

NSW FOREST AGREEMENTS AND INTEGRATED FORESTRY  
OPERATIONS APPROVALS

## NSW Forest Agreements

# Implementation Report

Upper North East

Lower North East

Eden

Southern regions

2004/2005



NEW SOUTH WALES GOVERNMENT

Minister for Climate Change and the Environment



**NSW Forest Agreements**

# Implementation Report

Upper North East  
Lower North East  
Eden  
Southern regions



A report prepared as part of the implementation of the  
NSW forest agreements and integrated forestry  
operations approvals

NEW SOUTH WALES GOVERNMENT

Minister for Climate Change and the Environment

## INFORMATION



This project has been coordinated by Resource and Conservation Unit of the NSW Department of Environment and Climate Change (formerly the Resource and Conservation Division of the Department of Planning or Forestry and Rural Industry Policy within Department of Natural Resources).

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# Foreword

The Hon Peter Primrose MLC  
President of the Legislative Council  
Parliament House  
Macquarie Street  
Sydney NSW 2000

The Hon Richard Torbay MP  
Speaker of the Legislative Assembly  
Parliament House  
Macquarie Street  
Sydney NSW 2000

Dear Mr Primrose and Mr Torbay

I have pleasure in presenting to Parliament the sixth annual implementation report on the NSW forest agreements and integrated forestry operations approvals. There are four NSW forest agreement and four integrated forestry operations approvals in place, covering the Upper North East, Lower North East, Eden and Southern regions of New South Wales.

In accordance with section 21(1) and 21(2) of the *Forestry and National Park Estate Act 1998*, this report provides progress on the implementation of the NSW forest agreements and integrated forestry operations approvals for the period 1 July 2004 to 30 June 2005. Progress is reported by:

- the achievement of milestones defined in each of the four NSW forest agreements;
- results of monitoring the ecologically sustainable forest management criteria and indicators by Forests NSW and the then Department of Environment and Conservation; and
- compliance with the integrated forestry operations approvals for each region.

The report demonstrates continuing improvements to the management of the New South Wales public forest estate and consequent progression towards ecologically sustainable forest management.



**Carmel Tebbutt MP**  
**Deputy Premier**  
**Minister for Climate Change and the Environment**

# Executive summary

**This is the sixth annual report on the implementation of the NSW forest agreements and integrated forestry operations approvals (IFOAs). It has been prepared in accordance with section 21 of the *Forestry and National Park Estate Act 1998*, which requires that progress on the implementation of the agreements and approvals be reported each year.**

There are four forest agreements and IFOAs currently in place, covering the Upper North East (UNE), Lower North East (LNE), Eden and Southern regions. The agreements and approvals for the UNE, LNE and Eden regions were put in place in 1999, followed by those for the Southern region in 2002.

These agreements and approvals provide a strategic and operational framework to manage public forests in New South Wales, with the overall objective of achieving ecologically sustainable forest management (ESFM). Progress towards meeting this objective is partially achieved by regular reporting of the:

- achievement of a range of undertakings or 'milestones', defined in each of the NSW forest agreements;
- results of monitoring of the ESFM criteria and indicators; and
- compliance of harvesting activities on State forests and other Crown timber lands with the IFOAs.

The implementation of the agreements and approvals is a cooperative undertaking between key land management agencies<sup>1</sup>: Parks and Wildlife Division (PWD) and Environment Protection Authority (EPA) of the Department of Environment and Conservation (DEC), Forests NSW and Fisheries of the Department of Primary Industries and Forestry and Rural Industry Policy (FRIP) of the Department of Infrastructure, Planning and National Resources (DIPNR).

This report details activities related to implementing the NSW forest agreements and IFOAs for the UNE, LNE, Eden and Southern regions during 2004/2005.

## Milestone achievements and highlights

In 2004/2005, agencies continued to achieve or work toward the completion of milestones contained within the NSW forest agreements. There were also a number of new initiatives starting this year that will assist progress towards ESFM of NSW forests.

Some of this year's highlights are:

### **Carbon trading – a world first**

In 2004/2005, Forests NSW became the first body in the world to trade carbon credits arising from forests in a registered greenhouse gas abatement scheme.

<sup>1</sup> A number of structural changes to key land management agencies have occurred during 2004/2005. These structural changes are outlined in the introduction section of this report.

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### **Forests NSW's EMS and certification**

Forests NSW's Environmental Management System (EMS) is an important tool for achieving ESFM. The EMS provides for improved planning, operations monitoring, feedback and corrective action for areas of risk in Forests NSW business. During 2004/2005, Forests NSW continued to work towards the accreditation of EMS under International Organisation for Standardisation (ISO) 14001.

An accredited EMS will provide a strong foundation for then seeking certification of forest management under internationally recognised standards. Forests NSW is currently considering various certification options.

### *State of the Parks*

In June 2005, DEC released *State of the Parks 2004*, a public report based on a survey of all aspects of management of the New South Wales parks system. The *State of the Parks* report is an integral component of DEC's EMS. The report is part of a continuing program to better understand park values, and respond to the condition of, and pressures facing, the parks system. Overall, *State of the Parks 2004* demonstrates that DEC is doing a good job in managing New South Wales's large and diverse parks system. The report has attracted international attention for the valuable contribution it has made to understanding management effectiveness in protected areas.

### **Forestry and Timber Industry Strategy**

The strategy will outline how the NSW Government intends to encourage and support an efficient and sustainable forestry industry that demonstrates world's best practice for industry and the environment. The strategy will suggest roles for Government, for industry and other players.

## **Monitoring ESFM criteria and indicators**

The criteria and indicators outlined in the forest agreements are important for measuring progress towards the achievement of ESFM. Monitoring and reporting the ESFM criteria indicators are now in their sixth year for the UNE, LNE and Eden regions, and third year for the Southern region.

In 2004/2005, there have been some changes in the type of data provided by DEC. This has been due to DEC's own internal review of the ESFM indicators. The changes in data provision have not been to reduce the amount of data, but to improve the longer-term monitoring of indicators; hence in some cases data have become more specific to the requirements of the indicator.

Monitoring the indicators is a continuing and evolving process. The evolution of indicators will ensure that, over time, measurements will become more robust and accurate.

## **Compliance of harvesting operations with integrated forestry operations approvals**

The operational framework for carrying out forestry activities in State forests and other Crown timber lands is contained in the IFOAs for each region. Forests NSW is required to comply with the terms and conditions of the approvals when engaging in forestry activities in native forests. DEC (PWD and EPA), DPI – Fisheries and DIPNR regularly monitor Forests NSW's compliance with the terms and conditions of the IFOAs.

In 2004/2005, there were 12 operational and planning audits of the Environment Protection Licence and Threatened Species Licence across the four regions which identified 174 non-compliances.



Forests NSW were subsequently issued seven warning letters outlining the non-compliances and were required to undertake remedial work at eighteen sites, seek soil conservationist advice at five sites and were issued with three penalty notices. In addition, a prosecution action in the Land and Environment Court regarding a collapsed road in Chichester State Forest (LNE region) was finalised.

NSW Fisheries have did not identify any non-compliance of the Fisheries Licence by Forests NSW.

# Contents

<b>Foreword</b>	<b>iii</b>
<b>Executive summary</b>	<b>iv</b>
<b>Acronyms and abbreviations</b>	<b>ix</b>
<b>Glossary</b>	<b>x</b>
<b>i</b>	<b>1</b>
<b>Introduction</b>	<b>1</b>
<b>1</b>	<b>3</b>
<b>Milestones and highlights</b>	<b>3</b>
<b>2</b>	<b>10</b>
<b>Monitoring ecologically sustainable forest management</b>	<b>10</b>
INTRODUCTION	10
CRITERION 1: BIODIVERSITY	12
CRITERION 2: MAINTENANCE OF PRODUCTIVE CAPACITY OF FOREST ECOSYSTEMS	26
CRITERION 3: MAINTENANCE OF ECOSYSTEM HEALTH AND VITALITY	38
CRITERION 4: CONSERVATION AND MAINTENANCE OF SOIL AND WATER RESOURCES	45
CRITERION 5: MAINTENANCE OF FOREST CONTRIBUTION TO GLOBAL CARBON CYCLES	49
CRITERION 6: SOCIO-ECONOMIC BENEFITS	51
CRITERION 7: LEGAL, INSTITUTIONAL AND ECONOMIC FRAMEWORKS	63
<b>3</b>	<b>76</b>
<b>Compliance with the integrated forestry operations approvals</b>	<b>76</b>
INTRODUCTION	76
IFOA AMENDMENTS	76
THREATENED SPECIES AND ENVIRONMENT PROTECTION LICENCES	77
FISHERIES THREATENED SPECIES LICENCE	79
NON-LICENCE TERMS	80
FORESTS NSW INTERNAL COMPLIANCE PROGRAM	81
<b>Further reading</b>	<b>83</b>
<b>Appendix 1.1</b>	<b>85</b>

## List of figures

Figure 2-1-A: Growth stage extent in State forests – all regions – 2004/2005	18
Figure 2-1-B: Forests NSW threatened species survey results – all regions	24
Figure 2-2-A: Committed sawlog volumes harvested – all regions	29
Figure 2-2-B: Committed volumes harvested – pulp grade sawlogs – Eden region only	30
Figure 2-2-C: Area of hardwood and softwood plantations established by Forests NSW	35
Figure 2-2-D: Effective stocking rates for softwood plantations – Forests NSW	36
Figure 2-2-E: Effective regeneration rates on State forests	37
Figure 2-3-A: Percentage of new Forests NSW hardwood plantations affected by selected agents	41
Figure 2-3-B: Percentage of new Forests NSW softwood plantations affected by selected agents	41
Figure 2-3-C: Area burnt by bushfire – DEC estate and State forests – all regions	43
Figure 2-5-A: Sequestered carbon in Forests NSW hardwood and softwood plantations – all regions	50
Figure 2-6-A: Permits issued for recreation/educational activities in State forests– all regions	55
Figure 2-6-B: Total PWD (direct) and Forests NSW (direct and indirect) regional employment	56
Figure 3-1-A: Non-compliance incidents recorded through Forests NSW internal monitoring – all regions	82

## List of tables

Table 1-1-A Volumes of timber products other than quota sawlogs from State forests 2004/2005 – UNE and LNE regions	4
Table 1-1-B Volumes of timber products other than quota sawlogs from State forests 2004/2005 – Eden and Southern regions	5
Table 2-1-A Change in area (ha) of growth stage categories within the DEC estate – UNE and LNE regions	15
Table 2-1-B Change in area (ha) of old growth stage categories within the DEC estate – UNE and LNE regions	16
Table 2-1-C Change in area (ha) of growth stage categories within the DEC estate – Eden region	16
Table 2-1-D Change in area (ha) of old growth stage categories within the DEC estate – Eden region	16
Table 2-1-E Change in area (ha) of growth stage categories within the DEC estate – Southern region	17
Table 2-1-F Change in area (ha) of old growth stage categories within the DEC estate – Southern region	17
Table 2-1-G The status of forest dwelling species – all regions	21
Table 2-1-H Management and condition of threatened taxa within parks (number) – all regions	26
Table 2-2-A Non-timber products obtained from State forests – all regions – 2004/2005	33
Table 2-2-B Non-forest products obtained from DEC estate – Southern and Eden regions	34
Table 2-3-A Forests NSW control efforts for noxious/environmental weed species 2004/2005	39
Table 2-3-B Forests NSW control efforts for feral animal species 2004/2005	40
Table 2-4-A Length of road by classification on State forests	46
Table 2-4-B Area of Forests NSW native forest assessed for soil erosion hazard 2004/2005	47
Table 2-5-A Assumptions for the carbon sequestration on Forests NSW's planted forest estate	49
Table 2-6-A Data sources for reporting number of visits to parks for each region (number of parks) – all regions	52
Table 2-6-B Availability and appropriateness of visitor facilities within parks for each region (number of parks)	54
Table 2-6-C Recreation/tourism facilities in State forests – all regions	54
Table 2-6-D Condition of Aboriginal places and sites within parks for each region (number of parks)	60
Table 2-6-E Condition of non-indigenous (historic) features within parks (number of parks) – all regions	62
Table 2-7-A Levels of community (non-indigenous) consultation and input into decision making for parks (number of parks) – all regions	66
Table 2-7-B Levels of Aboriginal community consultation and input into decision making for parks (number of parks) – all regions	67
Table 2-7-C Levels of awareness and or education programs that exist and the level to which this meets the needs of park management and visitor expectations for parks (number of parks) – all regions	69
Table 2-7-D Levels of management and impacts of illegal activities within parks (number of parks) – all regions	73

