tenure (Eden region)

Indicator 2.1.d: Annual removal of timber products and non-timber products from forest ecosystems by volume (Eden region)

- *These indicators are applicable to the Eden region. However, data has been provided on the quantities of non-timber products obtained from all regions. Values of products extracted have only been provided for the Eden region.*

Non-timber products of forests are items like gravel, bark, firewood and seedlings and activities in forests such as apiary, grazing and research. The definition excludes timber supplies for sawmills or processing plants.

Since 2001/2002, the area of State forest available for grazing across the LNE and Eden regions has increased by about 22% (20 617 ha). A contributing factor to this increase has been the dry conditions experienced in New South Wales over the past few years which have lead graziers to seek additional pasture for stock.

The increase in the number of sites leased for apiculture in State forests can also be attributed to the dry conditions in New South Wales as apiarists sought sites in coastal forests. The number of leased apiculture sites across the three regions has increased by 5% (or 70 sites) since 1999/2000. The majority of these sites are in State forests in the UNE region.

Overall volumes of firewood taken from State forests in the UNE, LNE and Eden regions have decreased since 1999/2000. Although the actual quantities taken from State forests in the UNE and Eden regions has increased over the past three years by about 20%, this has been countered by a 34% decrease in volumes taken from the LNE region.

The value of miscellaneous non-timber products harvested from State forests in the Eden region has increased by 8% since 1999/2000 to \$118 168. Reporting of the value of non-timber products obtained from the north east regions is not required.

## Plantations

MIG indicator 2.1.f: Area and percent of plantation established meeting effective stocking one year after planting (UNE, LNE, Eden regions)

During 2001/2002, 2 005 hectares of hardwood plantation were established on State forests in the UNE and LNE regions. No hardwood plantation was established in the Eden region during the period.

A further 5 951 hectares of softwood plantation were established by SFNSW during 2001/2002 across the UNE, LNE and Eden regions. Of the total area established 5 795 hectares was in the UNE and LNE regions and 156 hectares in the Eden region.

The effective stocking rates of plantation establishment across the three regions has remained consistently high, with softwood plantations achieving an average 96% stocking for the 2002 age class. Effective stocking rates were most successful in the Eden region, where the total area of softwood plantation established reached 100%.

The stocking surveys for the SFNSW hardwood plantation estate had not been undertaken by the end of the reporting period. These surveys are not usually completed until the end of October each year, and were not available for inclusion in this report. The early onset of the 2002 fire season also diverted staff and resources to fire fighting duties.

## Regeneration

MIG indicator 2.1.g: area and percent of harvested area of native forest effectively regenerated (UNE, LNE, Eden regions)

No formal regeneration surveys were undertaken in State forests during 2001/2002.

No assessments of regeneration in areas that were previously harvested by SFNSW and are now managed by the NPWS were undertaken this period.

## Criterion 3 – Maintenance of ecosystem health and vitality

### Weeds, feral animals and disease

Indicator 3.1.a: Area and percent of forest affected by processes or agents that may change ecosystem health and vitality (narrative as interim) (UNE, LNE, Eden regions)

Indicator 3.1: List of biological factors influencing forest health and vitality, including weeds, feral animals, insects and diseases (Eden region)

The extent of various weed, pest animals (including introduced predators) and disease has remained relatively stable across the public forest estate since 1999/2000. However, continued efforts across the national park estate and State forests aim to further reduce the impacts of these agents on the biodiversity and economic value of forest areas.

Expenditure is an indication of these ongoing efforts. During 2001/2002 SFNSW spent more than \$400 000 on the control of weeds and feral animals across the UNE, LNE and Eden regions. SFNSW expenditure focussed on the control of feral animals such as wild dogs, pigs and feral cats.

Region-specific expenditure by the NPWS was only available for the Eden region and two parks in the LNE region within the NPWS Central Directorate. As an alternative statewide NPWS expenditure on weed and pest animal control in 2001/2002 was estimated at \$15.8 million. Of this amount, \$5.7 million was used for weed and pest animal operational programs, with the remainder spent on salaries (\$9.2 million) and capital acquisitions directly related to pest management (\$0.9 million). Of the \$5.7 million budget for operational programs in 2001/2002 (\$2.43 million for pest animals and \$3.27 million for weeds), \$5.3 million was spent on specific on-ground field programs and \$0.353 million on research and coordination (excluding salaries).

#### Noxious and environmental weeds

SFNSW directed \$165 700 towards the control and eradication of weeds across the UNE, LNE and Eden regions during the year, with significant reductions made to the extent of most noxious/environmental weeds. Control efforts were undertaken over more than 170 000 hectares of State forest across the UNE, LNE and Eden regions. Species treated included giant parramatta grass (*Sporobolus fertilis*), groundsel bush (*Baccharis halimifolia*) serrated tussock (*Nasella trichotoma*) and lantana.

In the Eden region, 37 noxious or environmental weeds have been recorded as occurring on the national park estate, affecting about 60 hectares of parks or reserves (or 0.0002% of the national park estate in this region). Of the weed species identified, 24 were recorded as decreasing including crofton weed (*Ageratina adenophora*), bitou bush and pampas grass (*Cortaderia* spp.). Twelve species were recorded as stable, including Paterson's curse (*Echium plantagineum*) and African lovegrass (*Eragrostis curvula*).

Region-specific information for the national park estate in the north east regions was only available for the Watagans and Werekata national parks (LNE region). The main weed species affecting these parks include blackberry (*Rubus fruticosus* sp. agg.), lantana, crofton weed, pampas grass and cotton bush (*Gomphocarpus fruticosus*). All of these species were of a moderate or low intensity, and were either stable or increasing at the park boundaries.

NPWS Central Coast-Hunter Range Region is currently developing a regional pest management database to improve NPWS' ability to report against this indicator, particularly for the north east regions.

#### Feral animals

SFNSW control efforts during the year focussed on feral animals (including introduced predators) at a cost of over \$250 000. The agency has also implemented long term programs across all regions to control pigs, wild dogs, feral cats and foxes.

Much of SFNSW' expenditure on feral animal control was directed towards the Eden region. Eight feral animal species were treated in the region, over an area of more than 700 000 hectares. Species treated included rabbits, goats (*Capra hircus*) and deer (*Dama dama*). Control efforts in the UNE and LNE regions focussed on wild dogs and foxes. About 790 000 hectares were treated for these species, mainly in the LNE region.

On the national park estate in the Eden region there were about 100 occurrences<sup>9</sup> of pigs affecting an estimated 50 000 hectares, 2 000 occurrences of foxes with an estimated 250 000 hectares affected, 380 occurrences of wild dogs with an estimated 250 000 hectares affected, and less than 10

<sup>9</sup> Number of occurrences are based on bait uptakes, animals shot, observed during trapping and baiting program and count of tracks and other signs of the feral animals.

occurrences of feral cats with an estimated 200 000 hectares affected. Control efforts were undertaken for all of these species in the Eden region during the year. It appears the rate of spread of pigs is increasing, but remains stable for foxes and wild dogs. The rate of spread of feral cats in the Eden region is not known.

#### Disease and physical agents

Disease, pests, fungi or physical agents can severely affect the biodiversity of an area and its future productivity by diminishing the growth rate and overall health of trees. As part of its plantation establishment program, SFNSW undertakes regular surveys to monitor the extent of the main negative agents affecting its plantations. Data are collected annually on the occurrence of the main threatening biological agents and critical nutrient deficiencies in hardwood and softwood plantations.

The area of SFNSW hardwood plantations affected by selected agents has decreased since 1998/1999. The greatest decrease was the area affected by herbivorous and sap-sucking insects, falling from 23.8% to 5.8% between 1998/1999 and 2001/2002. However, these insects remain the main agent affecting hardwood plantations, with several large plantations severely affected. The area affected by stem borers has also fallen from 7.5% to less than 1% between 1998/1999 and 2001/2002. Damage from leaf and shoot fungi was reported for the first time in 2001/2002, with significant defoliation recorded in a number of plantations (2.4%). Soil pathogens caused only minor damage (0.01%) to hardwood plantations.

For softwood plantations, five key agents are monitored by SFNSW. Some of the agents, such as *Dothistroma* (needle blight) have the capacity to manifest themselves over large areas of forest while other agents affect individual trees (e.g. Sirex wood wasp, *Sphaeropsis* fungus, possum damage). The area of softwood plantation affected by *Dothistroma* reached high levels in several areas during 2001/2002, including the northern tablelands. However, there was a marked decrease in *Sphaeropsis* infestation between 1998/1999 and 1999/2000, which has continued to gradually decline. Boron deficiency remains a concern in young trees planted on ex-agricultural lands, but the level of infestation has remained below 1% over the past two years.

Bell miner (*Manoria melanophrys*) associated dieback continues to be a threat to forest health across all tenures in all regions. Anecdotal evidence indicates that the severity and extent of bell miner associated dieback has increased significantly in the last 5-10 years. A working group comprised of land management agencies (NPWS, SFNSW and DLWC), private landholders, scientists and conservationists is investigating bell miner associated dieback in forests of north east New South Wales. The working group is planning a community survey, an investigation of other detection methods (such as remote sensing) to map the extent and severity of bell miner associated dieback, and trials of control/rehabilitation methods.

Similarly, *Phytophthora cinnamomi* also poses a serious threat to forest health. The NPWS is continuing to monitor the area and impact of the fungal pathogen on its estate in the Eden region. At the four sites reported in 2000/2001 within the Ben Boyd, South East Forest and Mount Imlay national parks, the spread of *P. cinnamomi* remains either very slow or stable.

A range of on-ground activities are being undertaken by the NPWS and SFNSW to improve forest health. These activities are being undertaken individually, collaboratively, and with neighbours, other government agencies, rural lands protection boards, local government, catchment management boards and research groups such as the CSIRO. These and other partnerships will improve the control of negative agents and promote a landscape-based approach to the problem.

## Fire

### Indicator 3.2: impact of fire on forest-related values (Eden region)

- *This is an Eden region indicator. For continuity of reporting, all regions are reported here.*

Monitoring the size, intensity and frequency of fire events helps to determine the impact of fire on biodiversity and economic values, and assists to improve emergency and land management practices. Fire events recorded under this indicator are bushfires and prescribed burning activities for the national park estate and State forests only.

#### Bushfire

The 2001/2002 fire season was particularly severe, at its most intense around Christmas 2001. It is estimated that during the period 24 December 2001 to 16 January 2002 over 700 000 hectares of the State was burnt by bushfire (NSW Rural Fire Service, 2002). SFNSW alone spent over \$2.7 million fighting these fires. No expenditure figures were available for the NPWS.

During the year over 218 000 hectares of public forest were burnt in the UNE and LNE regions. Of this area, more than 118 000 hectares were burnt in the UNE region and over 100 300 hectares burnt in the LNE region. Around 86% of the total area of public forest burnt in the UNE and LNE regions was within the national park estate.

In the Eden region, the fire season was considerably less extensive and relatively short compared to that experienced in the north east regions. Only 1 145 hectares of national park and State forest were burnt by bushfire, over 97% of this in State forests. Although the total area of public forest affected by bushfire was comparatively small for the Eden region, the area burnt has increased by 70% over the last three years. Previously, less than 300 hectares of the public forest estate were affected by bushfire, increasing to over 1 100 hectares in 2001/2002.

#### Hazard reduction burning

Hazard reduction burning is undertaken to reduce the incidence and severity of bushfires and increase the ease and safety of bushfire control reducing damage to assets and the environment and risks to life and property.

In 2001/2002, the NPWS undertook 22 hazard reduction burns over an area of 1 270 hectares across the UNE, LNE and Eden regions. This included seven hazard reduction burns over 654 hectares in the UNE region, 11 hazard reduction burns over 506 hectares in the LNE region and four burns over 110 hectares in the Eden region. Burns undertaken in the Eden region were carried out for either for Pambula and Womboyn town protection or because recommended fire thresholds had been exceeded and the likelihood of species loss was increased due to lack of fire.

SFNSW invested \$6.1 million in the prevention of bushfires and to protect the future productivity and health of forests through fire management during 2001/2002. Mitigation measures undertaken by SFNSW included fuel management through the application of grazing strategies (200 949 ha), hazard reduction burns (12 770 ha) and post log or establishment burns (16 717 ha).

Both SFNSW and the NPWS are represented on District Fire Management Committees established under the *Rural Fires Act 1997*. These committees develop bushfire management plans under section 52 of the *Rural Fires Act* which identify risks, propose strategies to manage bushfire risk and outline response arrangements to fire events.

To complement the committees' management plans each SFNSW Region implements its own fire management plan. These are long term, broad area plans for the region, which delineate priorities for fire control over various areas. The plans stipulate which areas of forest should be permanently protected from fire (e.g. an important fire sensitive ecosystem, or assets such as pine plantations), and which areas are to receive hazard reduction burning. These may be strategic fuel reduced zones aligned in the path of prevailing fire season winds, or areas adjacent to homes and other rural assets.

## Criterion 4 – Conservation and maintenance of soil and water resources

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### Roads and crossings

Indicator 4.1.a: Area and percent of forest land covered by comprehensive road management plans, which include an assessment of the extent of existing road infrastructure, processes for ongoing improvement, targets and milestones (UNE, LNE regions)

Indicator 4.1: Road density by category and catchment, and stream crossing density by catchment, for the total forest agreement area, including forest and non-forest areas. Calculation of an ecologically sustainable road index and ecologically sustainable crossing index (Eden region)

SFNSW must plan and classify its road network according to the *Forest Practices Code - Part 4 Forest Roads and Fire Trails* (SFNSW, 1999c). The Code of Practice also requires SFNSW to prepare strategic road management plans in accordance with *Forest Practices related to Wood Production in Native Forests: National Principles* (Commonwealth of Australia, 1992b).

In accordance with the Code of Practice, all forest road systems in public forests and plantations should be based on the economic principle of minimising the combined cost of snigging and roading and on the principles of environmental care. Soil, water catchment, cultural and landscape values should be protected by the careful planning, location, construction and maintenance of roads and tracks and regulation of their use.

At 30 June 2002, nearly 13 000 kilometres of roads were situated in State forests across the UNE, LNE and Eden regions. Specifically, there were 7 324 kilometres of roads within 451 000 hectares of State forest in the UNE region, 2 224 kilometres of roads within 5 656 hectares of State forest in the LNE region, and 3 269 kilometres of roads within 163 000 hectares of State forest in the Eden region.

The NPWS maintained 3 274 kilometres of roads and management trails and 112 kilometres of walking trails, nine kilometres of fire breaks in the Eden region. A further 53 kilometres of roads and trails that NPWS plan to close and rehabilitate were also located in the region. The change in these figures since 2000/2001 is the result of improved digital mapping of park management trails.

The NPWS has implemented a strategic plan for ongoing maintenance of roads in the UNE and LNE regions within its Northern Directorate boundary, which will result in the improvement of soil and water resources in the regions.

A MOU between the NPWS and SFNSW covers the management of access roads used by both agencies in the UNE and LNE regions. SFNSW undertook the majority of the road works during the 2001/2002 and NPWS is to complete the works in 2002/2003. The strategic plan and MOU include maintenance of roads and trails in the north east regions with the added outcome of improving soil and water resources.

The NPWS and the South Coast Water Catchment Committee are working together in the Eden region as part of a strategic regional approach to sediment management from unsealed roads and crossings. This will culminate in the calculation of ecologically sustainable road and crossing indices. A map

identifying all crossing points for all tenures has been created for the national park estate in the Eden region. A stratified survey design is currently being developed to enable the variation to be sampled without bias and to identify the problems associated with the crossings.

### Soil erosion hazard

MIG indicator 4.1.a (interim): Area and percent of forest land systematically assessed for soil erosion hazard, and for which site-varying scientifically-based measures to protect soil erosion and water values are implemented (UNE, LNE, Eden regions)

Before the establishment of any roads in State forests scheduled for timber harvesting, a soil survey is undertaken by an accredited officer to identify areas susceptible to soil erosion. Consequently, the area of harvesting can be used as a measure of the land systematically assessed for soil erosion hazard and water pollution measures put in place.

In 2001/2002, 13 514 hectares of SFNSW native forest were assessed in the Eden region prior to harvesting. More than 20 800 hectares of native forest were also assessed in the UNE region, and 20 986 hectares of native forest assessed in the LNE region.

In the Watagans National Park in the LNE region, the NPWS undertook soil erosion assessments on 11.5 kilometres of four-wheel drive trails, 28.8 kilometres of two-wheel drive access roads, and six kilometres of walking tracks.

The Environmental Protection Licence, made under the *Protection of the Environment Operations Act*, requires SFNSW to implement a water quality monitoring program. Data generated by the program will be used to assess measures taken to prevent sediment pollution of forest streams during harvesting. Two reports covering years 2000 and 2001 were completed and submitted to the EPA in early 2002. The reports contained comprehensive site descriptions for all sites, including the new Kangaroo River sites near Coffs Harbour.

The NPWS continued a program in the Eden region to replace and upgrade facilities and infrastructure in order to improve soil and water quality in the high use areas. A number of major capital works programs completed to date have aimed to reduce sedimentation and improve water quality.

The NPWS also carried out a range of activities for soil and water conservation in the UNE and LNE regions throughout the year. One, the Pacific Highway Upgrade Program (PHUP), is being undertaken by the Roads and Traffic Authority between Newcastle and the Queensland border. At the end of June 2002 this program comprised 24 individual projects at various stages of construction. On average, NPWS provided input to eight PHUP projects per month over the year.

## Criterion 5 – Contribution of forests to global carbon cycles

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### Biomass and carbon

MIG indicator 5.1.a: Total forest ecosystem biomass and carbon pool, and if appropriate, by forest type, age class and successional stages (UNE, LNE, Eden regions)

SFNSW has developed an improved method to calculate sequestered carbon in its planted forest estate. By applying this new method, an estimated 1 228 866 tonnes of carbon were sequestered in a net SFNSW-managed softwood plantation area of 70 645 hectares across the UNE, LNE and Eden regions. A further 449 766 tonnes of carbon were estimated to have been sequestered in a net hardwood plantation area of 21 061 hectares across the three regions.

Specifically, an estimated 550 000 tonnes of carbon were sequestered in a net softwood plantation area of 31 645 hectares in the UNE and LNE regions. In the Eden region, an estimated 678 403 tonnes of carbon were sequestered in a net softwood plantation area of 39 000 hectares.

For hardwood plantations, it was estimated that 102 122 tonnes of carbon were sequestered in a net area of 4 782 hectares in the UNE region and 340 405 tonnes of carbon sequestered in a net area of 15 940 hectares in the LNE region. In the Eden region 7 239 tonnes of carbon were calculated as sequestered in 339 hectares of hardwood plantation.

Carbon sequestration opportunities are being investigated and/or pursued by both SFNSW and the NPWS. Some details are provided in Chapter 2 of this report.

### Global carbon budget

MIG indicator 5.1.c: Contribution of forest products to the global carbon budget (UNE, LNE, Eden regions)

Forests are recognised as an important carbon dioxide (CO<sub>2</sub>) sink and SFNSW has been playing a key role in the development of a strategy to address the impacts of greenhouse gas emissions and actions to offset them. As a result of these actions carbon dioxide emissions by SFNSW have decreased by about 4% since 1999/2000.

SFNSW is also developing a full set of carbon accounts for parts of its existing planted forest estate that are compliant with Article 3.3 of the Kyoto Protocol (not yet ratified). This component of the planted forest estate will underpin SFNSW carbon trading activities, whether for Kyoto Protocol purposes or under the NSW Greenhouse Benchmarks scheme due for implementation from 1 January 2003. The accounts will be consistent with AS4978.1(Int.), a carbon accounting standard for afforestation and reforestation (in general, Article 3.3 compliant planted forests) released by Standards Australia in June 2002.

As a member of the national Cooperative Research Centre for Carbon Accounting, SFNSW is undertaking the Life Cycle Analysis of Wood Products research program. The aim of the project is to develop data to support an accounting system for carbon that is stored in wood products. The first in a series of excavations to determine the fate of carbon stored in buried wood products in Sydney's landfill sites has been completed. Presently, international guidelines (from the Intergovernmental Panel on Climate Change) for carbon accounting assume a constant rate of decay for carbon contained in wood and its release back into the atmosphere as a greenhouse gas. The project aims to test these assumptions and to establish the rate at which wood products sent to landfill release carbon. The



project is overseen by the Landfill Research Steering Committee, represented by SFNSW, Waste Services NSW, Waste Boards, Cooperative Research Centre for Waste Management and the EPA.

## Criterion 6 – Maintenance and enhancement of long-term multiple socio-economic benefits

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### Visitation

MIG indicator 6.2.c: Number of visits per annum (UNE, LNE, Eden regions)

The NPWS is trialling a Visitor Data system developed by the Parks and Wildlife South Australia. The system, which stores and analyses visitor records captured by digital dataloggers and manual methods, is being modified to suit NPWS requirements. The Visitor Data system is compatible with digital counters that provide date, time and direction of travel and can analyse the data to reveal total visitor numbers, daily use patterns and longer term trends. This information will be used to monitor visitor impacts and schedule maintenance and compliance activities, as well as to satisfy various reporting requirements. Pilot sites have been identified and the Visitor Data system has been installed for testing in nine locations across the State.

In the north east regions, the NPWS purchased digital counters for 26 priority sites during 2001/2002, at a cost of \$114 000. The first installation was in Mount Warning National Park on the far north coast. The remaining digital traffic counters are to be installed at other sites early in the 2002/2003 financial year and will provide data in future years.

Visitor numbers to the national park estate in the north east regions for 2001/2002 were only available for selected park and/or reserve areas. It is estimated that Mount Warning National Park in the UNE region is receiving around 52 000 visits per year.

For the Eden region visitor numbers were recorded at selected park entry points. Results indicate that about 731 000 visits were made to a national park or nature reserve during the year, displaying an increasing trend in the number of visitors from previous years. Annual visitation to Nadgee Nature Reserve at Disaster Bay via Womboyn is estimated to have increased by 19%, 23% at Aragunnu, and 43% at Nelson Lagoon in Mimosa Rocks National Park.

Visitation to State forests is periodically measured at a limited number of sites in the UNE, LNE and Eden regions. Data were available for the Dungog and Watagan forests in the LNE region only, based on the 2001 calendar year. In the Watagan State Forest, the number of visitors was estimated at 108 000 people.

### Recreation and tourism facilities

Indicator 6.3: Availability and usage of recreation/tourism facilities (Eden region)

- Data were provided for all regions

The availability of recreation facilities in public forests has a close association with the number of visits made to the area. Monitoring of the number of facilities in public forests improves the planning and management of these areas for tourism and recreation activities. National parks and State forests provide a range of facilities for recreation and tourism purposes, including camp sites, walking trails, lookouts and picnic areas. Reporting against this indicator was improved in 2001/2002 with data provided for both State forests and the national park estate for the first time.

The NPWS identified 431 locations with recreation facilities in the three regions at 30 June 2002; 157 locations in the UNE region, 201 locations in the LNE region and 73 locations in the Eden region. Facilities recorded included basic picnic and camping locations containing parking, toilets, tables, fireplaces and access to beaches, waterfalls, rivers and lookouts. Several of the facilities are in areas that have special Aboriginal and/or non-indigenous cultural significance.

In State forests, there has been an overall reduction in the number of facilities managed and available for recreation since 1999/2000. At 30 June 2002, 136 recreation facilities were situated on State forests; 22 in the UNE region, 99 in the LNE region and 15 in the Eden region. The total number of facilities in State forests across the three regions has fallen by about 40% since 1999/2000. The largest change in the number of facilities occurred between 1999/2000 and 2000/2001, mainly in the UNE and LNE regions, with little or no change in the number of sites between 2000/2001 and 2001/2002.

The number of permits issued by SFNSW for various educational and recreational activities in State forests has also decreased since 1999/2000 (52% decrease across all regions). During the year, 133 permits were issued; 66 issued in the UNE region, 63 issued in the LNE region, and four issued in the Eden region. Most of the permits issued were for ecotourism, four-by-four tours and educational training and/or exercises. The greatest change in the number of permits issued for recreational and education activities occurred between 2000/2001 and 2001/2002; the largest decrease was in the Eden region (85%).

Recent changes to public liability insurance and increasing premiums are considered the main reason for the fall in activity permits issued over the past few years, as many of the types of recreation undertaken on State forest are adventure and 'high risk' activities.

To improve planning for recreational use and development on the national park estate, the NPWS has developed a regional planning framework which establishes criteria for recreation use, management and development in parks which form the basis for a zoning scheme for all NPWS areas. The zones effectively establish a recreational setting that determines what recreational use and development is appropriate across the landscape. The framework has been applied to all NPWS areas in its Northern Directorate. Other NPWS Regions are expected to follow suit.

On-ground activities to improve visitor facilities on the national park estate continued throughout 2001/2002, including the commencement of a \$1 million, three year toilet installation program for Myall Lakes National Park in the LNE region. In the Watagans National Park, also situated in the LNE region, extensive works were carried out to upgrade facilities for visitors, including the upgrading of picnic and camping areas at Bangalow and Gap Creek. Water tanks, gas barbeques and shelters are to be installed in 2002/2003.

In the UNE region sheltered gas barbecues have been installed at Shark Bay and Woody Head in Bundjalung National Park. Installation of the barbecues has dramatically reduced the demand for firewood and proven popular with visitors.

Since 1999 the NPWS has spent more than \$350 000 on new interpretative signage in the Eden region. The signage is integrated with new brochures and visitor centre displays. The continuation of a six year program will also see all older coastal facilities renewed over the next three years. New coastal walking tracks have also been opened at the Pambula River mouth and between Boyd Tower and Green Cape Lighthouse in Ben Boyd National Park.

## Employment

MIG indicator 6.5.a: Direct and indirect employment in the forest sector and forest sector employment as a proportion of total employment (UNE, LNE, Eden regions)

Indicator 6.4: employment numbers by type across all forest users in the Eden region

Forest products and miscellaneous timber operations continue to be an important source of regional employment in the UNE, LNE and Eden regions. Employment by SFNSW has remained relatively stable over the last two years, reflecting an ongoing commitment to growing and supporting the timber industry around New South Wales. At 30 June 2002, direct and indirect employment by SFNSW across the three regions was 3 126 equivalent fulltime (EFT) employees. By region, direct and indirect employment was:

- n 1 530 EFT employees in the UNE region;
- n 1 187 EFT employees in the LNE region;
- n 409 EFT employees in the Eden region.

Employment by SFNSW includes activities such as growing and management of forests, primary processing, harvest and haulage operations, apiary, grazing and ecotourism. Primary processing continues to be the largest forest sector of employment, comprising 68% of the total EFT employees.

Statewide employment by the NPWS was 1 924 EFT at 30 June 2002. Region-specific employment by the NPWS in the north east regions has remained steady since 2000/2001, with 174 EFT employees located in the UNE region and 216 EFT employees in the LNE region. These figures do not include temporary, casual or seasonal positions.

Since the South East Forests project began in 1991, 35.5 new positions have been filled, completing the recruitment program that resulted from the South East Forest Reform program. Four of these positions are identified as Aboriginal positions. In the Eden region, two new permanent NPWS positions were created and filled during 2001/2002. Nineteen new positions have been created since the Forest Agreement for the Eden Region was signed in 1999. These figures do not include temporary, casual or seasonal positions such as the 10 people employed in the Eden region during the 2001/2002 summer *Discovery* Ranger program.

## Gross income

Indicator 6.5: Gross income index related to forests (Eden region)

No data or information available.

## Places of cultural significance

Indicator 6.4.c: Change in condition and number of recorded places, artefacts, sites, buildings or other structures (UNE, LNE regions)

Indicator 6.6: Change in condition and number of recorded places, artefacts, sites, buildings or other structures (Eden region)

### Aboriginal cultural heritage

The recording of Aboriginal sites by the NPWS was greatly improved in 2001/2002 with the implementation of the AHIMS. Increased survey and research activity (including pre-operational investigations by SFNSW) and community participation have provided additional information to the AHIMS during its establishment. The number of Aboriginal sites recorded on NPWS tenure increased by 106 sites in 2001/2002, bringing the total number of sites recorded on-park to 2 633 across the UNE, LNE and Eden regions. Significantly, more sites of Aboriginal significance are recorded off-park

than on-park. The number of sites recorded off-park increased by 639 sites in 2001/2002, bringing the number of sites to 8 889 across the three regions.

On State forests, 1 310 Aboriginal sites were recorded, including 266 sites newly registered during the year.

The AHIMS also allows the NPWS to report the number of Aboriginal sites managed, the number of threatening conditions or processes identified and removed, and the number of Aboriginal sites subject to an Aboriginal heritage permit. This reporting will initially focus on a sample of parks that have recently been identified for NPWS' *State of the Parks* reporting.

The AHIMS has also introduced a means of recording Aboriginal site conservation works within each Aboriginal site record. Sites will alternatively be classified as 'actively managed' (having an ongoing management program and revisitation schedule) or 'managed' (having had an initial site conservation visit and subsequent recommendations).

SFNSW' commitment to protecting and managing significant cultural heritage values on its estate is continuing through cooperation with the local community, aiming to increase the recognition, management and conservation of Aboriginal cultural heritage values in its forests. Aboriginal cultural heritage officers are also employed regionally to assist in identification and protection of Aboriginal sites in the forests and to liaise with the local Aboriginal community.

#### Non-indigenous heritage/historic places

The HHIMS has replaced the Historic Places Register and serves as the NPWS Section 170 Heritage and Conservation Register (required by the *Heritage Act*) for historic heritage items on park. Data obtained from the HHIMS identified 2 270 historic places in the national park estate in the UNE, LNE and Eden regions. The number of sites registered has increased by 639 sites since 2000/2001.

On State forests, 292 non-indigenous sites were located in the UNE and Eden regions. No updated figures for the LNE region were provided for 2001/2002. As an indicative measure of the number of sites in the region, 169 were listed at 30 June 2001. No further assessment of non-indigenous sites was undertaken by SFNSW during 2001/2002.

A Heritage and Conservation Register maintained by SFNSW identifies sites and objects of heritage significance. Pre-operational planning processes identify places with cultural heritage significance and the protection measures necessary to safeguard heritage items. Heritage values are protected through the incorporation of site-specific prescriptions in operational plans to avoid disturbance, and in the case of Aboriginal sites as advised by the local Aboriginal community. The number of cultural heritage sites identified and protected on State forests is monitored as a performance indicator of cultural heritage values in landscape management.

## Criterion 7 – Legal, institutional and economic frameworks

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### Legal framework

MIG indicator 7.1 (narrative): Extent to which the legal framework (laws, regulations, guidelines) supports the conservation and sustainable management of forests (UNE, LNE, Eden regions)

- Consistent with 2000/2001 reporting, the information provided for Criterion 7 is at the statewide scale and in most cases not directly attributable to individual regions. However, individual projects undertaken in particular forest agreement regions have been reported separately where possible.

#### Legislation, policies, guidelines

During 2001/2002 important changes were made to key legislation related to forest management and administered by the NPWS. The National Parks and Wildlife Amendment Bill 2001 was introduced into Parliament in November 2001 with the *National Parks and Wildlife Amendment Act 2001* assented to in December 2001 (to be proclaimed in various stages beginning July 2002).

The new legislation includes provisions for an Aboriginal Cultural Heritage Advisory Committee and sets out its functions and membership. Previously the *National Parks and Wildlife Act* provided for an Aboriginal Cultural Heritage (Interim) Advisory Committee. There were two members representing indigenous people on the National Parks and Wildlife Advisory Council and on most of the advisory committees there is normally at least one indigenous person. The *National Parks and Wildlife Amendment Act* will also restructure the National Parks and Wildlife Advisory Council. The membership of the Council will largely be based on expertise in areas of relevance to the management of the national park estate and the carrying out of the Minister's and other NPWS functions under the Act. This will include expertise in local government and rural and regional issues. Major conservation groups will continue to be members of the Council.

The *National Parks and Wildlife Amendment Act* also amends existing provisions in the *National Parks and Wildlife Act* relating to the establishment of advisory committees. Under the new proposals, advisory committees will be formed over geographic areas to mirror the current NPWS practice of amalgamating a number of specific reserve committees into regional committees. Provisions also allow for committees to be formed for specific issues.

These amendments will be proclaimed in September 2002.

The Threatened Species Conservation Amendment Bill 2002 was passed in the Lower House on the 6 June 2002. The Bill was then introduced into the Upper House but at 30 June 2002 had yet to be passed.

NPWS regulations were reviewed as required under the *Subordinate Legislation Act 1989* and will be gazetted towards the end of August 2002.

The severity of the fire season of 2001/2002 highlighted the need for legislative changes in relation to fire management and planning. The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002* amends the *Environmental Planning and Assessment Act* and the *Rural Fires Act* to enable improved planning of bushfire protection. The changes affect local councils who are required to prepare bush fire risk management plans under the *Rural Fires Act*. They cover hazard reduction activities and planning and development control matters on land prone to bushfire (Department of Planning, 2002).

Natural resource agencies also develop and implement a range of policies, plans and guidelines related to forest management, details of which are provided in the *ESFM Criteria and Indicators Monitoring Report 2001/2002* (NSW Government, 2006).

#### Public participation

Public participation in forest management is facilitated through legislation and opportunities provided by land management agencies. For example, the *National Parks and Wildlife Act* provides for the establishment of a National Parks and Wildlife Advisory Council and Regional Advisory Committees. Plans of management, including recovery plans made under the *National Parks and Wildlife Act* and *Threatened Species Conservation Act* are publicly exhibited before they are finalised, as are forest agreements made under the *Forestry and National Park Estate Act*.

Agencies also support more informal public participation by having staff attended meetings and forums to learn about community opinion while the community comes to better understand how public forest areas are managed. To illustrate the extent of this informal discourse, SFNSW staff attended over 500 community forums during 2001/2002 in the forest agreement regions.

#### Institutional framework

MIG indicator 7.2 (narrative): Extent to which the institutional framework supports the conservation and sustainable management of forests (UNE, LNE, Eden regions)

##### Public education and awareness

Increased public understanding of how forests are managed is developed through better education and awareness. Both the NPWS and SFNSW conduct a range of education programs, details of which are provided in Chapter 2 of this report.

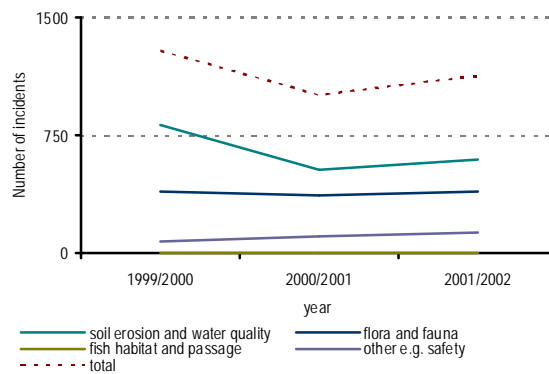
##### Enforce laws, regulations and guidelines

The NPWS improved its monitoring of compliance with the IFOAs in 2001/2002 by appointing two temporary part-time conservation compliance officers in the UNE and LNE regions (1.4 EFT). By 30 June 2002, recruitment action had commenced for two full-time NPWS conservation compliance officers for two years (2002/2003 – 2003/2004). The sole duty of these positions will be auditing SFNSW compliance with the IFOA Threatened Species Licence. One conservation compliance officer was employed for the Eden and Southern regions.

The EPA has established a comprehensive auditing program for the Environment Protection Licence to ensure soil and water quality is protected where forestry operations are undertaken.

To assist better compliance with the conditions of the IFOAs, SFNSW continued its internal compliance monitoring program. During the year, 1 730 compliance check sheets were completed. Each compliance check sheet assesses about 60 IFOA conditions covering about 103 800 checks of conditions.

SFNSW internal compliance audits identified 1 130 incidents of non-compliance in the three regions, a decrease of 12% since 1999/2000. Incidents related to soil and water quality continue to be the main area of non-compliance (72% of total incidents) despite a 26% decrease since 1999/2000. All other areas of monitoring have shown a decrease in the number of recorded incidents since 1999/2000, with the exception of 'other issues' (such as safety) which has increased by 71% (**Figure 3-F**).