# Acronyms and abbreviations

BMAD	Bell Miner Associated Dieback
CA	Conservation Agreement (as per the <i>National Parks and Wildlife Act 1974</i> )
CRA/RFA	Comprehensive Regional Assessment /Regional Forest Assessment
CRAFTI	Comprehensive Regional Assessment Aerial Photo Interpretation
CSIRO	Commonwealth Scientific and Industrial, Research Organisation
DEC	Department of Environment and Conservation
DNR	Department of Natural Resources
EFT	equivalent full-time
EPA	Environment Protection Authority (part of the Department of Environment and Conservation)
ESFM	Ecologically sustainable forest management
FRAMES	Forest Agreement Forest Resource and Management Evaluation System
FRIP	Forestry and Rural Industry Policy
GIS	geographic information system
HVOG	high conservation value old growth
IFOA	Integrated Forestry Operations Approval
LNE	Lower North East
MIG	Montreal Process Implementation Group
PWD	Parks and Wildlife Division (part of the Department of Environment and Conservation)
RFA	Regional Forest Agreement
RLPB	Rural Lands Protection Board
PWD	Parks and Wildlife Division of the Department and Environment and Conservation
UNE	Upper North East
VDS	Visitor Data System (DEC)
<i>Wildlife Atlas</i>	Atlas of NSW Wildlife

# 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 – [www.ornl.gov](http://www.ornl.gov)).

**Comprehensive Regional Assessment (CRA)/Regional Forest Assessment (RFA)** – assessments by the NSW Government and Australian Government agencies and community stakeholders that 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). 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*. Status of reserves requires action by Parliament in accordance with legislation for reservation or revocation.

**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 maintain the vitality of the system.

**ecosystem vitality** – the ability of an ecosystem to perpetuate itself.

**filter strip** – a strip of vegetation or groundcover along each side of a watercourse/drainage line retained for the purposes of retarding/reducing lateral flow of run off and sediment movement into the watercourse/drainage line and reduce the risk of channel and stream bank erosion.

**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 Zone (FMZ)** – 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 Resource and Management Evaluation System (FRAMES)** – Forests NSW’s statewide forest resource inventory, growth modelling, simulation and harvest scheduling system for New South Wales public native forest resource.

**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).

**gazettal** – the publication of a notice in the *NSW Government Gazette*.

**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 report** – the report by the Joint Australian and New Zealand Environment and Conservation Council (ANZECC)/Ministerial Council on Forestry, Fisheries and Aquaculture (MCFFA) National Forests Policy Statement Implementation Sub-committee, titled *Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia* (Commonwealth, 1997).

**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 that 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*.

**sustainable yield** – the long-term estimated wood yield from forests that can be maintained from a given region in perpetuity under a given management strategy and suite of sustainable use objectives.

**taxa** – categories in the biological classification system for all living organisms. Taxa (singular: taxon) are used to organise information about the natural world.

**threatened species** – any species of plant or animal listed under Schedule 1 Part 1 (endangered species), Schedule 1 Part 4 (presumed extinct) and Schedule 2 (vulnerable species) of the *Threatened Species Conservation Act 1995* or Part 7A of the *Fisheries Management Act 1994*

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

This is the sixth annual report on the implementation of the NSW forest agreements and integrated forestry operations approvals (IFOAs). It provides details on the progress of the forest agreements and IFOAs applying to the Upper North East (UNE), Lower North East (LNE), Eden and Southern regions. This report is a requirement under section 21 of the *Forestry and National Park Estate Act 1998*.

Ecologically sustainable forest management (ESFM) is a key objective of the NSW Government's forest policy. The NSW forest agreements and IFOAs provide a strategic and operational framework for achieving this objective. Progress towards ESFM is partially achieved by regular reporting on the:

- achievement of milestones as defined in the NSW forest agreements;
- results of monitoring of the ESFM criteria and indicators; and
- compliance of harvesting activities on State forests and other Crown timber lands with the IFOAs.

The ongoing implementation of the agreements and approvals is a cooperative undertaking between the Forestry and Rural Industry Policy within the Department of Infrastructure, Planning and Natural Resources (DIPNR), Department of Environment and Conservation (DEC), and the Department of Primary Industries (DPI) Fisheries and Forest NSW sections<sup>2</sup>. Together these agencies manage New South Wales public forests in the UNE, LNE, Eden and Southern regions. Their collective work in 2004/2005 produced significant advances in the management of New South Wales public forests.

### Structural changes

Over the past two years there have been significant restructures within the NSW Government. This has meant previous references to government agencies have now changed.

In September 2003, the Department of Environment and Conservation (DEC) was formed through the amalgamation of the Environment Protection Authority, National Parks and Wildlife Service (NPWS), Botanic Gardens Trust and Resource NSW. The former NPWS, now part of DEC, is referred to as the Parks and Wildlife Division (PWD) of DEC. Throughout this report key responsibilities of the former NPWS are now referred to as 'PWD'. Where the responsibility falls under another part of DEC, it is referred to as such.

In previous reports, lands managed by the former NPWS were referred to as the 'NPWS estate'. For consistency these lands are now referred to as 'DEC estate'.

The Department of Infrastructure, Planning and Natural Resources was formed in July 2003. It brought together the former Department of Planning (Planning NSW) and the Department of Land and Water Conservation (DLWC). The Resource and Conservation Division previously housed within Planning NSW subsequently became part of DIPNR. However, it too underwent a couple of name changes. As of March 2005 it became known as Forestry and Rural Industry Policy (FRIP).

<sup>2</sup> References to agencies are as they were known at 30 June 2005.



The Department of Primary Industries (DPI) was formed in July 2004. It involved the joining of State Forests of New South Wales (SFNSW), NSW Fisheries, Department of Agriculture and Department of Mineral Resources. Previous references to SFNSW are now presented as Forests NSW. References to the former NSW Fisheries are now DPI Fisheries.

## **Report structure**

Progress on the implementation of the NSW forest agreements and IFOAs is presented in three parts:

Chapter 1 provides some discussion on the progress of milestones defined in any agreement, as well as broader discussion on other government initiatives and activities that are contributing to the sustainable management of New South Wales forests. Specific details on the progress of individual milestones, as defined in the agreements, are provided in appendix 1.

Chapter 2 is a summary of the results of monitoring of the ESFM criteria and indicators. It presents the results of monitoring, key outcomes and any identifiable trends. Note that trends presented are generally only indicative at this stage and in many cases require more detailed and technical interpretation.

Chapter 3 provides details on compliance by Forests NSW with the terms and conditions of the IFOAs for each region. Under the IFOAs, regulatory agencies report results of auditing of terms of licences and Forests NSW reports the results of its internal compliance monitoring and meeting non-licence requirements.

## **Closing**

This report is the result of input from all agencies involved in the implementation of the agreements and approvals. The spirit of the agreements and approvals is one of cooperation in order to monitor the progress towards the achievement of ESFM. As previously stated in past years, it is still difficult to accurately determine how well the agreements and approvals are helping to achieve ESFM. However, it can be said that they have established a clear framework and provided for an interactive and collaborative approach to tackling the range of issues in forest management.

# 1 Milestones and highlights

This chapter outlines some of the significant achievements that occurred during 2004/2005. The information presented below includes specific milestones required by the agreements, as well as other activities that are part of broader government initiatives also assisting in the sustainable management of forests in New South Wales. Details on the progress of individual milestones, as listed in the agreements, are provided in Appendix 1.1.

## Public education and awareness

Forests NSW has developed and delivered formal education programs about forestry and forest management for more than a decade.

With the support of the National Association of Forest Industries, Forests NSW was host to the 2005 annual national forest educators' conference, which focused on a national approach to forest education. During the conference, forestry educators from all over Australia finalised a plan for the future development of education programs for teachers and students and identified collaborative project opportunities between industry and government.

A formal network of forest education representatives is now working on resource writing projects and a national web portal for schools. The portal will paint the 'big picture' of forests and forestry in Australia and centralise existing state-based information and resources. The network will continue to meet annually.

The PWD's public education program, *Discovery*, is now in its 13th year and provides a range of education activities to the community, linking natural and cultural heritage and improving understanding and awareness.

Almost 2 640 activities took place during the year, attracting a record 115 978 participants across the State. Further information on PWD's *Discovery* program is provided in chapter 2 under Criterion 7.

## Non-quota timber volumes

It is a requirement of the forest agreements that details on the production of products other than quota sawlogs be reported annually. In 2004/2005, 416 934m<sup>3</sup> of non-quota sawlogs were harvested from Forests NSW native forests and hardwood plantations. Total volumes harvested increased by about 2% since 2003/2004. A further 1 282 163m<sup>3</sup> of non-quota sawlogs (including veneer and High Quality Large sawlogs) were harvested from Forests NSW softwood plantation. These volumes have fallen by about 2% since 2003/2004.

Non-quota pulp grade timber harvested from Forests NSW native forest and hardwood plantations in the UNE and LNE regions and native forest in the Southern region totalled 184 382 tonnes in 2004/2005. Volumes fell by about 12% since 2003/2004.

Actual volumes of non-quota timber harvested in 2004/2005 are provided in tables 1-1-A and 1-1-B.

Note that hardwood pulp grade timbers for Eden region are not included here as they form part of the quota volumes designated in the IFOA. These volumes are reported under Criterion 2 in chapter 2 of this report.

Softwood non-quota pulp grade timbers harvested from Forests NSW plantations in 2004/2005 totalled 108 263 tonnes. These timbers were solely obtained from the UNE and Eden regions. No softwood pulp grade timbers were harvested from softwood plantations in the LNE and Eden regions during 2004/2005.

*Table 1-1-A: Volumes of timber products other than quota sawlogs from State forests 2004/2005 – UNE and LNE regions*

Log type	Unit	UNE region			LNE region		
		Native forest	Hardwood plantation	Softwood plantation	Native forest	Hardwood plantation	Softwood plantation
Veneer*	m <sup>3</sup>	n/a	n/a	68 545	n/a	n/a	2 705
High quality large*	m <sup>3</sup>	n/a	n/a	58 365	n/a	n/a	345
High quality small	m <sup>3</sup>	28 765	959	incl above	23 101	1 716	0
Low quality	m <sup>3</sup>	66 399	19 961	35 128	102 808	44 691	5 740
Poles/piles and girders	m <sup>3</sup>	8 774	3 709	0	13 321	5 047	0
Preservation logs	m <sup>3</sup>	0	0	0	0	0	0
Mining timber (round)	m <sup>3</sup>	0	0	0	0	0	0
Fencing/landscape/sleepers (sawn)	m <sup>3</sup>	0	0	0	988	0	0
<b>Total</b>	<b>m<sup>3</sup></b>	<b>103 938</b>	<b>24 629</b>	<b>162 038</b>	<b>140 218</b>	<b>51 454</b>	<b>8 790</b>
<b>Pulp grade</b>	<b>tonnes</b>	<b>7 431</b>	<b>4 217</b>	<b>6 953</b>	<b>82 805</b>	<b>25 880</b>	<b>0</b>

\* Veneer and high quality large sawlogs harvested from Forests NSW native forests and hardwood plantations comprise quota log volumes. Quota sawlog volumes are reported under Criterion 2 in chapter 2.

Source: Forests NSW data

Table 1-1-B: Volumes of timber products other than quota sawlogs from State forests 2004/2005 – Eden and Southern regions

Log type	unit	Eden region			Southern region		
		native forest	hardwood plantation	softwood plantation	native forest	hardwood plantation	softwood plantation
Veneer*	m <sup>3</sup>	n/a	n/a	0	n/a	n/a	254
High quality large*	m <sup>3</sup>	n/a	n/a	143 474	n/a	n/a	887 699
High quality small	m <sup>3</sup>	1 232	0	0	7 258	0	0
Low quality	m <sup>3</sup>	12 007	0	38 078	56 045	0	7 038
Poles/piles and girders	m <sup>3</sup>	0	0	0	180	0	0
Preservation logs	m <sup>3</sup>	0	0	27 163	0	0	7 629
Mining timber (round)	m <sup>3</sup>	0	0	0	0	0	0
Fencing/landscape/sleepers (sawn)	m <sup>3</sup>	280	0	0	19 693	0	0
<b>Total</b>	<b>m<sup>3</sup></b>	<b>13 519</b>	<b>0</b>	<b>208 715</b>	<b>83 176</b>	<b>0</b>	<b>902 620</b>
<b>Pulp grade**</b>	<b>tonnes</b>	<b>n/a</b>	<b>n/a</b>	<b>101 310</b>	<b>64 049</b>	<b>0</b>	<b>0</b>

\* Veneer and high quality large sawlogs harvested from Forests NSW native forests and hardwood plantations comprise quota log volumes. Quota sawlog volumes are reported under Criterion 2, in chapter 2.

\*\* Pulp grade timber volumes harvested from Forests NSW native forest in the Eden region comprise part of quota log volumes. Quota log volumes are reported under Criterion 2 in chapter 2.

Source: Forests NSW data

## Biodiversity: ecological effort and results

Over the past 15 years, Forests NSW has trained staff and recruited experts to develop accurate and efficient surveys for, and management of, biodiversity. A survey is required and any prescriptions have to be applied before harvesting can begin, in accordance with Threatened Species Licences, enforced by DEC.

To comply with best practice, Forests NSW also initiates monitoring and research to improve its capabilities. During 2004/2005, more than 1 500 wildlife surveys were carried out in State forests to comply with regulations, and a similar number in the course of research, monitoring, paid work for clients and for public interest.

Threatened species, such as the glossy-black cockatoo (*Calyptorhynchus lathami*), sphagnum frog (*Phyllorhina sphagnicola*), Dorrigo daisy bush (*Olearia flocktoniae*), and yellow-bellied glider (*Petaurus australis*), were recorded and there is an increased understanding of habitat preferences. For example, better habitat knowledge means some formerly hard-to-locate species, like the stuttering frog (*Mixophyes balbus*), are now found more readily.

## South Coast timber industry reform

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In June 2005, Alan Taylor and Co Pty Ltd, part of the Boral Timber Division, acquired the timber allocation and the sawmills formerly operated by Davis and Herbert Pty Ltd, previously Forests NSW's largest customer on the south coast.

The wood supply agreement for this region was not affected by the change of ownership and includes over 37 700m<sup>3</sup> high quality large sawlogs, 4 000m<sup>3</sup> high quality small sawlogs and 30 000m<sup>3</sup> of salvage logs. Boral is employing harvesting and haulage contractors that previously worked for Davis and Herbert, and, in addition, Forests NSW has temporarily transferred three log merchandising crews from the Tumbarumba area to supply timber to the Boral mills. It is anticipated that these changes will provide long-term security for the industry in this part of NSW.

## A world first in carbon trading

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In early 2005, the NSW Greenhouse Abatement Scheme accredited Forests NSW to become the first body in the world to trade carbon credits arising from forests in a registered greenhouse gas abatement scheme. Forests NSW registered 166 005 certificates – each equivalent to one tonne of carbon dioxide. The certificates represented the carbon sequestered during 2004 from 10 000 hectares of planted hardwood forests. The first batch of Forests NSW carbon certificates, worth more than one million dollars, were bought by Energy Australia to help offset the greenhouse gases released into the atmosphere as a result of electricity use in NSW. The initial success of the NSW scheme confirms there is a market for tradeable carbon certificates and provides incentives for companies to invest in new plantations.

The ability to trade carbon credits in NSW may contribute to areas of plantation being established and managed over longer rotations for high quality sawlogs or established purely for environmental reasons with income from credits offsetting establishment costs. Either way, it is an improvement for the environment, for industry and for the community.

Forests play an important role in maintaining the functioning of the biosphere. Forests are dynamic and as they grow they absorb gas carbon dioxide (CO<sub>2</sub>). Through the process of photosynthesis, trees convert carbon dioxide to plant matter, such as leaves and wood. At the same time that this occurs, CO<sub>2</sub> is also being released into the atmosphere through respiration from plants, animals and from the decomposition of litter and soil organic matter. Vigorous growing forests absorb more CO<sub>2</sub> through photosynthesis than is released through respiration, so a growing forest is a sink for carbon. As trees mature and eventually die the plant matter decomposes and is returned to the atmosphere.

By managing forests for timber production, some of the carbon stored is released during timber harvesting but much of the carbon remains in storage in timber products, such as floorboards or framing. By ensuring adequate regeneration after harvesting, the carbon in these forests effectively remains in equilibrium: the CO<sub>2</sub> absorbed by growing trees balances the amount removed through harvesting.

The expansion of Forests NSW's plantation estate, which takes place largely on land previously managed for agriculture, is also creating long-term change in land use and a new store of carbon. It not only maintains equilibrium, but also takes extra carbon out of the atmosphere, thereby providing a positive contribution to the environment. This extra carbon can be used to create certificates under the NSW Greenhouse Gas Abatement Scheme.

In addition to developing a carbon accounting system that is sufficiently robust to gain accreditation under the NSW Greenhouse Abatement Scheme, Forests NSW has been heavily involved in developing state, national and international standards and guidelines to enable carbon accounting and trading.

## **EMS, ESFM and certification of Forests NSW**

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Forests NSW's Environmental Management System (EMS) is an essential part of achieving ESFM. The EMS is being developed for its Native and Planted Forests Operations Branches to enhance systematic and rigorous application of policies and procedures. Forests NSW is now ready for accreditation of its EMS under the International Organisation for Standardisation (ISO) 14001 Standard.

Regional ESFM plans are the blueprints for achieving the principles of ESFM. Each plan sets out the broad strategies, performance indicators and measurable outcomes for forest management in the region for the next five years. Community input into five regional native forest strategic plans was encouraged through public display of the revised plans in March 2005.

There has also been increasing customer interest in, and requests for, certification of Forests NSW forest management practices for labelling of forest products to a recognised international standard.

One option under consideration is the Australian Forestry Standard, which is a nationally endorsed Australian Standard. The Australian Forestry Standard was developed within the internationally recognised frameworks of the Montreal Process criteria and indicators<sup>3</sup> and the ISO 14000 series of international, voluntary environmental management standards. The Australian Forestry Standard also takes account of local operating conditions.

An effective EMS will provide a strong foundation for then seeking certification of forest management under internationally recognised standards. Forests NSW anticipate seeking certification during 2006.

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<sup>3</sup> Defined in *A Framework of Regional (Sub-National) Level Criteria and Indicators of Sustainable Forest Management in Australia* (Commonwealth, 1998).

## *State of the Parks*

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In June 2005, DEC released *State of the Parks 2004*, a public report based on a rigorous survey of all aspects of management of the New South Wales park system. The report is part of an ongoing program to better understand park values, and respond to the condition of, and pressures facing, the park system. The report has attracted international recognition through the Chair of the IUCN World Commission Protected Areas, who acknowledged the *State of the Parks 2004* report as setting a worldwide standard in the comprehensiveness of the issues examined and for the systematic analysis of the best available information.

Overall, the report demonstrates that DEC is doing a good job in managing NSW's large and diverse parks system. DEC will continue to put emphasis on the management of pest animals, weeds, fire, visitors and cultural heritage. The report is available on the DEC website at [www.dec.nsw.gov.au](http://www.dec.nsw.gov.au).

A park management framework is under development, which will help ensure continual improvement in DEC's management of the cultural and natural heritage of New South Wales.

Sources of information for the *State of the Parks* include staff experience, research, planning documents, specialist and stakeholder opinion and organisational databases. Collection of this information is a two-stage process involving park staff collecting and collating the data, with managers then cross-checking for accuracy and consistency.

Links have been identified between the ESFM criteria and indicators and *State of the Parks* data; these may be strengthened and clarified so that ESFM and *State of the Parks* information eventually aligns for the purposes of reporting for some indicators.

## **Forestry and Timber Industry Strategy**

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The NSW Forestry and Timber Industry Strategy is a joint Department of Primary Industries (DPI) and Department of Infrastructure, Planning and Natural Resources (DIPNR) project that follows on from the forest agreements and promotes further growth and adaptation in the industry.

The strategy will outline how the NSW Government intends to encourage and support an efficient and sustainable forestry industry that demonstrates world's best practice for industry and the environment. The strategy will suggest roles for Government, for industry, and other players.

Development began in June 2005 with stakeholder interviews. As at the end of June 2005, over 60 face-to-face meetings had either been held or had been scheduled.

## **Conservation Partners Program**

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The Conservation Partners Program delivers formal protection for high conservation value natural and cultural heritage on private and other public lands through commitments under conservation agreements or wildlife refuges. The program also coordinates landholder involvement in conservation through non-statutory property registration schemes, which includes Land for Wildlife.

In 2004/2005 twenty-three conservation agreements were signed (covering 1657 hectares), twenty-one wildlife refuges were gazetted (covering 1084 hectares) and fifty-one land holders registered their properties for Land for Wildlife (covering 2696 hectares). These additions mean that an additional 5437 hectares have been formally protected under this program.

## **Discovery Program**

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During 2004/2005, Participation in *Discovery* program activities exceeded 100 000 for the first time since the program began in 1993. Also during 2004/2005 the program trained 104 trainers from local Aboriginal communities across 7 PWD management regions as Discovery Tour Guides.



## 2 Monitoring ecologically sustainable forest management

### Introduction

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The NSW forest agreements and IFOAs set out the strategic and operational frameworks for the management of public forests in New South Wales. A key objective of the agreements and approvals is the achievement of ecologically sustainable forest management (ESFM). As a means to measure progress towards this objective, the ESFM criteria and indicators are applied to each region.

Monitoring and reporting of the ESFM indicators began in 1999/2000 for the UNE, LNE and Eden regions and in 2002/2003 for the Southern region following the implementation of the forest agreements for each region. 2004/2005 is the sixth year monitoring has been carried out for the indicators relevant to the UNE, LNE and Eden regions, and the third year for those applicable to the Southern region.

### Monitoring obligations

This chapter provides a summary of the results of monitoring for the ESFM criteria and indicators for the UNE, LNE, Eden and Southern regions during 2004/2005. It satisfies, in part, requirements under section 2.11.2 of the UNE, LNE and Southern regions forest agreements and section 2.10.2 of the forest agreement for the Eden Region, whereby 'reporting on indicators must contribute to the annual reports to Parliament by the Minister'.

The ESFM indicators are those described in table 1, attachment 9 of the UNE, LNE and Eden regions forest agreements and table 2, attachment 7 of the Southern Region forest agreement. These indicators are identical to the 'sustainability indicators' referred to in the NSW/Commonwealth North East, Eden and Southern regional forest agreements (RFA). This summary of monitoring also satisfies requirements under clause 49 of the North East RFA, clause 53 of the Southern RFA and clause 47 of the Eden RFA where by the sustainability indicators must be monitored and reported against each year.

### Using indicators to assess achievement of EFSM

The NSW Government's EFSM system translates the internationally accepted Montreal Process criteria for environmental protection of native forest ecosystems into day-to-day forest management. It is recognised as international best practice.

The ESFM criteria and indicators allow sustainability to be defined and measured. The system contains information about long-term management objectives for conservation, recreation and timber production in NSW. This report sets out achievements against those objectives.

The ESFM criteria and indicators do not provide reasons for change, rather they enable uniform collection of data over time. The data are then interpreted to find out whether management practices are effective in providing for sustainable forest management.

The ESFM indicators have been largely based on the Montreal Implementation Group (MIG) set of sub-national indicators<sup>4 5</sup>. These sub-national indicators were developed at a national scale as a result of the Montreal Process. These sub-national indicators are reported as part of the Australian Government's *State of the Forests* reporting every five years.