Source: SFNSW data

Figure 3-F: Results of SFNSW internal compliance monitoring 1999/2000 – 2001/2002

By region, the total number of incidents of non-compliance identified by SFNSW in the UNE region has decreased by 4% since 1999/2000. Soil erosion and water quality remains the main area of non-compliance in the region with over half of the total number of incidents recorded in this category.

In the LNE region, the total number of non-compliance incidents recorded by SFNSW has fallen by about 26% since 1999/2000. Notably the number of incidents recorded related to soil erosion and water quality has decreased by 62% and those related to flora and fauna by 56% since 1999/2000. However, there has been a 67% increase in the number of non-compliance incidents related to 'other issues' since 1999/2000.

In the Eden region, the total number of non-compliance incidents recorded by SFNSW has fallen by 6% since 1999/2000. The number of incidents related to soil erosion and water quality have decreased by 29% over the past three years and incidents related to 'other issues' have fallen to nil. However, the number of incidents recorded related to flora and fauna have increased by 60% since 1999/2000.

Refer also to Chapter 4 of this report.

## Capacity to measure and monitor change

MIG indicator 7.4 (narrative): Capacity to measure and monitor changes in the conservation and sustainable management of forests (UNE, LNE, Eden regions)

The ESFM criteria and indicators are the main tool by which changes in forest values are monitored over time in the forest agreement regions. Monitoring is carried out to measure the effectiveness of management practices and improvements to the forest estate. The quality of data has been improving through better collection systems. The appropriateness of the indicators (which were developed during the CRA/RFA for each region) will be evaluated in the near future as part of the first five year review of the forest agreements and IFOAs. This review will determine how well the indicators provide information on changes in forest values.

The MIG criteria and indicators, on which the ESFM criteria and indicators are largely based, will be reviewed nationally in 2004. Outcomes of this review will be considered as part of the review of the ESFM criteria and indicators to ensure an alignment of the two monitoring streams.

The NPWS and SFNSW corporate *State of the Parks* and *SEEing* reporting continued to be developed throughout 2001/2002. Details are provided in chapters 1 and 2 of this report.

## Research and development

MIG indicator 7.5 (narrative): Capacity to conduct and apply research and development aimed at improving forest management and delivery of forest goods and services (UNE, LNE, Eden regions)

Research and development is crucial to improve forest management progress. Development of a statewide NPWS research framework is underway, and each NPWS Directorate will develop its own research strategy in accordance with the framework, to facilitate better prioritisation and focusing of research efforts.

The NPWS began a research project in collaboration with the University of Technology Sydney, Department of Education and Training, EPA, DLWC and the Powerhouse Museum to explore the 'Socio-Cultural Influences on Environmental Understandings of NSW School Students (from K-12)'. In 2002/2003, the research findings will be shared with key internal and external stakeholders to feed into school education programs and resources.

During 2001/2002, 78 research papers by NPWS staff relevant to the conservation of natural and cultural heritage.

SFNSW research is undertaken through its Forest Research and Development Division. During 2001/2002 SFNSW spent \$7.2 million on research and development. This is comprised of a corporate contribution of \$4.5 million, CSO Income of \$1 million and External Income \$1.7 million from grants.

During 2001/2002, SFNSW staff produced about 40 scientific publications on a range of issues.



# 4

## Compliance with the Integrated Forestry Operations Approvals

### Introduction

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The IFOAs provide an operational framework for the carrying out of forestry operations in State forests and Crown timber lands. At 30 June 2002, there were four IFOAs in place in New South Wales covering the UNE, LNE, Eden and Southern regions. The IFOAs for the UNE, LNE and Eden regions have been in place since January 2000. The IFOA for the Southern region commenced in May 2002.

The IFOAs are implemented cooperatively by SFNSW, the NPWS, NSW Fisheries, EPA and RACD, of PlanningNSW. The NPWS, EPA and NSW Fisheries each administer a licence and are responsible for the appropriate enforcement of the licence. RACD of PlanningNSW is generally regarded as the administrator of the non-licence terms. SFNSW also carry out its own monitoring of compliance with the IFOAs (refer to Criterion 7 in Chapter 3 of this report).

Compliance with the terms and conditions of the licence terms of the IFOAs are monitored on an ongoing basis. Agencies are progressively developing and implementing auditing programs to effectively and routinely monitor compliance with the IFOAs.

Complaints received from the public on possible non-compliance by SFNSW with the conditions of the IFOAs are also investigated as received. The manner in which complaints received from the public are investigated was improved during 2001/2002 following the establishment of a Coordinated Complaint Handling Protocol, which standardises the investigation of public complaints across all agencies administering a licence or the non-licence terms.

### Amendments to the IFOAs

Regular discussions are entered into between the agencies administering components of the IFOAs and with SFNSW who is responsible for the implementation of the IFOAs. Such discussions also include any proposed amendments to the IFOAs. At 30 June 2002, one amendment had been made to the IFOAs for the UNE, LNE and Eden regions (discussed below). The amendment was the result of inter-agency negotiation to ensure the appropriateness of the changes to the terms and conditions of the IFOA and that the changes are able to be implemented effectively.

The first amendments to the UNE, LNE and Eden region IFOAs involved modifications to the non-licence terms and the Threatened Species Licence of each IFOA. Specifically, the amendment provided consistency with the definition of routine road maintenance and road re-opening in the non-licence terms and the Threatened Species Licence, and replaced the beekeeping clause with a new clause that minimises any potential impact on the surrounding environment when setting down beehives and provides for the mapping of beehive set down sites.

These amendments commenced on 1 December 2001.

### Development and implementation of auditing processes to monitor compliance

During 2001/2002, the NPWS developed a comprehensive set of procedures and guidelines in handbook form for NPWS officers carrying out compliance audit and enforcement activities. These procedures were endorsed by the NPWS Executive in March 2002 and are now applied across the NPWS to ensure a consistent approach.

The NPWS carry out both reactive investigations in response to complaints from the public as well as proactive audit investigations. In all cases NPWS officers carrying out investigations follow the standard statewide procedures (see above).

NPWS field directorate initiatives related to auditing and enforcement included:

- n trialling of new field methodology and proformas for pre- and post-harvest auditing of retention of hollow-bearing and recruitment trees;
- n developing methodology for rapid and accurate assessment of buffer and exclusion zones;
- n developing new field methodology for assessing the extent of a rocky outcrop for auditing purposes and to assist SFNSW in interpretation of the relevant parts of the Threatened Species Licence;
- n completing OH&S 'job safety analysis' and 'risk management plan' for forestry audit and enforcement work;
- n providing GIS information layer of the known location and extent of grey-headed flying-fox camps to SFNSW to include in harvest planning;
- n assisting SFNSW to review existing brush-tailed phascogale management conditions in the Threatened Species Licence;
- n auditing of whether the appropriate flora management plans have been completed before harvesting operations commenced. The NPWS has subsequently required SFNSW to complete such plans to prevent further breaches;
- n reaching agreement with SFNSW on method of mapping high conservation value old growth on SFNSW' private property purchases;
- n ongoing auditing and consultation with SFNSW and local conservation groups on the implementation of the *Pine Creek Koala Management Plan* (SFNSW, 1999b);
- n developing a GIS system for recording all planned, current and completed SFNSW operations that is also used for auditing commercial firewood permits for compliance with Licence condition 5.17;
- n developing an interim interpretive guide for the koala star search.

During 2001/2002, the NPWS Northern Directorate employed two conservation compliance officers on a part-time temporary basis dedicated to compliance audit and enforcement of SFNSW' harvesting operations in the UNE and LNE regions. This staffing level was equivalent to about 1.4 full-time positions. The NPWS Southern Directorate employed one permanent full-time and one temporary full-time conservation compliance officers to carry out compliance audit and enforcement activities that include SFNSW' harvesting operations in the Eden region. Additionally, the NPWS has one permanent full-time position within the head office threatened species unit, dedicated to forestry.

Investigations by NPWS staff included field inspections, desk-top assessments, discussions and correspondence with relevant SFNSW personnel. In the case of complaints, each complainant was

advised of the progress of investigations into their complaint in accordance with the inter-agency Coordinated Forestry Complaint Handling Protocol.

## Audits of compliance

### Upper North East region

During 2001/2002, the NPWS received seven new complaints from the public concerning alleged breaches of the Threatened Species Licence for the UNE region. An additional 16 complaints were ongoing investigations carried over from the previous reporting period. The above total of 23 complaints covered 23 separate harvesting operations. During 2001/2002, breaches of 13 separate Threatened Species Licence conditions were identified in response to eight of these complaints. Investigations into a further eight complaints are ongoing, and for the final seven complaints, the NPWS determined that no contraventions to the Threatened Species Licence had occurred.

Five proactive audits of harvesting operations were undertaken by the NPWS in the UNE region during the year. Three of these audit investigations identified a total of eight additional contraventions of the Threatened Species Licence and one contravention of the non-licence terms of the IFOA. The remaining two audit investigations found no apparent contraventions of the Threatened Species Licence.

### Lower North East region

During 2001/2002, the NPWS received nine new complaints from the public concerning alleged breaches of the Threatened Species Licence for the LNE region. Another seven complaints were ongoing investigations carried over from the previous reporting period. The above total of 16 complaints covered 14 separate harvesting operations. During 2001/2002, breaches to seven separate Threatened Species Licence conditions were identified in response to three of these complaints. Investigations into a further ten complaints are ongoing, and for the final three complaints, the NPWS determined that no contraventions to the Threatened Species Licence had occurred.

Two proactive audits of harvesting operations were undertaken by the NPWS in the LNE region during the year. One of these investigations identified an additional two minor contraventions of the Threatened Species Licence that were resolved via a routine letter to SFNSW. The other investigation identified many breaches and this investigation is ongoing.

### Eden region

During 2001/2002, the NPWS received no complaints from the public concerning alleged breaches of the Threatened Species Licence for the Eden region.

One proactive audit of harvesting operations was undertaken by the NPWS in the Eden region during the year. This investigation identified three contraventions of the Threatened Species Licence.

## Environment Protection Licence

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The EPA's role in the management of SFNSW's forestry operations is primarily to protect the aquatic environment from water pollution. Environment Protection Licences issued to SFNSW under the *Protection of the Environment Operations Act* are key tools to help achieve this goal. Where SFNSW chooses to seek licence coverage for its forestry operations, it must comply with the conditions of the Environment Protection Licences contained in each of the IFOAs for the UNE, LNE and Eden regions.

Where SFNSW does not seek licence coverage, its forestry operations are subject to section 120 of the *Protection of the Environment Operations Act*, which prohibits the pollution of waters.

## Complaints

The EPA received 14 complaints from the community about forestry operations in 2001/2002. Of these complaints, ten were indicated potential non-compliances with the Environment Protection Licences and were investigated by the EPA. The remaining complaints were deemed outside the scope of the Environment Protection Licences and two complaints were referred to other regulatory agencies as they indicated potential non-compliances with other parts of the IFOA. The complaints investigated by the EPA have been included as part of the comprehensive audits as described below for each region. On each occasion, complainants were informed of the audit outcomes.

## Audit program

The EPA has developed an active audit program to determine SFNSW' compliance with licence conditions. The audit program ensures that SFNSW is taking the required measures to protect the aquatic environment through responsible planning and operational activities. Non-compliance with conditions of the licence are dealt with through meetings with senior SFNSW officers, issuing feedback or warning letters, clean-up notices, penalty notices or prosecution action as appropriate to the circumstances.

During 2001/2002, the EPA conducted 21 comprehensive audits of SFNSW' pre-operational and operational activities covered by an IFOA. EPA auditing identified 173 breaches in total across the UNE, LNE and Eden regions. As a result, SFNSW was issued with two penalty notices, one clean-up notice and received 12 feedback and 12 warning letters from the EPA for that period. SFNSW was required to undertake remedial work at 22 sites throughout the UNE, LNE and Eden regions and seek expert soil conservation advice on one occasion.

In addition, for 1 July 2001 to 30 June 2002, EPA audited the complaints, compliance and operations registers for two SFNSW regions covered by an IFOA.

## Audits of compliance

### Upper North East region

During 2001/2002, environment protection licence coverage applied to 147 separate SFNSW' operations in the UNE region.

The EPA conducted seven operational and planning audits in the UNE region during 2001/2002, identifying a total of 79 breaches. Thirty one breaches related to non-compliance with pre-operational planning requirements. These included installing drainage structures at crossings not consistent with SFNSW' approved planning documentation and variations to operational plans not approved by the Regional manager. Seventeen breaches related to operational activities during harvesting in the region and included trees felled from within filter strips and snig track crossings not drained in accordance with the Licence. Thirty one breaches pertained to non-compliance with operating conditions for roads and included crossings not drained effectively in areas where water flow along roads had the potential to exceed the distances specified by licence conditions.

As a result of these audits, the EPA provided feedback and sent warning letters to SFNSW outlining the issues of non-compliance identified. The EPA also issued two penalty notices to SFNSW for non-

compliance with the Licence in this region, one clean-up notice and required remedial work to be carried out on six occasions. The penalty notices issued to SFNSW related to inadequate drainage of a road and inadequate road drainage adjacent to a creek.

#### Lower North East region

During 2001/2002, licence coverage applied to 168 separate SFNSW operations in the LNE region. The EPA conducted eight operational and planning audits of these activities and identified 55 breaches of licence conditions in the region. Eight breaches related to pre-operational planning requirements. Non-compliance included inadequate site specific planning and documentation of planning. Nine breaches were identified for non-compliance with operational activities during forestry operations, which included inadequate drainage of snig tracks. Thirty eight breaches related to non-compliance with operating conditions for roads in the region and included ineffective crossing and road drainage and drainage features not crossed with an appropriate structure.

As a result, the EPA provided feedback and sent warning letters to SFNSW regarding non-compliance with licence conditions in the region and required remedial work in nine areas following EPA audits.

The EPA also conducted an audit of SFNSW' complaints, compliance and operations registers in the LNE region (Hunter region). Forty-eight breaches of condition 33 – 'Operations register' of the Environment Protection Licence were identified. The Operations Register, which SFNSW is required to keep in the regional office, was incomplete. The EPA provided feedback to SFNSW regarding the outcomes of this audit.

#### Eden region

During the period 1 July 2001 to 30 June 2002, licence coverage applied to 119 separate forestry operations in the Eden region. The EPA conducted five operational and planning audits. The EPA identified 36 breaches of conditions in the Eden region. Twelve breaches related to non-compliance with planning requirements including a lack of site specific planning and inaccurate to incomplete planning documentation. Ten operational breaches were identified for forestry activities relating to trees intentionally felled into and from within filter strips, felled trees removed from filter strips and ineffective drainage on snig tracks. Fourteen breaches related to non-compliance with operational conditions for roads including drainage features not crossed with an appropriate structure and water flow along roads exceeding distances specified in the licence.

As a result of these audits, the EPA provided feedback to SFNSW and issued warning letters regarding non-compliance with the Environment Protection Licence for the Eden region. SFNSW was required by the EPA to undertake remedial work on five occasions and seek specialist soil conservation advice on one occasion.

The EPA also conducted an audit of complaints, compliance and operations registers on the Eden region. Through this audit, the EPA identified that the Compliance Register was not maintained in accordance with the requirements of the Environment Protection Licence. In addition, the EPA noted seven breaches recorded in the compliance register that were not breaches of the Environment Protection Licence. The EPA's audit also identified that SFNSW' operations register maintained in the Eden region was incomplete and did not comply with the Environment Protection Licence.

As a result of this audit, the EPA provided feedback to SFNSW outlining non-compliance with conditions of the Environment Protection Licence relating to the complaints, compliance and operations registers maintained in the Eden Regional Office.

## Fisheries Licence

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NSW Fisheries IFOA compliance management falls into three main areas of operation:

- n review of planning documentation;
- n preparation and provision of detailed digital species distribution data;
- n random inspections and response to complaints.

### Review of planning documentation

Desk-top reviews of harvest planning documentation are carried out routinely as documents are received. These reviews concentrate on the provision of specified aquatic habitat exclusion zones and appropriate road location where harvesting is to occur to minimise the necessity for watercourse crossings.

### Preparation and provision of detailed digital species distribution data

Compliance with planning and on-ground conditions of the NSW Fisheries licence depends on provision of digital species distribution data compiled from detailed survey, expert assessment and community sightings reports. This distribution data for the eastern cod (*Maccullochella ikei*), the species most likely to be impacted by forestry operations in the UNE and LNE regions, was completed during 2001/2002. Formal provision of the data is expected to occur early in the next reporting period. Full activation of on-ground licence protection mechanisms in these regions is then expected. There are currently no threatened fish species in the Eden region likely to be impacted by forestry operations.

### Random inspections and response to complaints and other reports

Focussed threatened species compliance activities in relation to forestry operations are carried out opportunistically where they coincide with other NSW Fisheries compliance duties. Complaints are investigated when received.

During 2001/2002, NSW Fisheries, in conjunction with the EPA, undertook inspections of several watercourse crossings on State forest roads in the Eden region. No breaches of the Fisheries Licence were detected. However NSW Fisheries raised some concerns directly with SFNSW about aspects of the siting and construction of the crossings.

One contravention of the Fisheries Licence was detected during 2001/2002. This contravention occurred in the LNE region and related to reporting anomalies.

## Non-licence terms

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The monitoring of compliance with the non-licence terms of the IFOAs is regarded as the responsibility of RACD of PlanningNSW. The non-licence terms define the conditions under which forestry operations in State forests and other Crown timber lands must be undertaken.

To ensure the rules set out in each IFOA are complied with, RACD has one compliance officer (0.3 EFT). Responsibilities of the compliance officer are to ensure the conditions for undertaking forestry operations defined in the IFOA are being complied with and the documents required by the IFOA are being delivered. The officer is also responsible for following up any complaints received from the public concerning alleged breaches of the non-licence terms of the IFOAs.

## Complaints

During 2001/2002, RACD investigated several complaints covering issues such as:

- n silvicultural prescriptions;
- n Australian Group Selection (AGS)/Single Tree Selection (STS);
- n mapping of conservation values;
- n management of threatened species such as the koala.