A national review of the MIG indicators began towards the end of the reporting period. As the review had only just begun at 30 June 2005, no outcomes were available to report. Any outcomes of the national MIG review are to be considered in the future review of the ESFM criteria and indicators to maintain a link and level of consistency between the two monitoring streams.

Monitoring the indicators is an ongoing and evolving process. Agencies are continuing to develop and align reporting and are key participants in the MIG review. Given the continuation of other reporting streams at corporate and national levels, there is a need to align all monitoring and reporting to make best use of resources and improve the accuracy and usefulness of information provided. A more comprehensive review of ESFM indicators will occur as part of the first five-year review of the NSW forest agreements, IFOAs and RFA on a whole-of-government basis. The review had not begun when this report was being prepared.

## Data sources

Monitoring the ESFM criteria and indicators is chiefly carried out by the two main agencies responsible for the management of forest areas in New South Wales: DEC and Forests NSW.

Data provided by DEC have been drawn from whole of department data as well as specific reports from the part of the organisation that manages the park system. The data from Forests NSW (operating within the NSW Department of Primary Industries) have been obtained through its Social, Environmental and Economic Database (SEEDS).

## Changes in data

There have been some changes in the type of data provided in 2004/2005, mainly that provided by DEC. Over the past 12 months, DEC has conducted its own internal review of the ESFM indicators. Changes in data provision have not been to decrease the amount of data, but to improve the longer-term monitoring of indicators. In some cases this has meant that data have become more specific to the requirements of the indicator, for example the condition of indigenous and non-indigenous heritage sites.

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<sup>4</sup> Defined in *A Framework of Regional (Sub-national) Level Criteria and Indicators of Sustainable Forest Management in Australia* (Commonwealth, 1998).

<sup>5</sup> MIG – indicators beginning with the prefix 'MIG' are based on the MIG set of regional (sub-national) indicators.

A more comprehensive review of ESFM indicators is to be undertaken as part of the first five year review of the NSW forest agreements, IFOAs and RFA. This review will be undertaken on a whole of government basis.

The review had not commenced at time of this report being prepared.

## Closing

The monitoring of the indicators is an ongoing process and an evolving one. With a whole-of-government review of the indicators likely to commence in the near future, and the continuation of other reporting streams both at corporate and national levels, there is a strong need to align all monitoring and reporting to make best use of resources and improve the accuracy and usefulness of information provided.

As described above, agencies are continuing to develop and align reporting and are key participants in the MIG review, which commenced towards the end of the reporting period.

## Criterion 1: Biodiversity

MIG Indicator 1.1.a:	Extent of area by forest type and tenure (UNE, LNE, Southern regions)
Indicator 1.1:	Extent of forest ecosystem types and vegetation types by growth stage (Eden region)
Sub-indicator 1.1.a.1:	Understorey vegetation layer (Southern region)

***The DEC estate continued to record improvements in the extent of a range of forest ecosystem types across all regions.***

### Trend



### Data and Interpretation

#### *Change within the DEC estate*

Changes in the extent of forest ecosystem types are measured against modelled forest type extents listed in the RFAs<sup>6</sup>. New gazettals<sup>7</sup> were responsible for increases in the area of forest ecosystems in all regions during 2004/2005.

In the UNE region there was an increase in the extent of 79 of the 163 forest ecosystems in seven parks by a total area of 11 891 hectares.

<sup>6</sup> Modelled pre-1750 extent of forest types are contained in tables 1A and 1B, attachment 1 of the North East RFA, table 1, attachment 1 of the Eden RFA, and table 1, attachment 1 of the Southern RFA.

<sup>7</sup> A formal process by which land becomes part of the NSW parks system, whereby notices are published in the *NSW Government Gazette*.

Increases were also recorded in the extent of protected threatened ecosystems. This included an increase of 341 hectares in rainforest, which is considered an endangered ecosystem. Other endangered and rare ecosystems also recorded increases in the area protected, including 511 hectares of Dorrigo White Gum, 460 hectares of Paperbark, 1 171 hectares of Steel Box/Craven Gray Box, 31 hectares of Swamp Mahogany and 122 hectares of Wet Bangalow Brush-box.

A major addition of 4 300 hectares was added to the Yuraygir National Park, improving the protection of biodiversity and management status. This major addition protects large areas of rare and vulnerable heath and paperbark communities and contributed significantly to the achievement (in part) of the reservation targets for these forest ecosystems.

In the LNE region there was an increase in the extent of 65 of the 200 forest ecosystems in eight parks by a total area of 16 044 hectares. This included a 2 526 hectares increase in the extent of Dry Grassy Stringybark, 1 054 hectares in Dry Redgum-Bloodwood-Apple and 408 hectares of Gorge Grey Box forest.

The area of threatened ecosystems also increased with the addition of significant areas of vulnerable forest ecosystems. These included 451 hectares of Dry Open New England Blackbutt, 453 hectares of Escarpment Scribbly Gum and 998 hectares of New England Stringybark-Blakely's Red Gum. Additions of rare forest ecosystems in the LNE region included 124 hectares of Peppermint, 63 hectares of heath and 47 hectares of River Oak.

There was a slight increase in the extent of forest ecosystems in the Eden region, 10 of the identified 72 ecosystems increased by 53 hectares. Additions included Hinterland Wet Fern forest (5 ha) and Lowland Gully Shrub forest (12 ha).

In the Southern region, there was an increase in extent of 39 of the 144 forest ecosystems, therefore increasing the percentage of target achieved in the reservation of these forest ecosystems. Within the Southern region there have been additions to the conservation reserve system totalling just over 4 842 hectares. Additions included those to Deua Naitonal Park (270 ha), Ellerslie Nature Reserve (601 ha) and Morton State Conservation Area (1 029 ha).

Changes to forest type/structure/growth stage resulting from fire were not recorded for the UNE, LNE and Southern Regions.

For all regions the original tenure data for the DEC estate were derived from the final and agreed planning unit layer, used during forest agreement negotiations. In subsequent years the most recent tenure layer has been used to calculate the extent and growth stage of the forest ecosystems for any new areas that have been gazetted, as it is regarded to be the most accurate. This may lead to inaccuracies in interpretation as the new and old data sets may not align precisely.

For example, the most recent tenure layer for the Southern region has been used to calculate the extent of the forest ecosystems for areas gazetted after July 2004. The calculations require manipulation of original data layers and conversion to differing formats. This results in the loss of some data and an error estimate of about 1%.

The conservation targets used for the regions were calculated from the pre-1750 and current extant vegetation and growth stage maps provided for the regions. If the relative areas of pre-1750 and extant

forest ecosystems change as a result of data validation, then re-applying the formula used to calculate the original targets will create a new target percentage.

An issue with reporting against this set of indicators is that the data are based on the original CRA layers of forest type/growth stage, and it is unlikely these layers will be updated consistently across the park system. Therefore over time the accuracy of the information that is reported is likely to decrease. For example, if there have been major fire events that have changed the growth stage categories this will not be identified as no new growth stage mapping will be done.

#### *Change within State forests*

Information on the extent of forest ecosystem types in State forests has been obtained from Forests NSW's forest management zoning (FMZ) system<sup>8</sup>.

Over the past few years there have been numerous land transfers between State forests and the DEC estate, which has in effect decreased the size of the estate. These changes to the total size of the estate have correspondingly changed the extent of forest types. Although Forests NSW has not provided any specific data on changes to forest type extent within its estate due to these transfers or other actions, such as the further assessment of unclassified lands within its FMZ system, some changes can be noted.

The most significant changes for State forests in the north-east regions occurred over the previous two reporting periods following the enactment of the *National Park Estate (Reservations) Act 2002* and *2003*. These changes were reported in 2002/2003 and 2003/2004. There has been little notable change over the past twelve months, with land transfers resulting from the above acts largely complete.

## **Growth stage**

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

***Additions to the DEC estate resulted in increases to the extent of most growth stage categories. Extent of growth stage categories within State forests remained relatively stable.***

### **Trend**



<sup>8</sup> Adopted in 1999, to provide a standardised measure of classifying areas of State forest as available for harvest and those to be managed for conservation purposes.

## Data and interpretation

### *Change within the DEC estate*

Changes to the areas of the forest growth stage categories are calculated by adding the area (hectares (ha)) of forest ecosystems in newly gazetted areas to the baseline area of land already reserved within the regions, as calculated during the Comprehensive Regional Assessment/Regional Forest Assessments (CRA/RFAs). Baseline data are those described in attachment 1 of each RFA (see previous indicator).

Significant increases were recorded in most growth stage categories within the DEC estate in the UNE and LNE regions mainly due to new gazettals.

For the UNE region, the largest increase by growth stage was for candidate old growth forest. Of the 79 forest ecosystem types, 66 recorded an increase in candidate old growth, totalling 7 970 hectares. Increases in the area of disturbed old growth forest for 43 of the 79 forest ecosystems were also recorded, totalling 1 376 hectares. More than half (67%) of these additions are therefore classified as candidate old growth forest, containing significant areas of habitat for those species dependent on old growth elements (table 2-1-B).

For the LNE region, there were significant increases in the extent of candidate old growth forest in the DEC estate. Of the 65 forest ecosystems, 52 ecosystem types recorded an increase in candidate old growth forest totalling 13 840 hectares. Further substantial increases were recorded for disturbed old growth forest within the DEC estate, where 36 of the 65 forest ecosystems recorded increases in this growth stage category (522 ha). Therefore, 80% of the additions are classified as candidate old growth forest.

Figures for 'not growth staged' have increased due to acquisitions containing forest that does not require growth staging, such as mangrove, swamp, scrub, paperbark and swamp oak in the LNE and UNE regions.

Changes to forest type/structure/growth stage within the DEC estate as a result of fire were not recorded.

*Table 2-1-A Change in area (ha) of growth stage categories within the DEC estate – UNE and LNE regions*

Eucalypt forest growth stage	Total change since last reporting period (ha)	
	UNE region	LNE region
Rainforest	+347	+684
Mature forest	+169	+252
Disturbed mature forest	+96	+301
Young forest	+213	0
Recently disturbed forest	+16	0
Not growth staged	+1 704	+445
<b>Total</b>	<b>+2 545</b>	<b>+1 682</b>

Source: PWD

Table 2-1-B Change in area (ha) of old growth stage categories within the DEC estate – UNE and LNE regions

Eucalypt forest growth stage	Total change since last reporting period (ha)	
	UNE region	LNE region
High conservation value old growth	0	0
Candidate old growth	+7 970	+13 840
Disturbed old growth forest	+1 376	+522
<b>Total</b>	<b>+ 9 346</b>	<b>+14 362</b>

Source: PWD

For the Eden region, changes to the extent of growth stages were less extensive. Change recorded across ten forest ecosystems within the region since 2003/2004 totalled 53 hectares (tables 2-1-C and 2-1-D).

Fires were not sufficiently intense to affect forest growth stage, nor is the drought likely to have changed forest growth stage classes. The continuing validation program will produce new mapping and changes in the area and growth stage of vegetation assemblages.

Table 2-1-C Change in area (ha) of growth stage categories within the DEC estate – Eden region

Eucalypt forest growth stage	Total change since last reporting period (ha)
Rainforest	0
Mature eucalypt forest	+18
Disturbed mature eucalypt forest	0
Young eucalypt forest	+1
Recently logged eucalypt forest	0
Other eucalyptus growth stage	+27
<b>Total</b>	<b>+46</b>

Source: PWD

Table 2-1-D Change in area (ha) of old growth stage categories within the DEC estate – Eden region

Eucalypt forest old growth stage	Total change since last reporting period (ha)
Old growth eucalypt forest	+7
Disturbed old growth eucalypt forest	0
<b>Total</b>	<b>+7</b>

Source: PWD

For the Southern region, the percentage of candidate old growth increased in 27 of the 144 identified forest ecosystem types. There were just over 4 842 hectares added to the conservation reserve system, resulting in increases to most growth stage categories. A significant portion of additions were classified as candidate old growth forest (1 469 ha) and disturbed old forest (431 ha) (table 2-1-F).

Changes to forest type/structure/growth stage resulting from fire were not recorded.

Table 2-1-E Change in area (ha) of growth stage categories within the DEC estate – Southern region

Eucalypt forest growth stage	Total change since last reporting period (ha)
Rainforest	+29
Mature forest	+342
Disturbed mature forest	+746
Recently disturbed forest	+137
Young forest	+141
Unknown successional stage	0
<b>Total</b>	<b>+1 395</b>

Source: PWD

Table 2-1-F Change in area (ha) of old growth stage categories within the DEC estate – Southern region

Eucalypt forest growth stage	Total change since last reporting period (ha)
Candidate old growth forest	+1 469
No old growth category	+583
Disturbed old growth forest	+431
<b>Total</b>	<b>+2 483</b>

Source: PWD

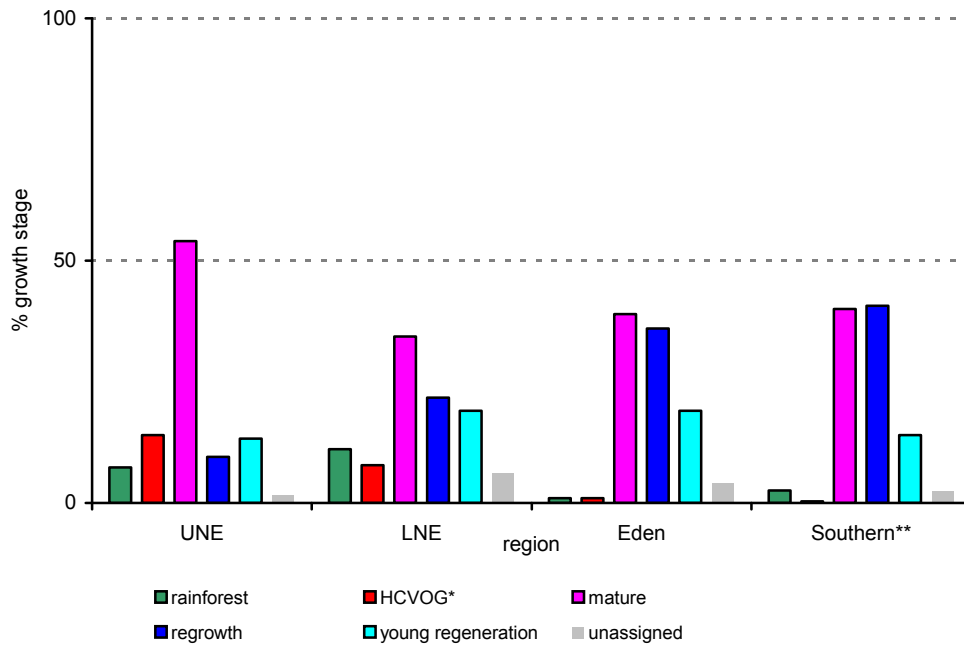
#### Change within State forests

The overall size of the State forest estate has decreased since 1999/2000 due to various land transfers, principally those facilitated by the *National Park Estate (Reservations) Act 2002* and *National Park Estate (Reservations) Act 2003*. Although this has reduced the size of the estate, mainly within the north east regions, the distribution of growth stages within it have remained relatively stable.

Between 2003/2004 and 2004/2005, only minor changes to growth stage extent within State forests in the UNE, LNE and Eden regions have been recorded. These small variations have been generally been those expected due to harvesting activities. Any change in growth stage extent in State forests in the Southern region cannot be measured at present as only data for the Tumut sub-region were available in previous years.

As previously reported, the largest growth stage extent is that for mature forest. Mature forest accounts for 34–54% of state forest in each region (figure 2-1-A).





\* high conservation value old growth

\*\* mature forest includes mature and candidate old growth; regrowth forest includes young forest; young regeneration includes recently disturbed forest; unassigned includes no growth stage assigned

Source: Forests NSW

Figure 2-1-A: Growth stage extent in State forests – all regions – 2004/2005

## Fragmentation

MIG Indicator 1.1.e	Fragmentation of forest types (UNE, LNE regions)
Indicator 1.1.e	Fragmentation of forest ecosystems (Southern region)
Indicator 1.2	Extent of connectivity in the forest landscape in relation to threatened species habitat, general retained habitat on public and private land, and conservation reserves (Eden region)

### **No outcomes to report**

#### **Trend**

No trend available.

#### **Data and interpretation**

No data have been provided for this reporting period. Fragmentation is not a feature of the landscape that Forests NSW and PWD captures. Previously, PWD provided data on the number and area of new conservation agreements (CAs) (termed Voluntary Conservation Agreements in previous annual reports) signed and the role of CAs in providing corridors between other habitat patches or extending the area of existing reserves. Data on CAs provided an indicative measure only of fragmentation.

Some information on CAs and wildlife refuges is provided by the PWD under Criterion 7.

## Forest dwelling species

MIG Indicator 1.2.a	A list of forest dwelling species (UNE, LNE, Southern regions)
Indicator 1.3.b (Category B)	List of representative species by extent and abundance. Representative sample to include threatened species, key functional groups and indicator species (Eden region)

### ***No outcomes to report.***

#### **Trend**

No trend available.

#### **Data and interpretation**

The PWD previously provided lists of forest dwelling species for species occurring within its estate for each region. These lists were derived primarily from the *Atlas of NSW Wildlife (Wildlife Atlas)*. In 2004/2005, these lists have not been updated or provided for ESFM reporting purposes. The PWD considers that the regional lists are unlikely to contain all forest dwelling species, as the primary data source, the *Wildlife Atlas*, relies on public and government researchers contributing their observations, and survey and research data. Increases are more likely to reflect scientific effort than species richness.

Significant increases in the number of forest dwelling species within a region for a given year are due to large data sets, such as research and surveys done by other NSW Government agencies. This sort of data can have records dating back many years, so reported increases might include species recorded before the reporting period. In addition, as very few invertebrate or fungi species records are sent to DEC, the *Wildlife Atlas* has limited information for these groups.

A weakness of the reporting methodology arises as a result of taxonomic changes during the reporting period being counted as additional species. There are also likely to be continuing inconsistencies due to the size and complexity of the data sets.

Forests NSW provide data to DEC for inclusion into the *Wildlife Atlas*. No data specific to this indicator in relation to State forests were available for this report.

## Threatened species, populations and ecological communities

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

***There was an increase in the number of forest dwelling species added to the schedules of the Threatened Species Conservation Act 1995. There was a decrease in the number of endangered populations and ecosystems listed in the schedules of the Threatened Species Conservation Act.***

### Trend



Number of forest dwelling species listed in the schedules of the *Threatened Species Conservation Act*



Number of forest dwelling endangered populations and ecosystems listed in the schedules of the *Threatened Species Conservation Act*

### Data and interpretation

In New South Wales, the *Threatened Species Conservation Act* is the main legislation that provides for the protection of endangered, vulnerable or extinct flora and fauna species, populations and ecosystems. Flora and fauna species may be listed for protection under Schedules 1 (endangered species, populations and ecological communities) and 2 (vulnerable species) of the Act. Determinations for listings are made by the NSW Scientific Committee<sup>9</sup>. Schedules of the *Threatened Species Conservation Act* apply across all tenures and are maintained by the NSW Scientific Committee.

Data provided for this indicator should be interpreted with care.

The status of forest dwelling species has declined because more species were listed as threatened on schedules under the *Threatened Species Conservation Act 1995*. However, this data reflect:

- increasing knowledge about species, populations and communities;
- taxonomic revision resulting in the splitting of previously identified species into a number of new species (sometimes with particular habitat requirements and/or limited ranges);
- improvements to the NSW Scientific Committee's processing of proposals for listing;
- changes to the *Threatened Species Conservation Act* about what can be listed; and
- increasing knowledge among the community about the listing process.

Consequently, increases do not necessarily show the true rate at which species are becoming threatened. While species, populations and communities are undoubtedly still at risk in New South Wales, the values presented in this indicator are more likely to reflect the management response to the

<sup>9</sup> An independent committee of scientists appointed by the Minister for the Environment.

issue than the true status of forest dwelling species. This measure does not distinguish those species for which threatened status is worsening or improving under current management practices.

This statewide data set includes data for the entire LNE region (parts of both PWD Northern and Central Branch management areas).

#### Forest dwelling species

The figures in table 2-1-G are based on the forest dwelling species list for 2003/2004, as no new forest dwelling species lists were generated for 2004/2005.

In 2004/2005, one reclassification relevant to the Eden, Southern and LNE regions was made: *Galium australe* (Tangled Bedstraw), previously listed as presumed extinct and now reclassified as an endangered species.

For the UNE region, one new listing and one removal for vascular plants was made in 2004/2005. The new listing is for *Boronia hapalophylla* under Schedule 1 and *Pultenaea stuartiana* has been removed from Schedule 2 due to a taxonomic revision.

There were two new listings and two reclassifications for vertebrate fauna during 2004/2005. The frogs, *Philoria richmondensis* and *Philoria pughii* were new listings and *Philoria kundagungan* and *Philoria loveridgei* were reclassified from Schedule 2 to Schedule 1.

Table 2-1-G: The status of forest dwelling species – all regions

Region	Schedule 1 endangered		Schedule 2 vulnerable	
	Listed before 04/05	Listed during 04/05	Listed before 04/05	Listed during 04/05
<b>UNE region</b>				
Vertebrate fauna	15	+4	92	-2
Invertebrate fauna	3	0	0	0
Vascular plants	82	+1	57	-1
<b>Total listed</b>	<b>100</b>	<b>5</b>	<b>149</b>	<b>-3</b>
<b>LNE region</b>				
Vertebrate fauna	13	0	78	0
Invertebrate fauna	1	0	0	0
Vascular plants	42	+1	70	0
<b>Total listed</b>	<b>56</b>	<b>+1</b>	<b>148</b>	<b>0</b>
<b>Eden region</b>				
Vertebrate fauna	12	0	39	0
Invertebrate fauna	1	0	0	0
Vascular plants	22	+1	16	0
<b>Total listed</b>	<b>35</b>	<b>+1</b>	<b>55</b>	<b>0</b>

Southern region				
Vertebrate fauna	20	0	57	0
Invertebrate fauna	0	0	0	0
Vascular plants	25	+1	28	0
<b>Total listed</b>	<b>45</b>	<b>+1</b>	<b>84</b>	<b>0</b>

Source: PWD

### *Endangered ecological communities*

There were 40 endangered ecological communities listed under Schedule 1 of the *Threatened Species Conservation Act* at the end of 2004/2005. Of these 11 were relevant to the UNE region, 26 relevant to the LNE region, eight relevant to the Eden region and 14 relevant to the Southern region. *Note that one endangered ecological community may be relevant to multiple regions.*

During 2004/2005 the number of endangered ecological communities listed under Schedule 1 of the *Threatened Species Conservation Act* increased by one. However, there were also various additions and removals made. During the year, five additional endangered ecological communities relevant to the forest agreement regions were listed under the Act: 'Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions'; 'Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions'; 'Subtropical Coastal Floodplain Forest of the NSW North Coast bioregion'; 'River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions'; and 'Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion'.

As a consequence of the new listings, 'River-flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner' and 'Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions', references to 'Sydney Coastal River-Flat Forest bioregions' and 'Sydney Coastal Estuary Swamp Forest in the Sydney Basin bioregion' were omitted from Part 3 of Schedule 1 of the Act.

One addition and three deletions of endangered ecological communities were added to the listings. This revision used a mapped layer of endangered ecological communities, which was based on the final determinations for each listed endangered ecological community. The final determinations were used to identify the bioregions and local government areas in which endangered ecological communities occur.

If the location of an endangered ecological community was identified only by its bioregion name and the bioregion's boundaries occurred within a forest agreement region, the community was included on the list although it may be outside forest agreement boundaries.

### *Endangered populations*

At 30 June 2005, there were eight endangered populations listed under Schedule 1 of the *Threatened Species Conservation Act* for all RFA regions. The number of endangered populations listed was reduced by one over the past 12 months with the removal of one endangered population of a forest dwelling species. The endangered population, '*Cryptandra longistaminea* F. Muell. in the vicinity of

Ellandgrove Road, South Grafton' (relevant to the UNE region) was removed from Schedule 1 because other populations were found.