The investigation of these complaints was carried out in accordance with the Coordinated Complaint Handling Protocol and involved discussions with SFNSW, field inspections and desk-top review of documents. Investigation of one of these complaints led to RACD providing assistance in consideration of SFNSW' Silvicultural Manual and Operational Circular – Application of AGS and STS.





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# Appendix 1.1

Individual milestones progress 2001/2002



Due date	Region	FA section*	Milestone	Progress
<b>Managing the forests</b>				
<b>Environmental Management Systems</b>				
2001	1 April	UNE, LNE, Eden	2.1.1 Att 5 Att 4	Preparation of SFNSW EMS – Native Forest Management System.
				<p>In progress</p> <p>SFNSW's draft NFMS Strategic Framework (which forms part of its EMS) was placed on public exhibition in 2000. The NFMS has been renamed the Native Forest Environmental Management System (NFEMS) to better highlight the intent of the management system.</p> <p>During 2001/2002, an external ISO 14001 certification company undertook a gap analysis (or audit) for the NFEMS, focussing on management areas needing further development. The NFEMS was also 'rolled out' to all SFNSW native forests regions, followed by an awareness and training session in each region. Simulated (training) EMS audits (10-15 auditor days in each region) were conducted in each native forest region to further improve regional staff knowledge and familiarity with the EMS, and demonstrate what an EMS audit would address. The audit outcomes have since been used to focus on the continuous improvement of the NFEMS in each region. At 30 June 2002, development of the NFEMS was continuing with an objective of obtaining ISO 14001 certification.</p>
2004	1 April	UNE, LNE, Eden	2.1.2 Att 3	Preparation of NPWS Environmental Management Systems.
				<p>In progress</p> <p>Development of the NPWS' EMS is progressing and is intended to cover all areas of NPWS operations. The <i>State of the Parks</i> report will comprise a major component of the system. Components of <i>State of the Parks</i> were trialled during 2001/2002.</p>
<b>Plans of management</b>				
<b>NSW Biodiversity Strategy</b>				
1999	31 March	UNE, LNE, Eden	2.4.1 Att 8	Release and adoption of <i>NSW Biodiversity Strategy</i> .
				<p>Complete</p> <p>Strategy released in March 1999. Strategy may be viewed at: <a href="http://www.nationalparks.nsw.gov.au/npws.nsf/Content/sbs+home">http://www.nationalparks.nsw.gov.au/npws.nsf/Content/sbs+home</a></p>
<b>Plans of management for the national park estate</b>				
2005	1 January	UNE, LNE, Eden	2.3.2 Att 8	Preparation of plans of management for dedicated reserves under the <i>National Parks and Wildlife Act 1974</i> .
				<p>In progress</p> <p>At 30 June 2002 there were 287 national parks, nature reserves, state recreation areas, historic sites and Aboriginal sites situated in the UNE and LNE regions which required management plans to be prepared. At 30 June 2002, the Minister for the Environment had adopted 65 plans of management for areas in the UNE and LNE regions (including seven plans that were being revised). Plans adopted included those developed for the Boonoo Boonoo National Park and Cathedral Rock National Park in the UNE region, and Wollemi National Park in the LNE region. A further 133 plans of management were in preparation.</p> <p>In the Eden region, there were 19 national parks, nature reserves and historic sites which required management plans to be prepared. At 30 June 2002, the Minister for the Environment had adopted eight plans of management (including one plan that was being revised). Plans adopted include those developed for Bournda National Park and Bournda Nature Reserve, and Mount Imlay National Park. A further six plans were in preparation (including three which had been publicly exhibited). The preparation of a plan for the Biamanga National Park had been deferred pending the finalisation of co-management arrangements with the Aboriginal community.</p> <p>(Note: the increase in the number of areas requiring plans of management to be prepared has increased since 2000/2001 due to additions to the national park estate since the end of the previous reporting period)</p> <p>Preparation of all relevant plans of management is on schedule for completion by January 2005, as required by the forest agreements for the UNE, LNE and Eden regions. Management plans may be viewed on the NPWS website: <a href="http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Fire+and+park+management+plans+by+title">http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Fire+and+park+management+plans+by+title</a></p>

Due date		Region	FA section*	Milestone	Progress
<b>Regional ESFM Plans</b>					
2000	1 April	UNE, LNE, Eden	2.2.1	Preparation of Regional ESFM Plans and subject to public exhibition and consultation.	Draft  SFNSW' Regional ESFM Plans provide a framework for the management of a range of forest values across State forests, including biodiversity, harvest planning, and indigenous and non-indigenous cultural heritage. Draft plans for the UNE, LNE and Eden regions were placed on public exhibition in September 2000. Since then, the plans are being progressively finalised following input from regulatory agencies and the public exhibition period. Supplementary model management plans (as required by the IFOAs), attached to the Regional ESFM Plans, are being finalised concurrently following further discussions with regulatory agencies during 2001/2002.
Annually		UNE, LNE, Eden	2.2.6	Report on progress on meeting targets in Regional ESFM Plans.	In progress  Initial work has begun in developing a framework for the report is being undertaken as part of the ESFM planning process, to identify key reporting requirements and provide a consistent framework for reporting. Reporting will begin following full implementation of the Regional ESFM Plans.
<b>Flora reserves</b>					
2001	1 April	UNE< LNE, Eden	2.2.2 2.2.3 (E)	Preparation of working plans for flora reserves, to be incorporated into the Regional ESFM Plans.	In progress  Flora reserve working plans are being developed and included as part of SFNSW' Protected Area Strategy for the Regional ESFM Plans. At 30 June 2002, there were 48 flora reserves located in State forests in the UNE, LNE and Eden regions. Of these reserves, 19 were situated in the UNE region, 17 situated in the LNE region and 12 situated in the Eden region. The Minister for Forests had approved 43 working plans for flora reserves across the three regions under the <i>Forestry Act 1916</i> . The remaining working plans have yet to be completed. Formal release of the working plans for flora reserves will occur with the Regional ESFM Plans. The plans will be progressively reviewed as required.
<b>Informal reserves, high conservation value old growth and areas managed by prescription</b>					
2001	1 April	UNE, LNE, Eden	2.3.3	Preparation of working plans for informal reserves and areas managed by prescription on State forests, to be included in the Regional ESFM Plans.	In progress  The strategy was incorporated into the draft Regional ESFM Plans, providing a framework for the management of various conservation values. However, continuing negotiations throughout 2001/2002 regarding areas of State forest for potential transfer to the national park estate and classification of additional areas of forest as high conservation value old growth meant the extent and composition of informal reserves and areas to be managed by prescription constantly changed during the reporting period, particularly in the UNE and LNE regions. Completion of milestone is on hold until the completion of the FMZ Assessment. These plans will be finalised with the Regional ESFM Plans.
2002	1 January	UNE, LNE, Eden	2.4.4.5	Preparation of management plans for large areas of rainforest, high conservation value old growth and other areas excluded by prescription (attach to Regional ESFM Plans and in consultation with NPWS).	Deferred  The draft strategy was incorporated into the draft Regional ESFM Plans. The strategy will be finalised as part of the Regional ESFM Plans. Management plans for these areas will be prepared in conjunction with the Regional ESFM Plans. Completion of this task has been deferred until the completion of the FMZ Assessment.
<b>Forest Management Zoning</b>					
1999	1 October	Eden	2.2.2 Att 5	Mapping of FMZs (as defined in Attachment 5 of Agreement) and attached to Regional ESFM Plans. Zones delineate areas of State forest to be managed as conservation reserves and those managed for timber production.	Implemented  SFNSW' FMZ system was developed in 1999 and is defined the document <i>Managing Our Forests Sustainably: Forest Management Zoning in NSW State Forests (SFNSW, 1999a)</i> . The system provides for the classification of State forest for harvesting and conservation, providing the basis for all operational planning and activities. In 2000, maps of proposed FMZ areas were placed on public exhibition with the draft Regional ESFM Plans. The system has since been implemented in the Eden region. Maps of FMZ classifications are available at SFNSW regional offices.



Due date		Region	FA section*	Milestone	Progress
2000	1 April	UNE, LNE	2.2.2 Att 5	Provision of maps of FMZs (as defined in Attachment 5 of the Agreement) and attached to Regional ESFM Plans.	Draft Refer to previous milestone.  In 2000, maps of proposed FMZ areas were placed on public exhibition with the draft Regional ESFM Plans. At 30 June 2002, the final area of State forest and any required changes to FMZ classification in the LNE and UNE regions were deferred until the completion of the FMZ Assessment.  Maps of proposed FMZ classifications are available at SFNSW regional offices.
Ongoing		UNE, LNE, Eden	Att 8	Implement the Forest Management Zoning system.	In progress  Following the completion of the FMZ Assessment in the UNE and LNE regions, the system will be fully implemented. This will be assisted by guidelines which are being developed by SFNSW.
<b>CAR reserve system</b>					
<b>Additions to the national park estate</b>					
Ongoing		UNE, LNE	6.16.2	The Government may attempt to voluntarily acquire leases using approaches coordinated with the NPWS purchase strategy. Funding to be sought for the purchase of leasehold lands.	Implemented  The NSW Government allocated \$1.4 million per year over four years to the NPWS to purchase leasehold and freehold lands. During 2001/2002, seven properties in the UNE region, and ten properties in the LNE region, were purchased by the NPWS. All of the areas purchased were at least part leasehold. Acquisition of these lands provides protection of a number of forest values, including; wilderness, old growth, under target ecosystems and threatened species habitat.
1999	31 August	UNE, LNE, Eden	6.16.2 6.16.1 (E)	Preparation of procedures for purchasing leases on land.	Deferred  At 30 June 2002, procedures for purchasing leases had not been developed as there has yet to be a perceived need for them by relevant stakeholders.
2001	1 April	Eden	6.16.1	Pursue the voluntary purchase of any leases on State forest tenure that has been revoked.	In progress  No voluntary purchases of leases on State forest tenure that had been revoked were made during 2001/2002 by the NPWS. Although one lease was available for purchase during 2001/2002, the timing of the land being placed on the market did not coincide with the NPWS' land acquisition funding cycle and therefore was unable to make the purchase.
Ongoing	As soon as practical	UNE, LNE, Eden	6.16.2 6.16.1 (E)	Any areas for which leases are purchased must be incorporated by gazettal into the NPWS estate as soon as practical.	Implemented  Leases purchased by the NPWS are being gazetted into the national park estate as they are acquired. During 2001/2002, six purchased leases were gazetted.
<b>FMZ Assessment/Northern Additions</b>					
1999	1 October	UNE, LNE, Eden	2.3.1	Minister for Forestry to create informal reserve pursuant to the amended <i>Forestry Act 1916</i> and called 'special management zones'.	In progress  During 2001/2002, negotiations between the NPWS, SFNSW and Planning NSW, resolved that FMZ 2 and FMZ 3a in the UNE and LNE regions would be given declared Special Management Zones under section 21A of the <i>Forestry Act</i> . The provision related to FMZs under section 21A of the <i>Forestry Act</i> would be amended to provide FMZs with the same legal status as FMZ 1 with respect to their alteration, amendment or revocation. This means that these changes would require changes to the <i>Forestry Act</i> . The negotiations also resulted in agreement on several new FMZ 1 areas. At 30 June 2002, the gazettal of these areas had yet to be confirmed by SFNSW.

Due date		Region	FA section*	Milestone	Progress
1999	1 December	UNE, LNE	6.16.2	Identification of areas 'available for formal reservation' refined from the 'areas for further consideration'. Process for identifying these lands was outlined in the PlanningNSW Memo dated 4 February 1999, and entitled 'Procedure for dealing with lands for further consideration for reservation'.	In progress The NPWS, DMR and SFNSW have completed the review of some 'areas for further consideration for reservation' and identified some that may be included in the formal reserve system. These areas will be considered in the FMZ Assessment.
2001	30 June	UNE, LNE, Eden	2.4.4.5	Directors-General of NPWS, PlanningNSW and CEO SFNSW to agree on the larger more significant exclusion areas of rainforest, high conservation value old growth and other prescriptive exclusions.	Deferred Milestone will be considered once areas to be transferred to the national park estate is completed as part of the FMZ Assessment and areas are declared SMZs under section 21 A of the <i>Forestry Act</i> .
1999	1 December	UNE, LNE	6.16.2	SFNSW must pursue upgrading to FMZ 2, and any FMZ 3 areas that would be classed as 'available for formal reservation' but for unresolved mineral issues.	In progress The process for upgrading FMZ 2 and FMZ 3 areas that would be classed as 'available for formal reservation' but for unresolved minerals issues, is covered by SFNSW Operational Circular 'Guidelines for Managing FMZ on State Forests'. Final requirements of the FMZ areas are to be resolved during the FMZ Assessment.
2000	30 June	UNE, LNE	6.16.2	NPWS and SFNSW, in consultation with the Department of Mineral Resources, to complete negotiations on the FMZ category for State forests with mineral and lease interests.	In progress The majority of this task was completed in 1999/2000. Further consideration of FMZ areas with mineral interests will be part of the FMZ Assessment.
2000	30 June	UNE, LNE	6.16.2 2.3.1	Lands must be zoned by SFNSW as FMZ 2 and FMZ 3 where they are encumbered by leases or have major mineral value precluding FMZ 2 and must be managed accordingly. Any activities on these lands which may diminish the values of the area must only be carried out with the agreement of NPWS and following consultation with leaseholders.	In progress Consideration has been given to this milestone previous to the commencement of the FMZ Assessment. Completion of this task is to occur as part of discussions between SFNSW, the NPWS, PlanningNSW and DMR as part of the FMZ Assessment.
Ongoing	Every 5 years or as required	UNE, LNE	2.3.3	Review of mineral and petroleum objections over FMZ 2 and FMZ 3 lands every five years or as required and land may be added to the dedicated reserve system.	No reporting required There was no change to mineral and petroleum interests in FMZ 2 and FMZ 3 during 2001/2002. Mineral and petroleum interests are being considered as part of discussions between SFNSW, NPWS, PlanningNSW and DMR being undertaken as part of the FMZ Assessment.
Ongoing		UNE, LNE, Eden	2.3.1 6.16.2 6.16.1 (E)	Consult with DMR when upgrading FMZ 3 to FMZ 2 and purchase of leases.	In progress – UNE/LNE region The upgrading of FMZ 3 areas to FMZ 2 is covered in the SFNSW Operational Circulars 99/10 'Managing our forests sustainable Forest Management Zoning in State Forests NSW' and 01/02 'Guidelines for using FMZ system' and is part of the FMZ Assessment process. Consideration of State forest areas with leases is also part of the FMZ Assessment. Consultation with DMR also occurs as part of an ongoing referral process for all proposed additions to the national park, including any leasehold land. No reporting required – Eden region No specific discussions have occurred in the Eden.
Ongoing	Every 5 years	UNE, LNE, Eden	2.3.3	NPWS and DMR to review Crown reserves every five years, any areas no longer required for mineral interests must be dedicated under the <i>National Parks and Wildlife Act 1974</i> with concurrence of DMR.	Deferred Review effectively being undertaken as part of the process considering the reclassification of Crown reserves as state conservation areas.

Due date		Region	FA section*	Milestone	Progress
<b>Crown reserves</b>					
1999	30 September	UNE, LNE, Eden	2.3.3	MOU regarding the management of Crown reserves.	Complete  A MOU about the management of Crown reserves was signed in March 2001 between the Directors-General of the NPWS and DMR. This MOU is an agreement on the management of Crown reserves dedicated for the purposes of public recreation, conservation and mineral and petroleum exploration.
1999	30 September	UNE, LNE, Eden	2.3.3	Formation of a management committee regarding the management of Crown reserves.	Deferred  The formation the Committee was deferred pending the completion of negotiations between NSW agencies over the potential transfer of all Crown Reserves to state conservation areas (Refer FMZ Assessment). The completion of any transfers, as a result of the negotiations, will avoid possible duplication of land use categories and solve some of the management anomalies that currently exist with Crown reserves.
2003	1 January	UNE, LNE	6.16.2	NPWS to assess forest conservation values on remaining vacant Crown land in consultation with the Department of Land and Water Conservation, DMR and other relevant stakeholders.	In progress  Assessment has been completed by the NPWS. At 30 June 2002, consultation between the NPWS and DLWC and DMR was continuing. The NPWS had received preliminary feedback from DLWC on the results of the assessment. Further responses are anticipated during 2002/2003. DMR had yet to respond at 30 June 2002.
2002	1 January	Eden	2.3.3	Preparation of plans of management for Crown reserves which are adjacent to land dedicated or reserved under the <i>National Parks and Wildlife Act 1974</i> .	Deferred  The preparation of management plans has been deferred. Plans will be progressively prepared following the completion of the abovementioned negotiations.
2005	1 January	UNE, LNE	2.3.3	Preparation of plans of management for Crown reserves which are adjacent to land dedicated or reserved under the <i>National Parks and Wildlife Act 1974</i> .	Deferred  The preparation of management plans has been deferred. Plans will be progressively prepared following the completion of the abovementioned negotiations.
<b>Cooperative approaches for threatened species management</b>					
<b>Assessment of species</b>					
1999	30 June	UNE, LNE, Eden	2.4.4.3	Implementation of a process to assess conservation requirements in relation to important new information concerning the biology and ecology of a species and/or effectiveness of licence conditions.	Implemented  A process was implemented in 1999/2000 and mirrors that adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act</i> (stipulated in Condition 1.3 of Appendix B in the IFOAs for the UNE, LNE and Eden regions).  A process is also in place for the review of certain fauna conditions of the Threatened Species Licences. This process includes the exchange and assessment of new information by the NPWS, SFNSW and, where appropriate, independent experts. Recommendations from such reviews are provided to the relevant Ministers for approval as they arise.  This process was applied during 2001/2002, where SFNSW undertook a study into the home range and habitat requirements of the brush-tailed phascogale in the SFNSW Mid North Coast Region (LNE region). On the basis of the study's outcomes and advice from the NPWS, the NPWS and SFNSW agreed to a new prescription in the Threatened Species Licence in the IFOAs for the UNE, LNE and Eden regions. The new prescription: 1) introduces the option of a landscape approach to habitat conservation for areas 1 000 hectares or greater; 2) reduces the size of the exclusion zone that must be retained within 500 metres of records, for the site-based approach; 3) changes the categories of habitat to be retained in the site approach, generally, from being based on models to being based on forest type mapping. This new prescription has formed part of proposed amendments to the IFOAs for the UNE and LNE regions.