This year's PWD data were sourced from the scientific determinations at [www.nationalparks.nsw.gov.au](http://www.nationalparks.nsw.gov.au). New listings were assessed for relevance to forests in the forest agreement regions.

#### *Threatened species surveys in State forests*

Trained Forests NSW staff survey flora and fauna during the planning phase of forestry operations, according to current licensing conditions under the *Threatened Species Conservation Act*<sup>10</sup>. These surveys occur in State forests to find out if threatened species are present, and if detected Forests NSW applies protective measures as per the IFOA.

These surveys mainly focus on locating threatened/endorsed species. However, as part of the survey process, FNSW ecologists and suitably trained staff record the majority of all fauna and flora species that they sight. Records of all the detected species are entered into the FNSW biodata system and SEEDS database. Survey techniques include: daytime transverses (searching for flora and diurnal fauna, or signs of fauna, such as dens and nests or distinctive scats or scratches); creek bed searches for amphibians; spotlighting for nocturnal mammals; harp trapping and sonar detection for small insectivorous bats; and cage and Elliott trapping for small- to medium-sized mammals.

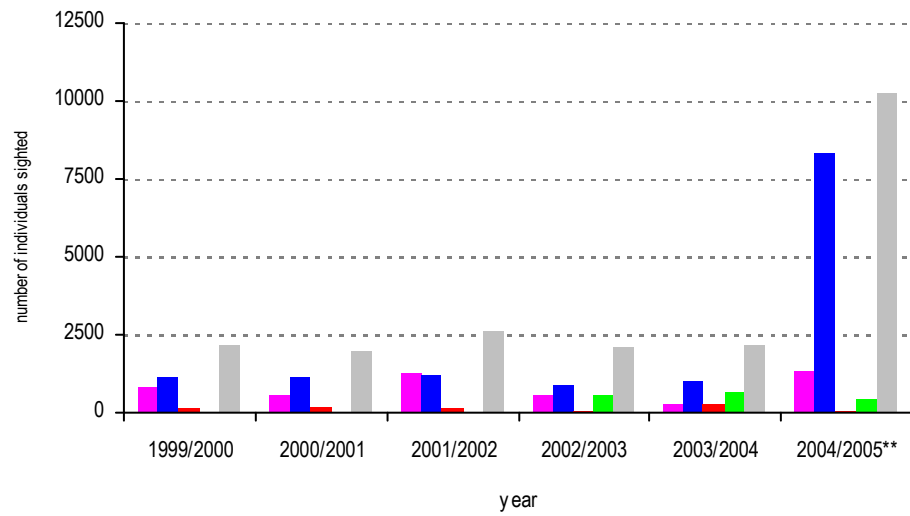
A list of sightings and recordings are routinely prepared for pre-harvest planning or pre-hazard reduction burning, and to assist Forests NSW measure the impact of its activities on threatened species. The number of threatened species determines the harvesting prescriptions, which in turn identify the area available for harvesting. Any recordings of threatened or endangered species will trigger measures that assist in the protection of essential habitat requirements and the maintenance of viable populations.

The number of threatened species sighted depends on how often surveys occur in areas scheduled for harvesting. Different forest types contain different species and habitat. The locality and seasonality of surveys and prevailing climatic conditions also have a bearing on the species, and numbers, sighted. Some annual variation is considered acceptable; however, any significant decline in the number of individuals sighted over time could act as an early warning and trigger a more thorough investigation. Records of threatened species are entered into FNSW databases and regularly supplied to DEC for inclusion in the *Wildlife Atlas*.

Forests NSW conducted pre-harvest surveys over an area of 84 285 hectares of State forest during 2004/2005. The surveys resulted in a total of 33 347 individual sightings of threatened flora and fauna species across all forest agreement areas (figure 2-1-B). The number of individuals recorded in 2004/2005 has increased significantly compared with previous years. This increase is mainly due to the recording of two threatened flora species *Macrozamia johnsonii* (11 768 individuals recorded in the UNE region) *Euphrasia ciliolata* (11 350 individuals recorded in the LNE region). In the LNE region there have also been significant recordings of *Angophora inopina* (2 078 individuals), *Tetratheca juncea* (3 145 individuals) and *Mixophyes balbus* (1 146 individuals).

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<sup>10</sup> Threatened Species Licence contained in the IFOA for each region.



■ UNE ■ LNE ■ Eden ■ Southern\* ■ total

\* Monitoring for the Southern region began in 2002/2003.

\*\* For clarity reasons this figure does not include records for *Macrozamia johnsonii* (11 768 individuals in UNE) or *Euphrasia ciliolata* (11 350 individuals in the LNE).

Source: Forests NSW data

Figure 2-1-B: Forests NSW threatened species survey results – all regions

## Species management measures

Indicator 1.3 (interim)

Management measures in place to maintain species extent and abundance (Eden region)

*This is an Eden region indicator. For consistency of reporting, all information related to management measures for all regions is presented here.*

### **No outcomes to report**

#### **Trend**

No trend available.

#### **Data and interpretation**

DEC has reported against this indicator annually since 2000/2001. However, information provided previously was for the number of individual recovery and threat abatement plans that were in preparation or completed. This data has been replaced with information from the *State of the Parks* survey for 2004/2005.

*State of the Parks* survey reports on the condition of threatened taxa (species, populations and communities). This data does not provide species extent and abundance as outlined in the indicator title. Instead, DEC considers 'condition' to encompass the ideas expressed by the current indicator and allow a broader evaluation that does not necessarily rely on quantitative data.

The two sets of data (table 2-1-E) separately assess whether there is a planned approach to the management of threatened taxa and whether the management of threatened taxa is successful.

Of the 287 parks that responded to the question, 49% had a planned approach to management targeting threatened taxa, while 51% managed threatened taxa in a reactive or incidental way. The Eden region had the highest proportion (67%) of parks that had a planned response to the management of threatened taxa.

The benefit of a combination of management approaches is that it allows targeting of resources; this is reflected in 91% of responding parks reporting that the condition of threatened taxa is stable, improving or secure. The LNE region had the lowest proportion of parks with a planned management approach (39%) and also had the lowest overall assessment of the condition of threatened taxa, with 90% of parks reporting their condition to be stable, improving or secure. This indicates that a strategic and planned approach is beneficial to the management of threatened taxa condition but that reactive approaches are also likely to be valuable in responding to unpredicted and new issues.

It should be noted that parks represent subsets of species distributions and although management of the species, population or community on-park may have local benefits, species may still be at threat due to broader environmental or land management impacts.



Table 2-1-H: Management and condition of threatened taxa within parks (number) – all regions

Assessment criteria	Region				
	UNE	LNE	Eden	Southern	Total
	n=152*	n=193*	n=19	n=127	n=491
Assessment criteria not relevant as threatened taxa are not an issue, or there is insufficient information to assess the impact of management on threatened taxa	57	93	7	47	204
Assessment criteria are relevant as threatened taxa are an issue, or there is sufficient information to assess the impact of management on threatened taxa	95	100	12	80	287
<b>Implementation</b>					
A planned approach to management is being implemented specifically targeting threatened taxa	57	39	8	37	141
There is little or no management or only reactive management specifically targeting threatened taxa occurs	38	61	4	43	146
<b>Effect of management</b>					
The condition of all or most threatened taxa is stable, improving or secure	87	90	12	76	265
The condition of all or most threatened taxa is declining	8	10	0	4	22

\* Cathedral Rock National Park in UNE and LNE regions not included in total number of parks for these regions as only partial data were provided.

Source: PWD

## Criterion 2: Maintenance of productive capacity of forest ecosystems

### 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, Southern regions)  
*Information provided for this indicator applies to State forests only. Figures reported do not include private forestry activities.*

**State forest native forest covered over 1.35 million hectares across the UNE, LNE, Eden and Southern regions. Over half of the total area was available for harvest.**

#### Trend

↔ State forests

n/a DEC estate

#### Yearly data/information discussion

##### Native forest

Forests NSW native forest covered about 1.35 million hectares across the UNE, LNE, Eden and Southern regions. About 62% (832 694 ha) was available for harvest and 38% (517 620 ha) protected

for conservation purposes<sup>11</sup>. The total area of native forest in the Southern region increased by 16% over the past 12 months. This increase is associated with a revision of the forest management zoning in the softwood plantation estate. Data provided for previous reports overlooked some areas of native forest within the softwood plantation estate (for example native vegetation filter strips or native vegetation along road sides).

Specifically, at 30 June 2005:

- Total Forests NSW native forest in the UNE region was 391 119 hectares. Fifty-one per cent (200 006 ha) was available for harvest and 49% (191 113 ha) reserved for conservation.
- Total Forests NSW native forest in the LNE region was 468 595 hectares. Sixty-one per cent (284 233 ha) was available for harvest and 39% (184 363 ha) reserved for conservation.
- Total Forests NSW native forest in the Eden region was 163 448 hectares. Seventy-one per cent (116 052 ha) was available for harvest and 29% (47 396 ha) reserved for conservation.
- Total Forests NSW native forest in the Southern region was 327 151 hectares. Seventy-one per cent (232 403 ha) was available for harvest and 29% (94 748 ha) reserved for conservation.

The area of State forest identified as available for harvest does not represent that actual area of native forest harvested within any given year. Harvestable areas are subject to the conditions of the IFOAs<sup>12</sup>, which protect various forest values, such as riparian zones, water quality and threatened species habitat. Lands excluded from harvest include those classified as: historic/Aboriginal sites; wildlife corridor; wetland; heath; rocky outcrop; rainforest; rare and non commercial forest types; high conservation old growth forest; filter strips; and protected land (including WPHC 4 and > 30 degrees). Accessibility issues, such as difficult terrain, may also further reduce the actual area harvested.

### *Plantations*

Forests NSW hardwood plantations (77 141 ha) occurs largely in the UNE and LNE and Southern regions. The total area of Forests NSW hardwood plantations has increased by about 44% between 1999/2000 and 2004/2005. This is attributable to increases in plantation area in the north-east regions, as only a small area of hardwood plantation occurs in the Southern region (40 ha). No hardwood plantations are situated in the Eden region.

Forests NSW softwood plantation covers about 185 241 hectares across the UNE, LNE, Eden and Southern regions. The area of Forests NSW softwood plantation in the UNE, LNE and Eden regions has decreased by about 6% since 1999/2000. Over the past 12 months, the area of softwood plantation has decreased across all regions.

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<sup>11</sup> Lands available for harvest and conservation classified by the FMZ system described in *Managing Our Forests Sustainably: Forest Management Zoning in NSW State Forests* (SFNSW, 1999).

<sup>12</sup> Made under Part 4 of the *Forestry and National Park Estate Act 1998*, which provides the framework for forestry operations in State forests and Crown timber land.

## 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, Southern regions)

No data available.

## Timber products compared to sustainable volume

MIG Indicator 2.1.d: Annual removal of wood products compared to sustainable volume (UNE, LNE, Southern regions)  
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)  
Indicator 6.1.a: Value and volume of wood and wood production (Southern region)  
*Harvested timber volumes reported for these indicators are those harvested by Forests NSW only. Volumes do not include those obtained through private property timber harvesting activities.*

**274 693m<sup>3</sup> of quota sawlogs were harvested from Forests NSW native forest and hardwood plantations across all regions. Regional volumes did not exceed those permissible under the terms of the NSW forest agreements and IFOAs.**

### Trend



State forests

n/a DEC estate

### Data and discussion

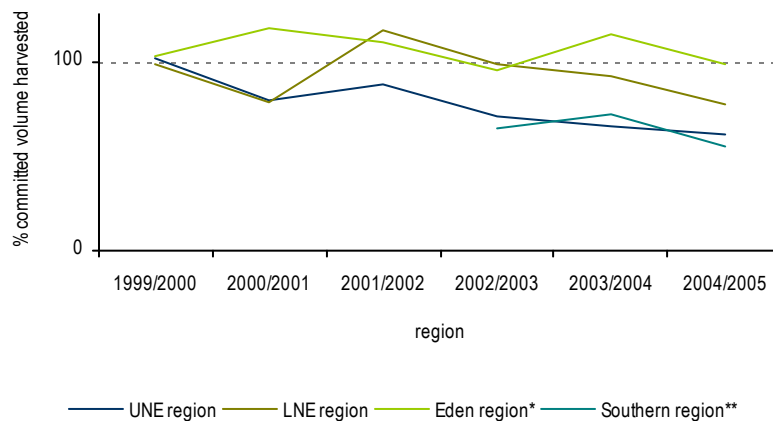
#### Committed/sustainable volumes harvested – quota sawlogs

Timber volumes permitted to be harvested by Forests NSW are designated in the NSW forest agreements, RFAs and IFOAs. An annual variation from the designated volume is permissible to accommodate changes in environmental and economic circumstances. This provision, as identified in the IFOAs, allows for harvest volumes in any one year to vary from the committed volume<sup>13</sup> by 25%, but not exceed 5% over a five-year-period.

Committed volumes designated in the agreements and approvals are made up of veneer sawlogs and high quality large sawlogs<sup>14</sup>, otherwise known as 'quota sawlogs'. Quota sawlogs harvested by Forests NSW in 2004/2005 did not exceed volumes permitted under the terms of the agreements and approvals. Quota volumes have not exceeded the permissible harvest range for any region since the agreements and approvals came into effect in 1999 (2002 for the Southern region) (figure 2-2-A).

<sup>13</sup> The volume of timber that may be harvested each year under the terms of the NSW forest agreements and IFOAs.

<sup>14</sup> Having a centre diameter under bark of at least 40 centimetres.



\* All quota sawlogs harvested from native forest.

\*\* Timber harvesting under the terms of a NSW forest agreements and IFOA began in 2002.

Source: Forests NSW

Figure 2-2-A: Committed sawlog volumes harvested – all regions

During 2004/2005, 70 271m<sup>3</sup> of quota sawlogs were harvested from Forests NSW native forests and hardwood plantations in the UNE region. This volume represents 61% of the committed volume. Volumes 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 is 3 954)]. Actual volumes of quota sawlogs harvested from Forests NSW native forest and hardwood plantations decreased by 8% from those obtained in 2003/2004.

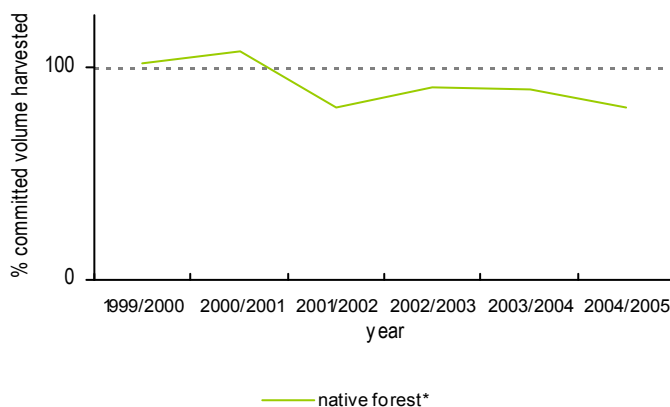
For the LNE region, quota sawlogs harvested from the region during 2004/2005 totalled 128 574m<sup>3</sup>, representing 77% committed volume. Volumes calculated using a sustainable volume of 170 592m<sup>3</sup> per annum as extrapolated from the IFOA [160 000 per annum + 23 407 per first five years (pro rata is 4 681)]. The total volume of quota sawlogs harvested from Forests NSW native forests and hardwood plantations have decreased by about 24% since 2003/2004.

Quota sawlogs harvested from the Eden region are wholly obtained from Forest NSW native forests as no hardwood plantation is located in the region. Quota sawlog volumes harvested in 2004/2005 totalled 22 434m<sup>3</sup>, representing 98% of the committed volume. Volumes calculated using a sustainable volume of 23 000m<sup>3</sup>. Quota sawlogs harvested from Forests NSW native forest in the region fell by 14% compared with those harvested in 2003/2004. There has been a general decreasing trend in total quota sawlog volumes harvested since 2000/2001.

For the Southern region, quota sawlogs (high quality large sawlogs only) harvested during the year totalled 53 414m<sup>3</sup>. The total volume harvested was obtained from Forests NSW native forest in the region. This volume represents 55% of the committed volume, calculated using a sustainable volume of 96 500m<sup>3</sup> per annum, extrapolated from the IFOA [48 000 (South Coast) and 48 000 (Tumut)]. Quota sawlog volumes harvested since 2002/2003 have reduced by 14%.

Pulp grade sawlogs also form part of quota sawlog volumes for the Eden region. Quota pulp grade sawlogs are calculated using a sustainable volume of 345 000 tonnes per annum. Quota pulp grade sawlogs are hardwood only, obtained from either native forest or hardwood plantation. As there is no

hardwood plantation situated in the Eden region, all quota pulp grade sawlogs are obtained from native forest. The volume of pulp grade sawlogs harvested fell by 10% since 2003/2004 to 277 952 tonnes, or 81% of the committed volume. Total volumes of pulp grade sawlogs have decreased since 1999/2000 (figure 2-2-B).



\* Quota pulp grade sawlogs harvested from native forest only

Source: Forests NSW

Figure 2-2-B: Committed volumes harvested – pulp grade sawlogs – Eden region only

Quota sawlogs harvested during 2004/2005 were largely obtained from Forests NSW native forest (96%), with the remainder from hardwood plantations (4%). The proportion of quota sawlogs obtained from hardwood plantations has averaged about 5% since 2002/2003. Previously only about 1% per annum was obtained from hardwood plantations.

#### Non-quota sawlogs and pulp grade timbers

Refer to chapter 1 for details of the volume of non-quota sawlogs and pulp grade timbers harvested during 2004/2005.

### 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.

### Species and royalty of logs harvested

Indicator 6.1: Average volume and royalty value of logs harvested per annum by species and grade by tenure (Eden region)  
 - This indicator was defined within 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 available.

## Volume of non-timber forest products

Indicator 2.1.e	Annual removal of non-timber forest products (e.g. berries, mushrooms, game, honey, wildflowers, tree ferns and possums) compared to the sustainable level (Southern region)
Indicator 2.1.b (B type)	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) <i>These indicators apply to the Eden and Southern regions. Forests NSW has provided data for all regions. Values of products obtained are for the Eden region only (as required by the indicator).</i>

***Quantities of non-timber products taken from State forests have generally decreased across all regions.***

### Trend



State forests

Inadequate data – DEC estate

### Data and interpretation

Non-timber, or forest products, are products or activities other than timber supplied to sawmills or processing plants. Forest products include firewood, seed, gravel and bark. Activities include apiary, grazing, four-wheel driving and horse riding.

State forests are the source of most forest products. Minimal commercial activity occurs within the DEC estate because it is managed mainly for conservation. Limited data are available for products taken from the DEC estate.

In 2004/2005, data provided by Forests NSW and PWD on the types of forest products taken from each estate have been better aligned, allowing for integration of data between the estates. However, the indicators reported against here are specifically for the Eden and Southern regions. Therefore, the PWD has provided data, as required, for these two regions only. Forests NSW, as has been the case since ESFM monitoring began, and due to the availability of data for other reporting requirements, is able to comprehensively report against these indicators for all regions (although this is not specifically required).

Specific details on actual products and quantities of products taken from each estate, by region, are provided in tables 2-2-A and 2-2-B.

There has been a decline in the quantities of forest products taken from State forests across all regions. Only in the Eden region have volumes of forest products taken remained relatively stable. However, for specific products there have been more variable trends.

Across all regions the total area used for grazing in State forests has substantially decreased. The combined area used for grazing across the UNE, LNE and Eden regions has fallen by 48% since 1999/2000. Since 2002/2003, and the inclusion of the Southern region, the combined area for grazing activities has declined by 50%. The total area for grazing has decreased across each individual region, most significantly in the UNE, LNE and Southern regions. The actual area for grazing activities across

the four regions at the end of 2004/2005 was 223 882 hectares, largely located in the UNE region (124 050 ha).

Apiary sites across State forests numbered 2 639 at the end of the reporting period. All regions recorded an increase in the number of sites. Since 1999/2000, the number of sites located across the UNE, LNE and Eden regions has increased by about 8%. Since 2002/2003, and the inclusion of the Southern region the number of sites has increased by 31%. This increase between 2002/2003 and 2004/2005 is due to not only the inclusion of a large number of sites in the Southern region (49% of sites were located in the Southern region in 2004/2005) but also to large increases in sites situated in the north-east regions.

Quantities of firewood taken from State forests have generally decreased in the UNE, LNE and Eden regions since 1999/2000. This decrease is largely due to a fall in quantities obtained from the LNE region (4 579 tonnes in 1999/2000 to 1 852 tonnes in 2004/2005). Conversely, with the inclusion of the Southern region since 2002/2003, total quantities have increased by 21% for all regions combined. This rise is due to the volume of firewood taken from the Southern region, which increased by 27% between 2002/2003 and 2004/2005 to over 6 800 tonnes.

Gravel, sand and rock taken from State forests have also exhibited an increase since 1999/2000. Over 54 900 tonnes were quarried from State forests in the UNE, LNE and Eden regions in 2004/2005, a 19% increase since 1999/2000. This increase, however, is mainly due to an increase in volumes from the Eden region. Volumes taken from the north-east regions fell in 2004/2005. No gravel, sand or rock is quarried from State forests in the Southern region.

The indicator for the Eden region also requires the reporting of the monetary value of forest products taken each year. The total value of forest products taken from State forests since 1999/2000 has increased by 51%. The actual value of forest produce taken from State forests during 2004/2005 from the Eden region was \$221 542 (an increase of 11% over past 12 months).

Data for the DEC estate have been provided for the Eden and Southern regions only – as required by the indicators. Seventy-one apiary licences were issued by the PWD in the Southern region up until June 2005. These licences were for a total of 276 apiary sites. The number of apiary sites has decreased from last year because previously the South Coast Management Area reported on all permissible sites but for this reporting period it has only included approved sites. Permissible sites include all sites, whether they are active or not, whereas approved sites are only the sites that have been approved by the South Coast Regional Manager to proceed with the activity for that year.

The only other non-forest products licensed by the PWD in the Southern region up until 2004/2005 included intangible products, such as film documentary permits (4), communication site permits (14), transmission lines, cables and pipelines (167.76 km), and other structures (15), although the decrease in the length of transmission lines, cables and pipelines is due to GIS boundary changes.

For the DEC estate in the Eden region there were no new apiary licences or sites, although there were three fewer communication and other structure permits issued than in 2003/2004.

Data were sourced from PWD Regional staff in Southern and Eden regions and the Wildlife Management Unit.

For Indicator 2.1.e reporting is only required for the Southern region and for Indicator 2.1.b reporting is only required for the Eden region. For both of these regions limited information is available on the removal of timber and non-timber products from the DEC estate. Honey is the primary non-timber product legally removed from the DEC estate for commercial purposes. A very small amount of some other products (e.g. bark, rock and seed) are collected for scientific purposes. Unfortunately, apiary licence conditions neither specify the number of hives allowed per site nor require the licence holder to provide an annual report on the volume of honey removed from each site. Accordingly, the sustainable level of honey production on the DEC estate cannot be determined and it is not possible to report on trends in production of honey removed under licence from national parks and reserves.

Similarly, in reference to Indicator 2.1.d for Eden, volumes are not recorded and are therefore not reported.

Under Section 132c of the *National Parks and Wildlife Act 1974*, up until 30 June 2005, 430 scientific licences have been issued that allow parties who have or will or may conduct work on DEC estate in New South Wales. These data are not broken down into regions as a licence may not be limited to specific locations.