Due date		Region	FA section*	Milestone	Progress
1999	1 October	UNE, LNE, Eden	2.4.4.2	Development of a process for the assessment of new records of threatened species, populations and ecological communities not already covered by licences, whereby the conservation requirements of the species are assessed.	<p>Implemented</p> <p>A process was implemented in 1999/2000 and mirrors that adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act</i> (stipulated in the IFOAs).</p> <p>Whenever the Scientific Committee makes a final determination to list a threatened species, populations and ecological communities not already covered by licences and considered likely to occur on State forests and be affected by logging activities, the NPWS advises SFNSW of the determination and the need to apply condition 1.2 of the Threatened Species Licence.</p> <p>Regular updates of the NPWS Wildlife Atlas are provided to SFNSW of all threatened species under its data licence with the NPWS. The provision of this information assists SFNSW in planning its logging operations. If a newly listed species is present in a compartment planned for logging, the relevant NPWS office is contacted, who then assess the conservation requirements of the species and advises SFNSW of an appropriate condition.</p> <p>During 2001/2002 the process was applied by the NPWS who developed a site-specific condition for the eastern pygmy possum and the grey-crowned babbler. Conservation requirements of the grey-headed flying-fox were also assessed during the year which determined that the existing conditions were adequate.</p> <p>The Threatened Species Licence does not cover endangered populations and ecological communities, therefore SFNSW is not authorised to conduct activities that may affect endangered populations and ecological communities.</p>
Ongoing		UNE, LNE, Eden	2.4.4.1	A process must be developed and implemented whereby the conservation requirements of a species new to science are assessed. The IFOA provides a review mechanism.	<p>Implemented</p> <p>Process mirrors that adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act</i> (stipulated in the IFOAs).</p>
Ongoing		UNE, LNE, Eden	2.4.4.1	Details the process to be followed when a species new to science is found.	<p>Implemented</p> <p>Process has been established and has been included in the IFOAs.</p>
Ongoing		UNE, LNE, Eden	2.4.4.2	Details the process to be followed when an important new record of a species in the area is found.	<p>Implemented</p> <p>Process has been established and has been included in the IFOAs.</p>
Ongoing		UNE, LNE, Eden	2.4.4.3	Review of particular Threatened Species Licence conditions in light of new information on the distribution, population size or ecology of a threatened flora species.	<p>Implemented</p> <p>The NPWS has implemented a process which mirrors that adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act</i> (stipulated in condition 1.3 of Appendix B in the IFOAs for the UNE, LNE and Eden regions).</p> <p>A process is also in place for the review of certain fauna conditions of the Threatened Species Licences. This process includes the exchange and assessment of new information by the NPWS, SFNSW and, where appropriate, independent experts. Recommendations arising from such reviews are provided to the relevant Ministers for approval. The process covers both flora and fauna.</p> <p>During 2001/2002, information concerning the brush-tailed phascogale was reviewed by SFNSW and recommendations made to PlanningNSW. Technical details of the licence were also reviewed and recommendations were made to PlanningNSW.</p>
Ongoing		UNE, LNE, Eden	2.4.3 2.4.4.1	Agencies to notify each other of any proposal to nominate for listing or de-listing of any species, populations, ecological communities or key threatening processes. The IFOA provides a review process to deal with changes to threatened species schedules.	<p>Implemented</p> <p>SFNSW process included in provisions of the IFOAs.</p> <p>NPWS notification occurs as required.</p> <p>During 2001/2002, the NPWS advised SFNSW of 24 new listings to the <i>Threatened Species Conservation Act</i> schedules, including fauna species, eastern pygmy possum and grey-headed flying-fox, and flora species, <i>Eucalyptus oresbis</i> and <i>E. ciliolata</i>.</p>

Due date		Region	FA section*	Milestone	Progress
Ongoing		UNE, LNE, Eden	2.4.3	Cooperation over non-licence components of the <i>Threatened Species Conservation Act 1995</i> , such as nomination of species, populations, ecological communities and key threatening processes, recovery plans, threat abatement plans and critical habitat.	<p>Implemented</p> <p>Inter-agency cooperation over non-licence components of the Threatened Species Conservation Act occurs as required. Cooperation has occurred during the preparation of the <i>Threat Abatement Plan for Predation by the Red Fox (Vulpes vulpes)</i> (NPWS, 2001d), draft forest owls recovery plan, and pre-recovery plan management actions for <i>Quassia</i> sp Moonee Creek and <i>Euphasia scabra</i>.</p> <p>Various recovery plans being prepared by the NPWS have involved SFNSW, including those for Nightcap Oak, Hastings River mouse, <i>Elaeocarpus</i> sp minion and yellow-bellied glider. This involvement has been through inclusion on recovery teams (Hastings River mouse and Nightcap Oak), or where there is not a formal recovery team established (<i>Elaeocarpus</i> and yellow-bellied glider) consultation both during the drafting and public exhibition stages of plan development.</p>
<b>Management and recovery planning</b>					
1999	31 December	UNE, LNE	2.4.3	Refinement of models to identify Hastings River Mouse habitat.	<p>Complete</p> <p>Refinement of micro-habitat models for Hastings River mouse was completed before the signing of the IFOAs in 1999. Analysis of the results of the research and review program is continuing. Further studies are being undertaken to increase scientific knowledge of the species.</p>
Ongoing		UNE, LNE, Eden	2.4.3	Continued implementation of joint management plans such as Pine Creek Koala Management Plan.	<p>Implemented</p> <p>The Pine Creek Koala Management Plan (SFNSW, 1999b) for Pine Creek State forest in the UNE region continued to be implemented. The plan contains provisions for the protection of koala habitat, harvesting in specified areas and ongoing monitoring and research on the impact of harvesting on koala populations. The plan is due for an initial review in 2004 and a major review (and amendment if necessary) in 2005.</p> <p>The Threat Abatement Plan for Predation by the Red Fox (<i>Vulpes vulpes</i>) (NPWS, 2001d) was implemented during 2001/2002, following its release in December 2001.</p> <p>Recovery plans are also being progressively completed by the NPWS under the <i>Threatened Species Conservation Act</i>, with many involving consultation with SFNSW and other agencies and community groups.</p> <p>No further joint management plans had been developed or implemented at 30 June 2002. However, agency-based management measures were continuing to be developed and implemented.</p>
<b>Pest, weed and feral animal control</b>					
1999	All	UNE, LNE, Eden	6.16.3	Wild dog control using 1080 baiting on lands managed by the <i>National Parks and Wildlife Act 1974</i> where SFNSW has given approval.	<p>Complete</p> <p>Baiting was underway throughout 1999 on lands transferred to the national park estate where SFNSW had given approval for such works to be undertaken.</p>
2005	1 April	UNE, LNE, Eden	2.4.2	Preparation of gazing management plans, predator and feral control plans and threatened flora species management plans.	<p>In progress</p> <p>During 2001/2002, consultation occurred between SFNSW and the NPWS, the EPA, NSW Fisheries and PlanningNSW, to further refine its draft strategic plans for the management of weeds and feral animals (included in the draft Regional ESFM Plans). SFNSW is now finalising the plans in response to input received from these discussions prior to seeking final endorsement from PlanningNSW.</p>

Due date	Region	FA section*	Milestone	Progress
Ongoing	UNE, LNE, Eden	2.12 2.11 (E)	Cooperative programs in addressing noxious weed control, feral animal control and other matter relating to forest health.	<p><b>Implemented</b></p> <p>In the Eden region, cooperative weed and pest management programs program have been established directly with SFNSW and the NPWS, and indirectly via the South East Catchment Board with Bega and Bombala Shire Councils, DLWC and private landholders. Local pest management committees comprising NPWS, South Coast Rural Land Protection Board and landholders have also been established to manage particular pest issues.</p> <p>The NPWS is continuing to establish cooperative programs with a variety of landholders, land management agencies and interest groups for the management of pest animals and weeds.</p> <p>Regional pest management strategies are also being prepared outlining how the NPWS will cooperatively manage pest issues along with other land managers. In the UNE and LNE regions, pest management strategies have been prepared for all five NPWS Regions in its Northern Directorate. Pest animal (including feral animal) and weed control programs are also integrated into plans of management, recovery plans and threat abatement plans.</p> <p>The Forest Health Advisory Committee was established under the terms of joint State and Federal Ministerial Council Generic Incursion Management Plan to deal with forest pests and diseases. Representatives on the Committee are SFNSW, NPWS, NSW Forest Products Association, AQIS, NSW Agriculture and the Royal Botanic Gardens, Sydney. The purpose of the Committee is to provide a forum for those who own or manage forests or forested areas to discuss and provide advice on policy and action for all matters pertaining to the health of the forests.</p> <p>SFNSW also participates in local Weed Management Committees and works in close cooperation with Rural Lands Protection Boards and Wild Dog Associations in determining local control priorities and cooperative control programs.</p>
<b>Managing for other forest values and uses</b>				
<b>Fire management</b>				
2001	1 April	UNE, LNE, Eden	2.10 2.9 (E)	<p>Preparation of a joint agreement with District Fire Committees for the prevention, detection and suppression of bush fires.</p> <p><b>Complete</b></p> <p>Prepared annually for the District Bushfire Management Committee, represented by the NPWS, SFNSW, DLWC and the NSW Rural Fire Service.</p>
<b>Recreation and tourism</b>				
2001	1 April	UNE, LNE, Eden	2.13.1 2.12.1 (E)	<p>Preparation of joint regional recreation and tourism plans.</p> <p><b>In progress</b></p> <p>A reference group was established in 2000/2001 to progress the preparation of joint recreation and tourism plans for the UNE and LNE regions. The project was to build on the draft Recreation Management Strategy for the NPWS Northern Directorate. As SFNSW was unable commence to the joint undertaking during 2001/2002, the NPWS Northern Directorate prepared a draft Recreation Framework to manage visitor impacts and experiences. The framework takes a strategic approach to recreation planning and the methodologies used would be suitable for application by other land managers should they wish. The framework is an internal working document to be circulated amongst interest groups before being finalised in 2002/2003.</p> <p>Development of the recreation and tourism plan for the Eden region commenced following the signing of the Southern RFA in April 2001, having been deferred due to the inclusion of South Coast area of the Southern region into the plan. At 30 June 2002, a draft joint NPWS and SFNSW plan had been developed to manage visitor impacts and experiences. However, before finalisation of the plan it is intended to include coastal areas north to Batemans Bay. With this path being adopted, consideration is also being given to how best to deal with areas further north of Batemans Bay and areas to the west (i.e. the remainder of the Southern region).</p> <p>The NPWS and SFNSW are continuing to develop and implement individual planning measures.</p>

Due date	Region	FA section*	Milestone	Progress
<b>Carbon sequestration opportunities</b>				
2004	1 April	UNE	2.13.2	<p>Undertaking of a revegetation project that includes carbon sequestration opportunities.</p> <p><b>In progress</b></p> <p>A MOU was entered into by the Minister for the Environment and the Minister for Forestry in July 2000. The agreement provided for the sharing of expertise and information to expand carbon sequestration rights and environmental markets.</p> <p>In order to operationalise the MOU with SFNSW, the NPWS undertook a study to identify potential reforestation of lands it manages. These areas were ranked according to gross area, site productivity and conservation value. More than 44 individual parcels of cleared land (mostly ex-farmland), totalling over 9 400 hectares, were verified as suitable for reforestation. The next stage of the project identified three candidate areas, in three regions, for further detailed study by the NPWS and SFNSW. The environmental, legal and economic feasibility of using carbon sinks for ecosystem restoration for each of the sites was examined in more detail. The results of this study are to be available in 2002/2003.</p> <p>SFNSW is continuing to establish plantations for carbon sinks under various partnerships. Successful negotiations between SFNSW and TEPCO in 2000/2001 resulted in an agreement to establish 10 000 hectares of carbon sinks in eastern New South Wales. At 30 June 2002, SFNSW had established 2 000 hectares of plantation in the Hunter Valley as part of the TEPCO partnership.</p>
<b>Occupation permits on State forests</b>				
1999	1 July	UNE, LNE, Eden	2.3.3	<p>Formation of Occupation Permit Taskforce.</p> <p>(Taskforce will also consider issues in the Eden region)</p> <p><b>Complete</b></p> <p>A Taskforce was formed in November 2000, represented by the NPWS, SFNSW and NSW Farmers.</p>
2000	1 July	UNE, LNE	2.3.3	<p>Phasing out of occupation permits.</p> <p><b>Deferred</b></p> <p>The majority of occupation permits were phased out of State forest areas zoned FMZ 1 and FMZ 2 by July 2001 following consideration by the Occupation Permit Taskforce. Finalisation of exclusion or management arrangements was expected by December 2001. However, this was deferred until the completion of the FMZ Assessment.</p>
<b>Plantation areas within national parks</b>				
2001	30 June	UNE, LNE	3.3 6.16.1 Att 11	<p>Supply from logging associated with rehabilitation of identified hardwood plantations remaining within the new reserve system and completion of harvesting of plantations in national parks.</p> <p><b>In progress</b></p> <p>Plantation areas are located at Myall Lakes, Knappinghat, Koreelah, Mebbin and Toonumbar. An assessment of all five areas by the NPWS found that two areas would benefit from harvesting. Prior to any harvesting taking place within the areas, a Review of Environmental Factors under Part 5 of the <i>Environmental Planning and Assessment Act</i> and community consultation would be required.</p> <p>At 30 June 2002, no harvesting of former SFNSW hardwood plantation areas in the reserve system had been undertaken due to costs associated with rehabilitation and the small commercial volumes contained in the areas.</p>
Ongoing	Within 6 months of harvest	UNE, LNE	6.16.1	<p>Rehabilitation works on plantation areas within national parks must be completed within six months of harvest completion.</p> <p><b>No reporting required</b></p> <p>No harvesting operations have been undertaken due to costs associated with rehabilitation and small commercial volumes, therefore no rehabilitation works have commenced.</p>
Ongoing		UNE, LNE	6.16.1	<p>Works programs and rehabilitation plans to be jointly prepared and approved. Rehabilitation costs to be funded by sale royalties.</p> <p><b>No reporting required</b></p> <p>Some of the proceeds from the harvesting of former SFNSW hardwood plantation areas situated in the reserve system are to be directed towards any necessary rehabilitation works. As no harvesting operations were undertaken during 2001/2002, no rehabilitation works were undertaken.</p>
<b>Roads and trails</b>				

Due date		Region	FA section*	Milestone	Progress
2000	1 January	UNE, LNE, Eden	2.13.4 2.12.4 (E)	Preparation of a MOU on joint roads and trails maintenance and access arrangements.	<p>Complete</p> <p>A MOU on joint roads and trails maintenance and access arrangements in the UNE and LNE regions was entered into by SFNSW and the NPWS in January 2000. At 30 June 2002, implementation guidelines were being finalised and field-tested. An interagency workshop was also held to facilitate implementation of the MOU.</p> <p>A draft MOU between SFNSW and the NPWS for the Eden region was completed in 2000/2001. Since then, the MOU has been reviewed to ensure compatibility with a similar MOU for the Southern region.</p>
<b>Private land</b>					
<b>Regional Native Vegetation Committee</b>					
1999	30 June	Eden	2.8.1	Establishment of Regional Native Vegetation committee under the forest agreement, to promote conservation of rare or non-existent ecosystems on private land.	<p>Complete</p> <p>Committee was formed in 2000. The first meeting of the Committee was held in October 2000, with representatives from PlanningNSW, NPWS, SFNSW and DLWC. An outcome of this meeting was for members to identify current voluntary conservation mechanisms and financial incentives available to promote conservation on private land.</p> <p>Following the establishment of the Eden RFA, an allocation of \$2 million was provided to fund a range of initiatives for the voluntary conservation on private land of priority ecosystems. The funds have assisted with the development of a Voluntary Biological Diversity Conservation Strategy by the NPWS, DLWC and the South East Catchment Management Board, and the establishment of a local management team to implement it. Other groups working with the NPWS, DLWC and the South East Catchment Management Board include; the Bega Valley Shire Council, NSW Agriculture, the Far South Coast and Towamba River Landcare Associations and the Bega Environment Network. The Local Management Team is working to reduce the complexities of incentives available to private landholders by promoting cooperative approaches between local groups, organisations and authorities (NPWS, 2002).</p>
2000	1 January	UNE, LNE	2.9.1	Establishment of a committee under the forest agreement, to look at conservation values on private land which are a conservation priority for inclusion in the CAR reserve system, and seek funding.	<p>Complete</p> <p>Refer to previous milestone.</p>
<b>Identification of lands of conservation priority</b>					
2000	1 January	UNE, LNE	2.9.1	Identification of forest ecosystems on private land which are of conservation priority for inclusion in the CAR reserve system.	<p>Deferred</p> <p>The identification of forest ecosystems on private land for inclusion in the CAR reserve system (list contained in Attachment 2 of the RFA for North East New South Wales) required the completion and incorporation of CRAFTI data into regional databases.</p> <p>Revision of CRAFTI linework for UNE region was completed in August 2000 and for LNE region in December 2000. Refinement of the CRAFTI data provides a basis for derivation of forest growth stage, ecosystem modelling and predictive modelling of species habitat across all tenures. Updated soil landscape mapping is to be provided by DLWC to the NPWS to contribute to the process. This derived information will provide spatially accurate data for private land and will assist the completion of a range of government programs, including regional vegetation management plans and the <i>NSW Biodiversity Strategy</i> (NPWS, 1999a). In the meantime, NPWS has derived an interim data layer and provided this to Regional Vegetation Committees and Catchment Management Boards</p>



Due date		Region	FA section*	Milestone	Progress
<b>Voluntary conservation mechanisms</b>					
Ongoing		UNE, LNE, Eden	2.9.1 2.8.1 (E) Att 7	Principles applying to land and voluntary mechanisms that may be applied to achieve conservation on private land (e.g. VCAs, property agreements, management contracts etc.).	Implemented  Voluntary mechanisms (such as VCAs) and principles that may assist to achieve conservation on private land are being applied.
<b>World Heritage and Wilderness</b>					
2000	1 January	UNE, LNE	2.5	Public exhibition of wilderness assessment report for the UNE and LNE regions.	Complete  The Northern Wilderness Assessment Report (NPWS, 2001a) was completed in May 2001. The Report identified over 250 000 hectares of land as wilderness and described options for wilderness declaration boundaries.  The Report was publicly exhibited between July and September 2001, and resulted in over 42 000 submissions from a variety of individuals and groups. A Summary and Analysis Report was subsequently prepared that provided recommendations for declaration to the Minister for the Environment in June 2002.
Ongoing		UNE, LNE	Att 8	Make subsequent decisions on the declaration and management as wilderness of areas of the CAR reserve system provisionally identified as wilderness during the regional forest assessment.	In progress  At 30 June 2002, no decisions on the declaration and management of wilderness areas of the CAR reserve system had been made.
2001	1 April	UNE, LNE	2.7	Review of CERRA World Heritage Areas to identify any additional rainforest to be included.	In progress  Possible additions to the World Heritage Register located in the UNE and LNE regions were presented at a meeting of the CERRA Committee in September 2000. The Committee decided that it would not pursue these additions, pending the establishment of a CERRA TSAC. Members have now been appointed to the Advisory Committee.  The NPWS will refer the possible additions to the inaugural meeting of the CERRA TSAC, scheduled for August 2002.  In the Eden region, a preliminary assessment and review of potential areas for World Heritage listing commenced during 2001/2002.
2002	1 April	UNE, LNE, Eden	2.7 2.6 (E)	Further studies of the dedicated reserve system to identify World Heritage values, including eucalypt dominant vegetation and religious beliefs embedded in the landscape.	In progress  Refer to previous milestone.
<b>Cultural heritage</b>					
1999	1 October	UNE, LNE, Eden	2.8 2.7 (E)	Cultural heritage management guidelines for SFNSW to be attached to the IFOA.	Complete  Attached to the UNE, LNE and Eden regions IFOAs. Guidelines were developed with reference to the CRA/RFA report Protecting Cultural Heritage Values and Places in NSW Forests (Kinhill, 1999) describing planning, operation, monitoring and review processes for managing cultural heritage.

Due date		Region	FA section*	Milestone	Progress
1999	1 October	UNE, LNE, Eden	2.8 2.7 (E)	NPWS to review its cultural heritage guidelines and ensure consistency with the principles contained in CRA project reports prepared by the Cultural Heritage Working Group (2000 a and b).	<p>Complete</p> <p>The NPWS' policies regarding Cultural Heritage Strategic Policy, Consultation Policy, Cultural Heritage Information Policy and Guidelines for the Assessment of Impact on Heritage Places have been endorsed by the agency's Executive. These policies and guidelines are consistent with the principles contained in the CRA/RFA projects entitled Protective Mechanisms for Cultural Heritage—Generic Version (Cultural Heritage Working Group, 2000 a) and Protective Mechanisms for Cultural Heritage—Lower North East Region (Cultural Heritage Working Group, 2000b). At 30 June 2002, the NPWS' review of statewide guidelines to ensure consistency with principles contained in the above mentioned reports was continuing.</p>
Ongoing		UNE, LNE, Eden	Att 8	Manage cultural values, both Aboriginal and non-Aboriginal, according to guidelines.	<p>Implemented</p> <p>Cultural heritage guidelines have been developed and applied. Guidelines are attached to each IFOA.</p> <p>Cultural values managed according to NPWS' existing statewide guidelines (currently under review).</p> <p>Refer also to previous milestones.</p>
2001	1 April	UNE, LNE, Eden	2.8 2.7 (E)	Finalisation of SFNSW policy on Indigenous and Non-indigenous cultural heritage.	<p>Draft</p> <p>SFNSW' draft policy was incorporated into the draft Regional ESFM Plans and outlined strategies for the protection and management of cultural heritage on State forests. The final policy will be released with the final Regional ESFM Plans.</p> <p>Part of SFNSW' NFEMS Strategic Framework (exhibited in 2000) includes policies on 'Cultural Heritage', 'Protection of Indigenous Interests and Values' and 'Protection of Non-Indigenous cultural Heritage'. These documents were reviewed with regional stakeholders such as Local Aboriginal Land Councils, Elders groups, conservation groups and comment received from interested individuals.</p> <p>The protection of Aboriginal cultural heritage involves liaison with the Aboriginal community and identification in the field of known and previously recorded sites. Field investigations are undertaken during planning to identify whether additional sites or objects are present. Where potential cultural sites are identified during operations, further activity ceases until the item or place is investigated and a decision made on the appropriate management of the site. Site protection measures are developed following liaison with community representatives and incorporated in operational plans.</p>
Annually		UNE, LNE, Eden	2.8 2.7 (E)	Report on cultural heritage performance through annual report, State of the Environment reports that publish against performance indicators and provide access to the outcomes of performance reviews.	<p>Implemented</p> <p>SFNSW report on its cultural heritage performance each year through its <i>SEEing</i> report (previously called the Environmental and Social Values Report).</p> <p>The NPWS also report cultural heritage performance on an annual basis. To improve reporting on cultural heritage, the agency has been developing more detailed performance indicators for its <i>State of the Parks</i> reporting to be trialled in 2002/2003.</p> <p>Both the NPWS and SFNSW are continuing to contribute significant information to the ESFM Criteria and Indicators Monitoring report each year, which includes cultural heritage indicators.</p>

Due date		Region	FA section*	Milestone	Progress
<b>Places of cultural significance</b>					
Ongoing		UNE, LNE, Eden	2.8 2.7 (E)	Updating of section 170 register, sites of state significance will also be listed.	<p>Implemented</p> <p>A HHMS is being developed by the NPWS, to be completed in August 2002. The system will replace the NPWS' Historic Places Register (which was still in use and updated as necessary throughout 2001/2002) and improve the section 170 register (<i>Heritage Act 1977</i>) by providing additional and better linked information on NPWS heritage assets. The new system will allow field staff and consultants to add or amend information related to heritage items they manage and also incorporate necessary technology such as GIS into the database.</p> <p>At 30 June 2002, SFNSW was entering preliminary information into the section 170 register. Details and the format required in the register by the NSW Heritage Office will require further field investigation. As resources permit, and in conjunction with operational field investigations, the records for places of heritage significance will be further reviewed. Management actions are determined according to the nature of sites and potential threats.</p>
<b>Places of Aboriginal significance</b>					
2001	1 April	UNE, LNE, Eden	2.8 2.7 (E)	NPWS to review indigenous cultural heritage management processes to provide a landscape-based system.	<p>Implemented</p> <p>NPWS' Aboriginal cultural heritage processes for consents and permits are being reviewed to ensure a landscape approach is adopted. The review is considering broadening the scope of cultural heritage values that are identified and assessed, and the impact on these values, rather than focussing on just the archaeological significance of a site in isolation from the rest of the landscape. To assist NPWS staff, and the consultants and contractors the NPWS employs, in managing its cultural heritage responsibilities, strategic, information, community consultation and other policies form part of a broader package aimed at better integrating cultural heritage into NPWS conservation objectives and operations. Management processes for both natural and cultural heritage through management planning and impact assessment are taking a landscape approach as recommended in the Visions for the New Millennium report (NPWS, 1998) and the NPWS Corporate Plan</p>
Ongoing		UNE, LNE, Eden	2.8	NPWS must continue to develop its information management system for indigenous heritage in consultation with Aboriginal communities and other stakeholders (information submitted to the Aboriginal Sites Register).	<p>Implemented</p> <p>The NPWS completed the AHMS in June 2001 and was fully implemented for most of 2001/2002.</p>
Ongoing		UNE, LNE, Eden	5.1.1	NPWS to conduct a preliminary assessment of all new parks to identify priority areas that could be added to Schedule 14 of the <i>National Parks and Wildlife Act 1974</i> .	<p>In progress</p> <p>Guidelines have been developed for the assessment of all parks to determine their inclusion in Schedule 14 of the <i>National Parks and Wildlife Act</i>. These guidelines provide a process for undertaking cultural significance assessments for determining the possible inclusion of parks in Schedule 14 of the Act.</p>
<b>Aboriginal interests</b>					
<b>Aboriginal involvement in forest management</b>					
2000	1 April	UNE, LNE, Eden	5.1.3	SFNSW and NPWS each to prepare a strategy to ensure Aboriginal communities and stakeholders are given a greater participatory role in forest management.	<p>In progress</p> <p>SFNSW and the NPWS have yet to finalise strategies for all forest agreement regions. In the interim both agencies continue to provide opportunities for Aboriginal community and stakeholder involvement where possible.</p>

Due date		Region	FA section*	Milestone	Progress
2001	1 April	UNE, LNE, Eden	5.1.3	SFNSW to involve Aboriginal communities in the development and finalisation of its policy in relation to Aboriginal involvement in forest management which will form part of the NFMS.	<p>Draft</p> <p>SFNSW policy is contained in the NFMS Strategic Framework and ensures the protection of places of Aboriginal significance and ongoing consultation and liaison with Aboriginal people on matters of their interest. This includes the protection of cultural knowledge and places, and ensuring obligations under relevant legislation are met. Consultation with the Aboriginal community during the year resulted in further review and modifications to the final policy. The policy ensures that Aboriginal people will be consulted when operations are planned in proximity to items of Aboriginal cultural heritage and provides for economic and cultural opportunities for Aboriginal communities.</p>
<b>Joint venture and co-management arrangements</b>					
2000	1 April	UNE, LNE	5.1.1	Examination of any State forest that could be considered for co-management and joint venture arrangements.	<p>In progress</p> <p>SFNSW is developing a number of projects with Aboriginal local communities. In SFNSW Hunter Region (LNE region), a venture with the Keepa Keepa Elders is underway. The project is centred on an area near Mount Sugarloaf in Heaton State Forest, which is being used as a base for a number of activities, including cultural learning with Aboriginal youth. Work is continuing with the Darkinjung Land Council in relation to sites in the McPherson State Forest (LNE region). The SFNSW Hunter Region has also commenced a new initiative, working with Aboriginal women to ensure provision continues to be made to protect and provide for gender-specific cultural interests.</p> <p>The interests of Aboriginal people have been promoted in SFNSW Mid North Coast region (UNE and LNE regions) through involvement in delivering Aboriginal cultural awareness programs to workers involved in construction of the new correctional centre near Kempsey. A part of this program has encouraged companies and tradesmen to include Aboriginal youths when engaging apprentices.</p> <p>SFNSW North East Region has been in discussion with Aboriginal communities in relation to the future management of specific areas of State forest. The ongoing interaction between Aboriginal communities and SFNSW Aboriginal and other staff is building trust and a high level of rapport. This is fundamental to further joint developments.</p>
Ongoing		UNE, LNE, Eden	5.1.1	SFNSW and NPWS must progressively negotiate joint management arrangements and joint ventures with local Aboriginal communities.	<p>Implemented</p> <p>In the UNE and LNE regions, the NPWS had 10 joint management, access or hunting and gathering arrangements in place with Aboriginal communities (at 30 June 2002), including the first ILUA in the State, at Arakwal. An informal management agreement was also put in place with the local Aboriginal community for Nungguu Mirral Aboriginal Area, located in the Nambucca Valley (LNE region). Advisory committees have also been formed for Mount Warning (Wollumbin) and Bundjalung national parks that will focus on developing co-management arrangements for these two parks. In 2002/2003, the NPWS will employ a cultural heritage project officer in Coffs Coast Area as a pilot to foster better partnerships with Aboriginal communities in the management of Aboriginal cultural heritage.</p> <p>In the Eden region, two cultural camps established on national parks in the region. This includes one in Ben Boyd National Park. The culture camps are principally designed to address the issues of 'who we are and where we come from' for the Aboriginal participants, with a focus on respect for self and others. Activities involved may include: the sharing of cultural heritage knowledge, re-acquainting people with land and culture; the development of self-esteem among young people through outdoor adventure and cultural activities; and teaching of traditional skills. The NPWS provide support and assistance for culture camps wherever possible and often have a direct involvement in their organisation and conduct.</p> <p>SFNSW and the Aboriginal community are establishing consultative arrangements to protect and conserve Aboriginal culture and heritage, and intellectual property. Fifteen business partnerships with Aboriginal people are being developed by SFNSW across the State, including the contracting of pre-harvest cultural heritage site inspections and the establishment of a native plant nursery (SFNSW, 2002).</p>

Due date	Region	FA section*	Milestone	Progress
<b>Access for traditional and cultural purposes</b>				
2000	1 April	UNE, LNE, Eden	5.1.1	<p>Preparation of a joint strategy which will include how Aboriginal communities can gain access to materials for traditional/cultural purposes (such as art and craft purposes, food sources and medicine, access to firewood).</p> <p><b>In progress</b></p> <p>A joint strategy has been prepared by the NPWS and SFNSW for the Eden region and is to be finalised during 2002/2003 following consultation with the Aboriginal community. A joint strategy for the UNE and LNE regions has yet to be completed. However, the strategy for the Eden region is to be considered when developing the strategy for access and use arrangements in UNE and LNE regions.</p> <p>In the meantime, Aboriginal access to forest resources for traditional purposes is being facilitated by both SFNSW and the NPWS, across all regions. SFNSW is continuing to issue section 30I permits (under the <i>Forestry Act 1976</i>) for the non-commercial collection of materials. Licences/permits for hunting native animals can also be issued in accordance with other legal requirements. The broader adoption/development of appropriate strategies is assisted through reference to the SFNSW Cultural Heritage Functional Working Group. Specific arrangements for cooperative management with Aboriginal communities are under consideration, particularly for areas classified as FMZ 2 and FMZ 3.</p>
<b>Employment opportunities</b>				
2000	1 April	UNE, LNE	5.1.2	<p>Preparation of a joint strategy to facilitate employment and development program for Aboriginal people.</p> <p><b>In progress</b></p> <p>The preparation of a joint strategy for the UNE and LNE regions has not yet commenced. However, the NPWS has developed an internal position which could be used as the basis of future negotiations. In the interim, the NPWS and SFNSW are continuing their own internal initiatives. The NPWS has developed a new Aboriginal Employment and Training Strategy that seeks to facilitate employment and development opportunities for Aboriginal people. As part of the strategy, cross-agency approaches to training are being examined.</p> <p>SFNSW has implemented its Aboriginal employment and industry program for the recruitment of Aboriginal people. During 2001/2002, two trainees were involved in tertiary studies. One trainee was working as a trainee supervising forest officer position and the forestry trainee was given field-based training opportunities during university course breaks. A field-based trainee in SFNSW North East Region was given opportunities to gain experience through timber inventory, ecological assessment and marketing work. A clerical trainee located at Coffs Harbour shifted to a new position in SFNSW Mid North Coast Region, at Wauchope. Further employment has been provided by SFNSW for Aboriginal people in other areas of SFNSW operations, including inventory work and ecology field investigations.</p>
Ongoing		UNE, LNE, Eden	5.1.2	<p>NPWS to offer permanent employment opportunities for Aboriginal people in operational management as part of the funding package for the management of additions to the reserve system.</p> <p><b>In progress</b></p> <p>The NPWS employed seven additional Aboriginal staff during 2001/2002: an Aboriginal ranger, field officer and four trainee field officers at Arakwal National Park, and a field officer at Dorrigo National Park. A further six staff who identify as Aboriginal were also employed by the NPWS in non-identified positions. At 30 June 2002, persons who identify themselves as Aboriginal comprised 6.3% of the NPWS workforce in the UNE and LNE regions (a total of 37 people). The NPWS will be pursuing further employment opportunities for Aboriginal people as part of the finalisation of the northern forest agreements. It is expected that these positions will become available in 2002/2003.</p> <p>In the Eden region, four Aboriginal staff were appointed by the NPWS as a result of funding provided for the management of additions to the reserve system: a trainee field officer, two Aboriginal sites officers (one male and one female) and one project officer to manage handback of Biamanga and Gulaga National Parks. Additional employment areas include the Discovery Ranger program where two field officer training positions for young Aboriginal persons and one ranger training position for an Aboriginal person have been appointed.</p>

Due date	Region	FA section*	Milestone	Progress
Ongoing	UNE, LNE, Eden	5.1.1	Ventures likely to generate mutual benefits to the Aboriginal, as well as the wider, community must also be considered.	<p>In progress</p> <p>No new ventures were initiated during 2001/2002.</p> <p>The NPWS Aboriginal Discovery program continued throughout the State. The program aims to enhance community appreciation and understanding of Aboriginal cultural heritage and the importance of its protection in the landscape. The NPWS contracts the Aboriginal community to supply Discovery Rangers for the program. In 2001/2002, 39 Aboriginal Discovery Rangers were employed to deliver 1 290 Aboriginal cultural heritage and other educational activities in the program.</p> <p>In the Eden region, as part of the NPWS Discovery program and in an independent commercial capacity, funds have been directed towards supporting Bega Aboriginal community members in cultural tour operator training to help build the capacity of these communities to deliver high quality tourism products. The NPWS also contracts the Aboriginal community to supply Discovery Rangers for cultural activities.</p> <p>Aboriginal land surveys have also been completed and results returned to communities along with a series of management recommendations for their use in future management. An additional funding application will be prepared to implement some of the recommendations of the previous survey work. The NPWS will also investigate options for the ongoing management of the Aboriginal lands delivered to communities as part of the Forest Agreement for the Eden Region.</p>
Ongoing	UNE, LNE, Eden	5.1.1	Where further analysis indicates the feasibility of other ventures, project plan must be developed for implementation.	<p>Implemented</p> <p>Refer to previous milestone.</p>
<b>Managing timber supply</b>				
<b>Supply arrangements</b>				
1999	1 March	UNE, LNE	3.2	<p>Amendment of wood supply agreement with Boral.</p> <p>Complete</p> <p>Signed 5 March 1999 taking effect from 1 January 1999.</p>
1999	31 December	UNE, LNE, Eden	Att 8	<p>Review legislation and policies relevant to the allocation and pricing of hardwood logs from State forest before the end of 1999.</p> <p>Complete</p> <p>During 1999, in accordance with the scheduled review of SFNSW' log pricing policy, the final phase of amendments was made to Log Value Pricing system to update assumptions within the residual value pricing model and remove anomalies. These amendments included the removal of the remaining 10% capping of price variations in relevant price zones. The log value pricing system was also expanded to include the linkage of small sawlogs prices to quota sawlog prices. The main objective of the final stage of the implementation of Log Value Pricing was to have hardwood sawlog prices closer to market value.</p>
2000	1 April	UNE, LNE	3.2	<p>Wood supply agreement arrangements for processing thinnings.</p> <p>Complete</p> <p>No new markets for processing thinnings from native regrowth and hardwood plantations have emerged. Therefore, the Minister for Forests has not considered any new agreements.</p>
2000	1 April	Eden	3.2	<p>Amendment of wood supply agreement with Harris Daishowa Australia.</p> <p>Complete</p> <p>Signed 5 March 1999, amended 29 September 1999.</p>
2000	31 December	UNE, LNE	3.2	<p>Additional volumes supplied under a transitional 'top-up' arrangement over two years to assist industry adjustments to terminate by 31 December 2000.</p> <p>Complete</p> <p>SFNSW made arrangements for additional wood supply volumes over a two year period. 'Top-up' arrangement amount reduced by half during the year 2000 and terminated on 31 December 2000.</p>
Ongoing	UNE, LNE, Eden	3.4 4.3	<p>Consultation on timber supply arrangements must occur through the development of Plans of Operation.</p>	<p>Implemented</p> <p>Consultation by SFNSW with stakeholders occurs in the development of Plans of Operations.</p>

Due date		Region	FA section*	Milestone	Progress
<b>Supplementing timber supply</b>					
1999	30 June	UNE, LNE	6.16.2	The development of a process (prior to any purchases) of selecting land for purchase by SFNSW for timber supply must consider substantially unmet CAR conservation targets. A process for this and the key targets must be developed by SFNSW including consultation with NPWS and PlanningNSW by the 30 June 1999. This is not to hinder the overall purpose of the Private Property Supplementation Program to supplement the SFNSW timber supply.	<p><b>In progress</b></p> <p>Discussions have occurred between SFNSW, the NPWS and PlanningNSW on the development of the process. At the end of the reporting period the process had yet to be finalised through agreement between the agencies.</p> <p>The approach taken by SFNSW, to date, has evolved as properties have been identified for purchase. The approach taken includes: consideration of flora and fauna values follow prescriptions in the Threatened Species Licence of the IFOA area applied to all private property purchases; application of a protocol (developed by SFNSW and the NPWS) for high conservation value old growth where ever possible prior to purchase; application of a process which allows for consideration of under-represented forest ecosystems on private property. Field assessment/verification is undertaken where needed to identify the presence and location of the forest ecosystems for protection.</p>
<b>Monitoring timber supply</b>					
<b>Timber volumes harvested</b>					
2004	1 April	UNE, LNE	3.5	SFNSW, NPWS and PlanningNSW will consult on appropriate spatial scales for reporting actual yields against FRAMES estimates.	<p><b>In progress</b></p> <p>Preliminary discussions were held to enable reporting actual versus predicted volumes in the 1999/2000 NSW Forest Agreements Annual Report. Further discussions between SFNSW, the NPWS and PlanningNSW are to be undertaken. Creation of a statewide FRAMES Improvement Committee is to be pursued to address this and other FRAMES development issues. It is expected the Committee will be formed in 2002/2003.</p>
Ongoing		Eden	3.5	SFNSW, NPWS and PlanningNSW will consult on appropriate spatial scales to reporting actual yields against FRAMES estimates.	<p><b>In progress</b></p> <p>Refer to previous milestone.</p>
Annually		UNE, LNE, Eden	3.5	Reporting on actual versus predicted volume at the scale determined by SFNSW, PlanningNSW and NPWS. To be included in the annual report to Parliament.	<p><b>Implemented</b></p> <p>Volumes harvested by SFNSW during 2001/2002 did not exceed the allowable variation from the committed volume in any region.</p> <p>The actual volume of Veneer and High Quality Large sawlogs harvested from SFNSW native forest and hardwood plantations in the UNE region was 101 944m<sup>3</sup>. This represents 88% of the committed volume.</p> <p>In the LNE region, 177 036m<sup>3</sup> of the committed volume of Veneer and High Quality Large sawlogs were harvested from SFNSW native forest and hardwood plantations during 2000/2001. This represents 103% of the committed volume.</p> <p>In the Eden region 25 329m<sup>3</sup> of High Quality Large sawlogs and veneer logs were harvested from SFNSW native forests during 2000/2001. This represents 110% of the committed volume.</p> <p>Quota pulp grade and chipwood timbers harvested from native forests in the Eden region during 2001/2002 was 279 854 tonnes. This represents 81% of the committed volume defined in the IFOA.</p>
Annually		UNE, LNE	3.5	Monitoring of FRAMES performance to include comparison of actual and predicted volume each 12 month period at the RFA region level. To be included in Annual Report to Parliament.	<p><b>In progress</b></p> <p>A review of actual versus predicted timber volumes was undertaken by SFNSW in 2000/2001, the results of which were not available for inclusion in this report. However, SFNSW advise that the results of the analysis did not reveal results that significantly questioned FRAMES estimates. Further examination by SFNSW of previous 'actual versus predicted' methodologies identified problems with these processes that severely limit their usefulness. Key issues have been identified.</p>
Annually		UNE, LNE, Eden	3.5	Monitoring of FRAMES performance will include an assessment of the progressive 20 year supply. To be included in Annual Report to Parliament.	<p><b>In progress</b></p> <p>Refer previous milestone.</p>

Due date		Region	FA section*	Milestone	Progress
Annually		Eden	3.5	Monitoring of FRAMES performance to include comparison of actual and predicted volume for the multi-aged forest resource each 12 month period. To be included in Annual Report to Parliament.	In progress Refer previous milestone.  Key issues have been identified and a comprehensive monitoring study is proposed. Enhancements to the FRAMES tool-set are also planned to complement these new monitoring studies. These improvements will not only make FRAMES easier to use but also provide a range of more meaningful reports for yield prediction and monitoring. Results of actual versus predicted volumes were not provided by SFNSW for inclusion in this report.
<b>Production of timber products</b>					
Annually		UNE, LNE, Eden	3.5	Report on annual production of timber products other than quota sawlogs.	Complete Reporting done on a financial year basis. Data provided for the 2001/2002 year in Table 2-D.
<b>FRAMES improvement</b>					
2007	1 March	UNE, LNE	3.2 3.5	Review of supply levels at year 8, after inventory is reviewed, to determine a supply level for years 9-20, with value adding criteria applied at year 5.	No reporting required Review at year 8 will be undertaken as part of FRAMES review.
Ongoing	Within next 5 years	UNE, LNE	3.5 Att 8	Refinement of resource availability by improving the inventory such as additional plot measurements (funding provided at \$500 000 pa for five years).	In progress Program being developed. Work to date includes that identification of permanent growth and extra plots to improve measurement of resource availability.
Ongoing		Eden	3.5 Att 8	Refinement of resource availability by improving the inventory such as additional plot measurements.	In progress Refer to previous milestone.
Ongoing		UNE, LNE, Eden	3.5	Results of resource inventory and annual monitoring must be used to review performance in achieving the implementation of sustainable yield of timber products in State forests.	In progress A review of projected timber yields for the UNE and LNE regions is currently in progress. No further work has been conducted for the Eden region at this stage.
Ongoing		UNE, LNE, Eden	3.5	Inventory system used in FRAMES must be supplemented by progressive enhancement of modifier models, such as harvesting area exclusions and FRAMES parameters such as tree protection and tree availability modifier models.	In progress Since 1999, significant effort has been expended on measuring additional inventory plots and gathering additional data to underpin net harvest area estimates. This information is currently being incorporated into the databases that underpin FRAMES and being written up in technical reports for wider distribution.  At 30 June 2002, an internal SFNSW review of projected timber yields for the UNE and LNE regions was underway. It is expected the review to be completed by July 2002. No further work has been conducted for the Eden region at this stage.
Ongoing		UNE, LNE, Eden	3.5	SFNSW consultation with NPWS and PlanningNSW on the terms and conduct of the FRAMES assessment.	In progress SFNSW has undertaken an internal assessment of objectives and outcomes of the FRAMES review process and is to commence discussions with stakeholders and agencies to determine their priorities for future development of FRAMES. Information from these sources will be used to develop a FRAMES Improvement Strategy that will direct future work and be the basis for future reporting of progress.



Due date	Region	FA section*	Milestone	Progress
<b>Silviculture practices</b>				
1999	1 December	UNE, LNE	2.2.4 Preparation of Eco-field Guides.	<b>In progress</b> SFNSW has been preparing its eco-field guides for the UNE and LNE regions in two parts: Part 1 - Overview of Forest Management in North East NSW was under review following its application and the content and approach of the revised Regional ESFM Plans. Part 2 - Diagnostic component had been finalised and was being applied in the field. Part 2 will be updated on an ongoing basis. A review of the eco-field guides and their effectiveness is planned for early 2004.
2000	1 April	UNE, LNE, Eden	2.2.4 Att 6 Preparation of SFNSW Forest Practices Code: Part 5 - Wildlife Management in Native Forests.	<b>In progress</b> A draft was prepared in 1999/2000. No further action (internal or external review) has occurred.
2001	1 April	UNE, LNE, Eden	2.2.8 Native forests silvicultural regimes must be implemented on State forests.	<b>Implemented</b> SFNSW Native Forest Silviculture Manual was published in September 2000 and documents silvicultural regimes that have traditionally been practiced on State forests with proven success, as well as silvicultural specifications and guidelines required by the IFOAs. The Manual complements SFNSW field guides and training programs, and is supported by its Forest Practices Circular 2002/02 - Implementing Silviculture in LNE and UNE. The circular provides a step-by-step instruction on application of the manual and implementation of silviculture (including tree marking) in the field in the UNE and LNE. The circular and manual are being used in harvest planning and in the field.
2001	1 April	UNE, LNE, Eden	2.2.8 Preparation of arrangements for silvicultural practices including establishment of demonstration areas (UNE, LNE regions only), audit compliance, reporting and consultation.	<b>Implemented</b> At 30 June 2002, two demonstration sites had been established at Queens Lake and Kiwarrak. A third demonstration site in tablelands forest types (on a purchased property) is yet to be established as it awaits the resolution of the application of the High Conservation Value Old Growth Protocol. SFNSW select sites for the establishment of demonstration areas that are of an operational scale and represent the major north coast forest types (Blackbutt, Dry Hardwood and Tablelands forests). Forest types, forest structures, location and presence of IFOA exclusion areas within the sites are also considered. The demonstration areas provide opportunities to: enhance staff training to ensure the consistent application of best practice silviculture in the forest; refine the planning processes to deliver the forest agreement and IFOA silviculture conditions; show stakeholders and the broader community the implementation of the forest agreements and IFOA silviculture conditions. During 2001/2002 six training courses have utilised the silvicultural demonstration sites, as well as using non-established sites to address silvicultural skills. During 2001/2002, SFNSW Mid North Coast Region trained 76 personnel at the sites (including foresters, managers, ecologists and field workers). The auditing process for silvicultural practices applied by SFNSW has been integrated into its corporate Compliance Monitoring and Audit process.

Due date	Region	FA section*	Milestone	Progress
Ongoing	UNE, LNE, Eden	2.2.5	SFNSW to employ internal audit system to ensure consistent application of standards across Crown-timber lands.	<p><b>Implemented</b></p> <p>SFNSW' internal audit policy was included in its NFEMS Overview. The Audit system comprises of a four-tiered system of compliance monitoring to be implemented in all regions. This procedure has been updated in SFNSW Circular 2003/01 - Monitoring and Measuring Compliance of Operations. Application of the audit system provides for: T1 - on-site monitoring by the SFO, to ensure compliance with operational conditions; T2 - on-site checking of the T1 level by the supervising forestry officer's supervisor and correct application of standards; T3 - independent audit of the T1 and T2 levels by regional staff not directly involved in the operation, and/or independent audit by SFNSW EMS audit team; T4 - independent audit by SFNSW Management Audit and Review Branch.</p> <p>All operations are covered by the audit procedure with risk assessments determining the focus of T1 and T2 monitoring and of the T3 and T4 audits. Any non-compliance requires a corrective action request to address the non-compliance and minimise any future re-occurrences. Results from T1 and T2 monitoring checks are kept in SFNSW' Harvest Tracking System.</p>
Ongoing	UNE, LNE, Eden	2.2.3	Harvesting plans to be prepared for all logging operations and forest products conducted under a Timber Licence.	<p><b>Complete</b></p> <p>SFNSW prepares harvesting plans for all logging operations and forest product removal conducted under a timber licence. A harvest plan manual detailing the requirements to ensure consistency and standards has been developed.</p>
Ongoing	UNE, LNE, Eden	2.2.7	Notification by SFNSW on the location and nature of forestry operations to be done at least bi-monthly to PlanningNSW, NPWS, EPA and NSW Fisheries as outlined in IFOA arrangements.	<p><b>Implemented</b></p> <p>Program implemented. SFNSW is providing monthly notification of operations to regulatory agencies.</p>
<b>Implementation, review and community awareness</b>				
<b>Staff training, employment and industry initiatives</b>				
<b>Staff training</b>				
Ongoing	UNE, LNE, Eden	2.1.1 3.6 (E)	<p>SFNSW field staff and contractors must receive appropriate competency-based training.</p> <p>In the Eden region, establish timber industry training and accreditation program to assist workers in developing recognised competencies in soil and water, flora and fauna, indigenous and non-indigenous cultural heritage, log grading and log merchandising requirements.</p>	<p><b>Implemented</b></p> <p>In association with the timber industry, SFNSW has developed 'Supervising Forest Harvesting Operations' and 'Forest Harvest Operations' manuals to assist in training. Another program, the 'Field Supervisors Safety Training' course, was drafted in 2001 and piloted through a series of workshops across SFNSW during the first half of 2002.</p> <p>In 2000, SFNSW introduced a new Staff Development and Training Policy and Staff Development program to assist in developing a highly skilled and efficient workforce.</p> <p>At 30 June 2002, SFNSW was providing 44 in-service training programs to staff on a regular basis, with many of these programs being available to external individuals and organisations. These courses include training in cultural heritage, wildlife identification and management, systems management, fire management and suppression, and other various human resource areas. During 2001/2002, 499 staff received training in 72 courses, ranging from OH&amp;S to machine operator skills.</p> <p>A second phase of the program is to be implemented with those employed under Section 10 of the <i>Forestry Act</i>. The second phase will occur after full consultation with the relevant union and employee consultation groups.</p> <p>Practical field-based training is being provided in the silvicultural demonstration sites established in the UNE and LNE regions.</p>
Ongoing	UNE, LNE, Eden	2.1.2	NPWS field staff and contractors must receive appropriate competency-based training.	<p><b>Implemented</b></p> <p>Ongoing training programs for NPWS staff cover natural and cultural (including Aboriginal) heritage management, and operational, technical and safety matters. Programs range from technical training related to occupational health and safety requirements to statewide capacity building initiatives targeted at particular staff classifications. Cultural awareness training throughout the NPWS was a focus for 2001/2002, with objectives to improve employees' knowledge and understanding of Aboriginal culture, and using this to improve the way the agency does its business. Documents on professional and ethical conduct are made available to all new and current NPWS staff.</p>

Due date		Region	FA section*	Milestone	Progress
<b>Employment</b>					
Ongoing	Subject to funding	UNE, LNE, Eden	3.6 Att 10	Employ a range of initiatives to facilitate employment, subject to funding.	In progress  Capital works outsourced by the NPWS since the forest agreements were signed in 1999 have included bridge construction, road maintenance, road rehabilitation works, vegetation and fauna research and monitoring, construction of directional and interpretive signs, campsites, walkways, viewing platforms and day use areas, and Review of Environmental Factors documentation. Employment opportunities for Aboriginal people are also a component of the initiatives.
<b>Industry initiatives</b>					
Ongoing	Subject to funding	UNE, LNE, Eden	3.6	Extension of FISAP to fund various initiatives in the UNE, LNE and Eden regions.	In progress  FISAP funding was extended for further five years, as a result of the forest agreement process, to assist industry and employment opportunities for forest-based industries in the UNE, LNE and Eden regions.  In the UNE and LNE regions \$7.5 million was allocated to the Private Property Timber Supplementation program. The program was established to assist SFNSW purchase timbered property as a means of providing additional resources to the native timber industry, due to the reduction in resource following the establishment of the CAR reserve system. At 30 June 2002, eight properties had been purchased across the UNE and LNE regions under the program, covering an area of 10 931 hectares of native forest, with an estimated 97 129m <sup>3</sup> of quota sawlogs purchased. It is anticipated the Program is to be finalised in 2002/2003.  The Log Haulage Assistance program in the UNE and LNE regions was allocated \$1 million per year over five years to assist native forest quota sawmilling companies meet additional log haulage costs incurred where they have to obtain quota sawlog supplies from outside their usual areas of supply (as a result of the establishment of the CAR reserve system). The program continued to be implemented across the north east regions throughout 2001/2002.  In the Eden region, the Eden Recovery Mill was completed in 2000/2001. At 30 June 2002, the Commercial Regrowth Thinning program had yet commence.
2004	1 April	UNE, LNE, Eden	2.9.2 2.8.2 (E)	Private property supplementation program, involving the purchase of timber rights or private property to assist in supply arrangements to industry must apply controls in legislation.	Implemented  Refer to previous milestone.
<b>Community involvement and education</b>					
<b>Complaint handling</b>					
2000	1 January	UNE, LNE, Eden	6.15	Devise and implement a coordinated complaint handling and response system.	Implemented  The Coordinated Complaint Handling Protocol was developed by the NPWS, NSW Fisheries, EPA and PlanningNSW. The Protocol establishes a standardised, coordinated and efficient process to respond to complaints received from the public relating to the IFOAs. The system was endorsed in October 2001 and has been operating since that time.

Due date	Region	FA section*	Milestone	Progress
<b>Community participation and awareness opportunities</b>				
Ongoing	UNE, LNE, Eden	Att 8	Providing ongoing formal participation to raise awareness and understanding of ESFM and how it can be achieved in New South Wales forests.	<p><b>In progress</b></p> <p>Public education programs with NPWS participation have included: the development of education resources on biodiversity and associated teachers' resource kits; guided walks and tag-along four-wheel drive tours; ranger talks and on-site inspections; training, planning and control programs for pest species; and preparation of a three-year plan for environmental education in New South Wales.</p> <p>The NPWS Discovery program provided community education opportunities for the general public and interested groups on natural and cultural heritage, with 71 646 people participating in the program through 2 346 educational walks, talks and tours conducted in 176 locations during 2001/2002. Two key themes addressed in 2001/2002 were threatened species and pest management.</p> <p>SFNSW spent \$4.6 million on education and awareness programs and activities across the State. Over 2 600 opportunities for public involvement were provided, including guided interpretive walks, public displays and volunteer programs. These programs are well attended attracting over 6 000 students and teachers annually. Free bus trips are available for interested teachers to find out about forest management and SFNSW. The information provided on these trips is relevant to both primary and secondary teachers with resource packs provided. Tours in 2002 will take in native hardwood forests as well as hardwood and softwood plantations.</p> <p>Cumberland State Forest in Sydney provided the venue for a range of education and awareness programs, attracting nearly 10 500 participants during 2001/2002.</p> <p>Educational opportunities provided by SFNSW are assisted by two forest studies centres located in Sydney and Newcastle (LNE region). The centres provide a range of education and awareness opportunities, including an overview of forest management and forest ecology; programs for all classes K-12; programs in the forest; worksheets tailored to field activities; guest lecturers and field trips for tertiary groups; and access to timber harvesting and regeneration sites.</p> <p>SFNSW also participate and present at regional shows, development and sponsorship of competitions promoting timber and timber use (e.g. SFNSW South East Workers competition) and participation in land care and river care programs to promote the role of trees and forests in environmental rehabilitation.</p>
Ongoing	UNE, LNE, Eden		Improving cooperation and coordination between Government agencies so as to achieve integrated management for conservation, wood production and other values in both public and private forests.	<p><b>Implemented</b></p> <p>The MIG and National Forest Inventory processes are key examples of improving cooperation and coordination to achieve integrated management for conservation, wood production and other values in both public and private forests.</p> <p>At 30 June 2002, the Australian Forestry Standard was nearing completion. The Standard is an example of cooperation and coordination to achieve integrated management for conservation, wood production and other values in both public and private forests. The Standard was being developed by Australia's Primary Industries Ministerial Council (formerly the Ministerial Council on Forestry, Fisheries and Aquaculture) in partnership with the National Association of Forest Industries, Australian Forest Growers, and Plantation Timber Association of Australia. It is anticipated the Standard will be completed in 2002/2003.</p>
Ongoing	UNE, LNE, Eden	Att 8	Continuing to develop the public consultation and public reporting mechanisms through the introduction of new partnerships (for example the International Model Forest Network).	<p><b>In progress</b></p> <p>SFNSW is continuing to develop its stakeholder consultation and public reporting mechanisms. Examples of developing partnerships include: 1) Formation of Aboriginal Women's Network in the Hunter region (LNE region); 2) Participation in the Darkinjung Community Development Employment Program; 3) Partnership with Dept of Education and Training in the Forest Harvesting Sector Training Project; 4) Eighty-four thousand hectares of State forests in the central Murray region of New South Wales nominated as Wetlands of International Importance under the Ramsar Convention.</p> <p>SFNSW annual <i>SEeing</i> report is being verified by an external certification agency each year as part of the process of demonstrating the reliability and transparency of ESFM outcomes.</p>

Due date		Region	FA section*	Milestone	Progress
<b>Informing the public</b>					
1999	As soon as possible	UNE, LNE, Eden	1.6	Granting of an IFOA on, or as soon as possible after, the making of the agreement.	Complete IFOAs for the UNE, LNE and Eden regions were signed on 21 December 1999, and commenced on 1 January. Amendment 1 for the UNE, LNE and Eden regions was made during 2001/2002 and commenced on 1 December 2001.
Ongoing	Within 7 days of signing	UNE, LNE, Eden	6.10	Furnishing of the Agreement (and IFOA) to the Presiding Officer of each House of Parliament and to be laid before Parliament within 15 sitting days of receipt.	Complete Furnishing of the Agreements to the Presiding Officer of each House of Parliament occurred on 9 March 1999. Furnishing of the IFOAs to the Presiding Officer of each House of Parliament occurred on 24 December 1999. Furnishing of the forest agreement and IFOA for the Southern region to the Presiding Officer of each House of Parliament occurred in May 2002.
1999	1 April	UNE, LNE, Eden	6.11	Public notice in newspaper circulating throughout the State and also in a newspaper circulating the region, about the Agreement and IFOA.	Complete Public notice on the forest agreements occurred on 12, 16 and 18 March 1999 in regional newspapers (Northern Daily Leader, Newcastle Herald, Armidale Express, The Advocate, Port Macquarie News, Northern Star, Northern Rivers Echo, Bega District News, The Magnet, Queanbeyan Age, and South East Magazine) and the Sydney Morning Herald. Public notice on the IFOAs occurred on 29 December 1999 and 5 January 2000 in the same regional newspapers, The Australian and the Sydney Morning Herald.
1999	1 April	UNE, LNE, Eden	6.11	Copies of documents to be made available for public inspection at the head office and other regional offices of PlanningNSW.	Complete Forest Agreements were signed on 5 March 1999 – deposited at PlanningNSW Head Office Sydney, regional offices at Newcastle, Queanbeyan and Grafton; SFNSW regional offices at Casino, Glenn Innes, Grafton, Coffs Harbour, and Eden; NPWS regional offices at Port Macquarie, Armidale, Grafton, Glenn Innes, Alstonville and Merimbula. IFOAs were signed on 21 December 1999 – deposited at PlanningNSW Head Office Sydney, regional offices at Newcastle, Grafton and Queanbeyan; SFNSW regional offices at Walcha, Taree, Casino, Eden and Coffs Harbour; NPWS regional offices at Glenn Innes, Alstonville, Merimbula, Armidale and Port Macquarie.
1999	1 May	UNE, LNE, Eden	6.11	Copies of documents made available on the Internet by means of the website of the PlanningNSW.	Complete Forest agreements were made available on the RACAC website ( <a href="http://www.racac.nsw.gov.au">http://www.racac.nsw.gov.au</a> ) in March 1999. IFOAs were available on the site in April 2000. The site also contains links to the Australian Government RFA website ( <a href="http://www.rfa.gov.au">http://www.rfa.gov.au</a> ) that contains project reports carried out as part of the CRA/RFAs for the UNE, LNE and Eden regions.
<b>Access to information</b>					
1999	1 December	UNE, LNE, Eden	2.11.3 2.10.3 (E)	Determining a method to provide all research reports to the public.	Complete All CRA/RFA project reports have been placed deposited in the PlanningNSW Library. Access to these documents can be made by request at the PlanningNSW Information Centre. Some project reports can also be viewed through a link on the RACAC website ( <a href="http://www.racac.nsw.gov.au">http://www.racac.nsw.gov.au</a> ) and the Australian Government's RFA website ( <a href="http://www.rfa.gov.au">http://www.rfa.gov.au</a> ).

Due date	Region	FA section*	Milestone	Progress
<b>Additional reporting mechanisms</b>				
2000	1 April	UNE, LNE, Eden	4.2	<p>Additional reporting and consultative mechanisms for NPWS (e.g. <i>State of the Parks</i> report, NPWS Advisory Council, District Advisory Committee).</p> <p>Complete</p> <p>The NPWS is continuing its corporate level reporting, providing statewide information on the activities of the agency each financial year.</p> <p>Reporting by the NPWS was enhanced in November 2001 with the release of its first <i>State of the Parks</i> report. The report provided an overview of the conservation values of New South Wales and the NPWS' management of the parks system. The next <i>State of the Parks</i> report is to be released in early 2005.</p> <p>The NPWS is also represented on a range of international, national, state and local groups related to forests and forest management, such as Australasian Fire Authorities Council, NSW Bushfires Coordinating Committee and Greening Australia (among others).</p> <p>Other consultative and reporting mechanisms include the NPWS District Advisory Committees which continue to provide advice to the National Parks Advisory Council and the NPWS on range of natural and cultural heritage conservation matters both on and off reserve. Membership of these committees includes Aboriginal communities, women, local government and farmer groups.</p>
2000	1 April	UNE, LNE, Eden	4.3	<p>Additional reporting mechanisms for SFNSW (e.g. Plan of Operations, Regional ESFM Plans).</p> <p>Complete</p> <p>SFNSW is continuing its corporate level reporting, providing statewide information on the activities of the agency each financial year.</p> <p>SFNSW' Environmental and Social Values report has been replaced by the <i>SEEing</i> report. The first <i>SEEing</i> report was published in 2001/2002. SFNSW' periodical, Bush Telegraph is continuing to be published every two months and its Research Division's annual report prepared each financial year.</p> <p>SFNSW is also represented on a range of international, national, state and local groups related to forests and forest management, such as the Australasian Fire Authorities Council, NSW Bushfires Coordinating Committee and Greening Australia (among others).</p>
Annually		UNE, LNE, Eden	2.2.6	<p>SFNSW reporting at statewide level through Environmental and Social Values Report.</p> <p>Complete</p> <p>SFNSW has published the 1999/2000 Environmental and Social Values report, 2000/2001 <i>SEEing</i> report, and 2001/2002 <i>SEEing</i> report.</p>
2000	1 April	UNE, LNE, Eden	4.5	<p>Additional reporting mechanisms, such as committees, by other agencies.</p> <p>Complete</p> <p>All agencies are continuing to report annually at a corporate level through their annual reports.</p> <p>The EPA is continuing to release the State of the Environment report every two years.</p>

Due date	Region	FA section*	Milestone	Progress
<b>ESFM criteria and indicators</b>				
<b>Monitoring</b>				
Ongoing	UNE, LNE, Eden	2.11.2 2.10.2 (E)	Monitoring of ESFM criteria and indicators.	<p><b>Implemented</b></p> <p>Monitoring of the ESFM criteria and indicators has been underway since 1999/2000. Results of monitoring undertaken by the NPWS and SFNSW are summarised in the NSW Forest Agreement Implementation report and described in detail in the supplementary report, ESFM Criteria and Indicators Monitoring report prepared each year. The refinement and improvement of data collection techniques by the NPWS and SFNSW is being undertaken on an ongoing basis.</p> <p>The NPWS has established a central coordinating group to administer the implementation and monitoring of the ESFM criteria and indicators, in conjunction with its own <i>State of the Parks</i> monitoring stream.</p> <p>SFNSW' ability to monitor the ESFM criteria and indicators was improved during 2001/2002 following the development of its SEEDS computer application. The system allows better management of data and its storage and retrieval to satisfy data requirements for the ESFM criteria and indicator and for a number of reporting streams including MIG and SFNSW <i>SEEing</i> report. The application provides a set structure and definitions to standardise the provision of regional data thereby increasing consistency and accuracy of data. During 2002/2003 and 2003/2004 linkages with other corporate systems will be further developed. The SEEDS system will be externally verified in 2002/2003 to ensure that data is provided consistently, accurately and transparently and that indicators used are relevant in the reporting of the sustainability of SFNSW.</p>
<b>Reporting</b>				
Annually	UNE, LNE, Eden	2.11.2 2.10.2 (E) Att 9	Reporting on indicators to contribute to annual report to Parliament.	<p><b>Complete</b></p> <p>This report contains summarised information on the monitoring of ESFM criteria and indicators. Full details are contained in the ESFM Criteria and Indicators Monitoring Report 2001/2002 (FRIP, 2005).</p> <p>Improvement and development of monitoring and reporting processes for the criteria and indicators is ongoing.</p>
<b>Trial and assessment</b>				
2000	1 April	UNE, LNE, Eden	2.11.2 2.10.2 (E)	<p>Preparation of evaluation framework for the criteria and indicators, to provide basis for five-year review.</p> <p><b>Complete</b></p> <p>A draft evaluation framework was devised by PlanningNSW in 2000/2001. The draft was accepted, in principle, as a final document by agencies involved in the collection of ESFM criteria and indicators monitoring data and has since been applied.</p> <p>The purpose of the framework is to collect information on the appropriateness of each indicator, such as cost-effectiveness, appropriateness of the indicators, ability to obtain data, ability to obtain data in specified format. The information obtained from the framework will be used to assist with the review of the criteria and indicators, as part of the first five year review of the forest agreements.</p>
2004	1 April	UNE, LNE, Eden	2.11.2 2.10.2 (E)	<p>Trial and assessment of indicators to ensure they are practical, measurable, cost-effective and capable of being implemented at the regional level.</p> <p>No reporting required</p> <p>An assessment of the ESFM criteria and indicators is to be undertaken as part of the first five year review.</p>

Due date		Region	FA section*	Milestone	Progress
<b>Data management</b>					
1999	1 October	UNE, LNE, Eden	6.13	Lodgement of all archival copies of data.	Complete All archival copies of data for the UNE, LNE and Eden regions have been lodged. Archive finalised in July 2001.
2000	1 April	UNE, LNE, Eden	6.13	Data Management Agreement.	Complete Finalised March 2000 by State members of the CRA Data Management Group.
Ongoing		UNE, LNE, Eden	Att 8	Developing and implementing an information system to facilitate the sharing of data for the use by all agencies, including local government, involved in the management of forested land.	Implemented The NSW Government launched the CANRI website in March 2001 to improve the integration and coordination of data between government and increase public awareness of natural resource management. The CANRI site is the result of a whole of government program which was first proposed in 1999 and subsequently allocated nearly \$4 million over a period of four years to develop the site (NSW Government, 2001).  The site is of use to community groups, industry groups, landholders, government agencies and students providing easy access to maps and other natural resource information. It also allows stakeholders to contribute information to the site and as a source for data sharing.  SFNSW' Biodiversity Information Working Group is also addressing the issue of information sharing as a necessary part of its function. Such work is a starting platform for further data sharing.
<b>Research</b>					
1999	1 December	UNE, LNE, Eden	2.11.3 2.10.3 (E)	Research projects that are in areas formerly on State forests and are now in national parks and nature reserves, SFNSW to provide NPWS with details of affected studies, location of sites and access requirements.	Complete SFNSW has provided details to the NPWS. Access to these areas is being provided where required. Details on these areas have been provided to the Forest Research Liaison Committee.
2000	1 January	UNE, LNE, Eden	2.11.3 2.10.3 (E)	Preparation of strategy to outline all monitoring and research to be undertaken.	In progress A Forest Research and Liaison Committee was formed in 2000 to assist in the development of a joint research and monitoring strategy. Before its completion, agencies are undertaking agency-based strategies which address monitoring and research such as the development of an agency-wide Corporate Research Framework by the NPWS. In 2002/2003, the NPWS framework is to be developed  NPWS Northern Directorate, which incorporates all of UNE region and the majority of LNE region, will also be developing a Research Plan during 2002/2003. This will be achieved by detailing all current research projects, then developing structure and processes to facilitate the coordination of future research efforts. The project will have wide involvement of Northern Directorate staff. A Biodiversity Research Strategy is also being developed under the NSW Biodiversity Strategy (NPWS, 1999a). An interagency working group will progress this task.  SFNSW draft monitoring and reporting strategy was exhibited with the Regional ESFM Plans in 2000. The strategy is being finalised as part of the Regional ESFM Plans and is additional to the strategic plan for SFNSW' research division which is revised each year.
2004	1 March	UNE, LNE, Eden	2.11.3 2.10.3 (E)	Preparation of a compendium of forest research.	Draft At 30 June 2002, PlanningNSW had begun the development of the Compendium in consultation with a range of government and non-government organisations.



Due date		Region	FA section*	Milestone	Progress
Ongoing		Eden	3.1	An operational research trial within the Eden region is proposed to be conducted by SFNSW and EPA associated with selective harvesting from some filter strips.	In progress  A proposal for an operational research trial in the Eden region regarding selective harvesting from some filter strips has been developed by SFNSW. It was submitted to the EPA in November 2001. Following feedback received from the EPA in February 2002, SFNSW and the EPA have held a number of meetings to discuss an appropriate research design. Certain technical aspects have now been established but further consultation is needed to finalise the trial.
<b>Reporting and review</b>					
<b>Reporting on the forest agreements</b>					
Annually		UNE, LNE, Eden	6.9	Preparation of an annual report on the forest agreement, which will include a discussion on the achievement of milestones for ESFM and compliance with any IFOA.	Complete  This is the third annual report, covering implementation of the forest agreements for the UNE, LNE and Eden regions for the 2000/2001 financial year. Progress has been provided on: achievement of milestones in the forest agreements; a summary of monitoring data collected for the ESFM criteria and indicators; compliance with the IFOAs.
Annually		UNE, LNE, Eden	6.9	Each annual report on the agreements is to be tabled in each House of Parliament by the Minister for Urban Affairs and Planning as soon as practical after its is prepared.	Complete  The 1999/2000 Forest Agreement Annual Report was tabled in Parliament in February 2002.  The 2000/2001 Forest Agreement Annual Report has been submitted for tabling (date of tabling to be advised).  The 2001/2002 Forest Agreement Annual Report has been submitted for tabling (date of tabling to be advised).
<b>Review</b>					
Ongoing	Every 5 year review	UNE, LNE, Eden	6.8	Ministers to review the performance of the forest agreements and IFOAs including their effectiveness and efficiency in meeting Government goals and policies.	No reporting required  Part of first five year review.
Ongoing	Every 5 year review	UNE, LNE, Eden	6.8	Parties to ensure the public are given an opportunity to participate in the review (public notification and inspection).	No reporting required  Part of first five year review.
Ongoing	12 months after each 5 year review	UNE, LNE, Eden	6.8	Report on the outcome of the Ministers' performance review to be tabled in each House of Parliament twelve months after the review.	No reporting required  Not required until 12 months after the completion of the review.

\* (E) – Reference in Forest Agreement for the Eden Region.