Table 2-2-A: Non-timber products obtained from State forests – all regions – 2004/2005

Forest product	Unit	Region			
		UNE	LNE	Eden	Southern
Grazing	ha	124 050	41 123	8 721	49 988
Apiculture	sites	984	385	162	1 108
Seed	kg	9	2	0	290
Firewood	tonnes	364	1 852	865	6 838
Craft timber	m <sup>3</sup>	0	0	0	5
Misc native timber pieces	number	120	102 344	0	888
Wood blocks	number	0	0	0	4 226
Film/documentary	permits	0	1	0	2
Communication sites	permits	30	53	8	31
Other structures	permit	17	50	7	19
Powerlines/cables/pipelines	km	0	98	50	381
Gravel/sand/rock	tonnes	500	312	54 103	0
Research	permits	7	20	6	8

Source: Forests NSW



Table 2-2-B: Non-forest products obtained from DEC estate – Southern and Eden regions

Non-forest product category	Sub-category	Unit	Eden region			Southern region		
			2002/2003	2003/2004	2004/2005	2002/2003	2003/2004	2004/2005
Animal/insect-related products	Apiary – beekeepers	number	6	4	4	70	64	71
	Apiary – sites	number	25	21	21	330	324	276
	Apiary – hives	number	unknown	unknown	unknown	unknown	unknown	unknown
Vegetation-related products	Native tree seed – capsules	kg	0	0	0	0	0	0
	Native tree seed – raw seed	kg	0	0	0	0	0	0
	Wildflower collection	permits	0	0	0	0	0	0
	Native plants – scientific collection	permits	data unavailable	data unavailable	data unavailable	5	data unavailable	data unavailable
	Leaf for oil production	kg	0	0	0	0	0	0
	Bark	tonnes	0	0	0	0	0	0
	Broombush	tonnes	0	0	0	0	0	0
Other	Gravel/sand/rock	tonnes	0	0	0	0	0	0
	Film/documentary	permits	0	0	0	4	4	4
	Communication sites	permits	0	2	0	14	14	14
	Other structures	permits	0	1	0	15	17	17
	Transmissionlines/cables/pipe lines	km	0	0	0	127	193	168

Source: PWD

## Plantations

MIG Indicator 2.1.f:

Area and percent of plantation established meeting effective stocking one year after planting (UNE, LNE, Eden, Southern regions)

***The area of plantation established on State forests decreased. The effective stocking rate in Southern region has improved.***

### Trend

↓ State forests – area of plantation established

↑ State forests – effective stocking

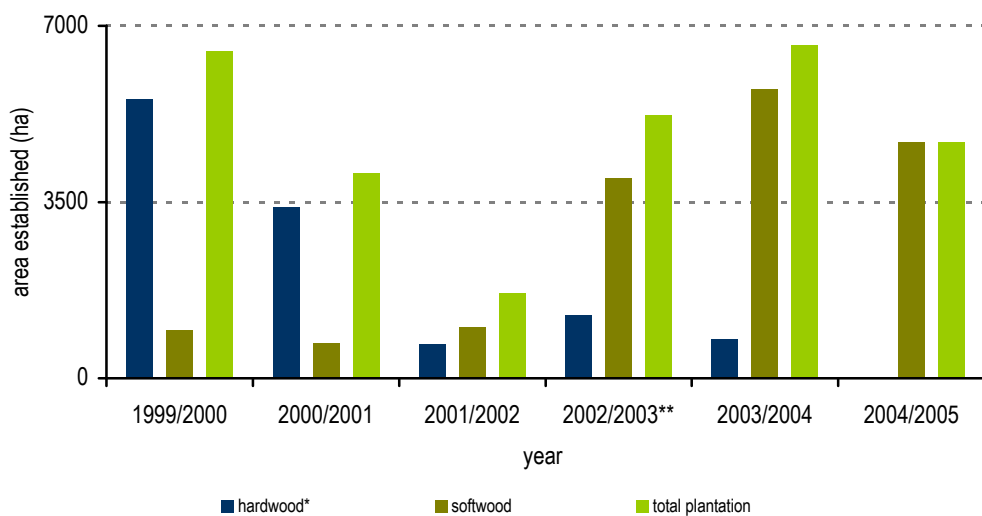
N/A – DEC estate

## Data and information

### Plantations established

Forests NSW hardwood and softwood plantations covered 262 380 hectares across all regions at the end of 2004/2005. This total includes harvest exclusion areas. The total area of plantations was largely softwood plantations situated within the Southern region (110 794 ha).

In 2004/2005, 4 697 hectares of softwood plantations were established by Forests NSW (figure 2-2-C). The majority of plantations were established in the Southern region (3 190 ha). Softwood plantations was also established in the UNE (1 297 ha) and LNE (210 ha) regions. No areas of hardwood plantation were established this year.

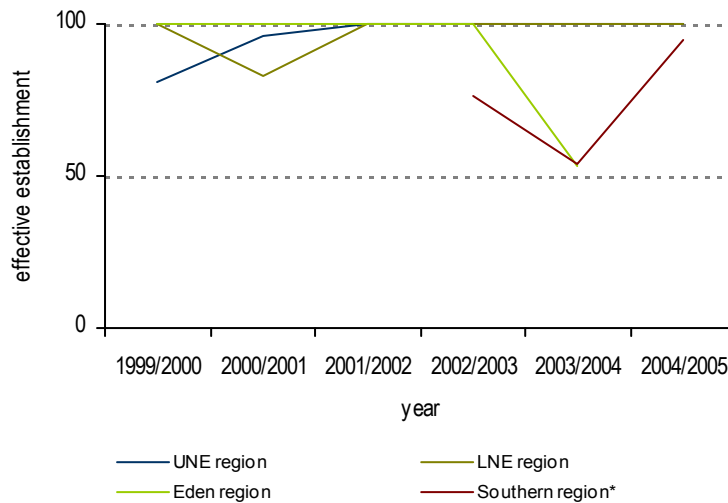


\*\* includes area established in the Southern region after ESFM monitoring began

Figure 2-2-C: Area of hardwood and softwood plantations established by Forests NSW

### Effective stocking rates

The effective stocking rate is the survival of planted trees one year after planting at a level that promotes a cost-effective return upon harvest. Since 1999/2000, excluding 2003/2004, the effective stocking rates of Forests NSW's softwood plantations have remained consistently high. In 2003/2004 effective stocking rates for Southern and Eden regions decreased to approximately 50%. However, in 2004/2005, effective stocking rates have significantly improved for the Southern region (95%). Effective stocking rates for UNE and LNE have remained at 100% (figure 2-2-D). There were no data on the effective stocking rate for softwood plantations as no planting occurred in the Eden region in 2003/2004.



\* monitoring for the Southern region began in 2002/2003  
 Source: Forests NSW

Figure 2-2-D: Effective stocking rates for softwood plantations – Forests NSW

## Regeneration

MIG Indicator 2.1.g

Area and percent of harvested area of native forest effectively regenerated (UNE, LNE, Southern region)

**Regeneration surveys across more than 2 950 hectares of harvested State forest in the north-east and Southern regions revealed a 90 – 100% effective regeneration rate.**

### Trend

↑ State forests

n/a DEC estate

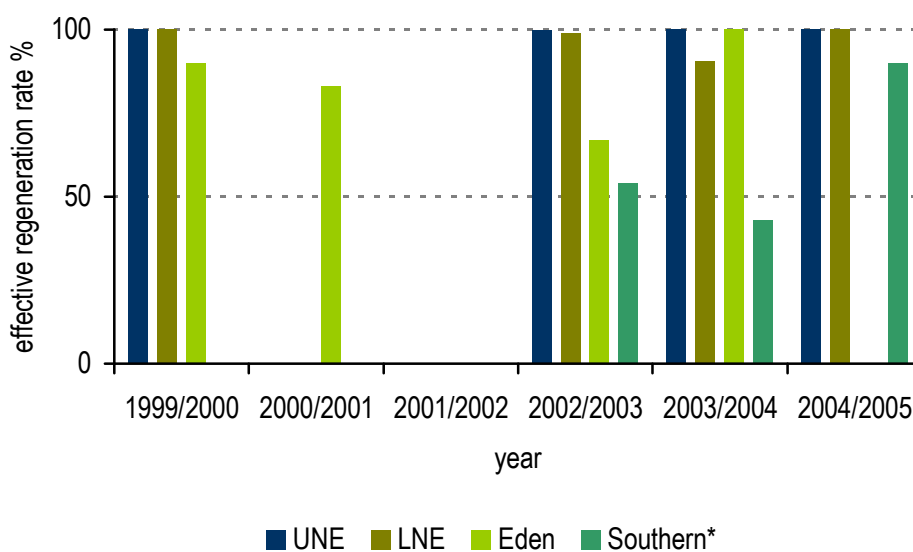
### Data and discussion

Forests NSW is committed to ensuring that as a direct result of its harvesting of its native forests and plantation areas that the forest regenerates for future generations to use and enjoy. Harvested native forest is regenerated by Forests NSW to re-establish pre-harvest forest structure and species composition, specific to each forest type and locality.

Surveys identify effective regeneration rates. Forests NSW surveys for regeneration in all forest types and areas. However, it is recognised that some forests types or areas have poor regeneration as a result of climatic, soils, understorey vegetation or other environmental factors (such as inappropriate fire regimes). Potential problematic areas are targeted for surveys to find out if rehabilitation work is required to encourage regeneration. Forests NSW also uses survey results as a trigger to review whether the identification of potential rehabilitation sites or unproductive areas may affect the long-term sustainable volumes from State forests.

In 2004/2005, there were twelve regeneration surveys of over 2 955 hectares of State forest in the UNE (1 257 ha), LNE (690 ha) and Southern regions (1 008 ha). There were no regeneration surveys in the Eden region.

Since 1999/2000, regeneration rates for the UNE, LNE and Eden regions (since 2002/2003 for the Southern region) have remained consistently high (figure 2-2-E). In 2004/2005, regeneration surveys were conducted in all regions, except the Eden region. Results show regeneration rates of 100% in the UNE and LNE regions and 90% in the Southern region. The regeneration rate recorded for the Southern region has risen significantly, increasing from 43% last year to 90% this year.



where value is zero '0' there were no regeneration surveys

\* monitoring for the Southern region began in 2002/2003

Source: Forests NSW data

Figure 2-2-E: Effective regeneration rates on State forests

In previous years, the PWD has recorded the transfer of State forest land to the DEC estate under the forest agreement process. As no land is harvested in the DEC estate and there is no ongoing regeneration work, there is no new information on this indicator.

## Criterion 3: Maintenance of ecosystem health and vitality

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### Weeds, feral animals and disease

MIG Indicator 3.1.a	Area and percent of forest affected by processes or agents that may change ecosystem health and vitality (UNE, LNE, Southern regions)
Indicator 3.1 (Category B)	List of biological factors influencing forest health and vitality including weeds, feral animals, insects and diseases (Eden region)

**More than \$1.16 million were directed towards the control of a range of negative agents across more than 1.9 million hectares of State forest in the UNE, LNE, Eden and Southern regions.**

#### Trend



State forests

n/a DEC estate

#### Data and discussion

In order to maintain and improve biodiversity and productive capacity, DEC and Forests NSW continue to carry out efforts to control and eradicate noxious weeds, feral animals (including introduced predators), pests and disease.

Forests NSW continue to report against this indicator through indicative measures of expenditure and estimated area treated for targeted weed and feral animal species across its estate. In previous reports PWD has provided a detailed narrative on various pest, weed and disease management initiatives on its estate. PWD has also previously reported on a performance indicator for the effectiveness of pest management on its reserves, known as 'Pest Measure'. The indicator requires a level of detail that is difficult to obtain as much of it is not collected routinely or as part of other forest/park management activities. Also, data provided by both DEC and Forests NSW, as shown above, are not compatible with each other and therefore cannot be reported comprehensively across all tenures.

Data for the DEC estate for this measure will be made available for 2004/2005 via a separate and detailed pest and weed management report that will be made public early in 2007. This report, 'Protecting our National Parks from Pests and Weeds', will update information on the 'Pest Measure' that has previously been reported, as well as additional information on pest and weed management in national parks and reserves throughout New South Wales.

Also in 2004, PWD developed a series of fact sheets and frequently asked questions to provide information to the community about the management of three key environmental pressures – pest animals, weeds and fire. This material focuses on first identifying the problems and then highlighting the professional and cooperative manner in which the PWD coordinates and puts in place solutions.

Printed versions are available at regional NPWS Information Centres and online versions are also available on the NPWS website at [www.nationalparks.nsw.gov.au](http://www.nationalparks.nsw.gov.au). There are four pest animal fact sheets about feral pigs, foxes, rabbits and wild dogs, and four weeds fact sheets about bitou bush (*Chrysanthemoides monilifera*), blackberry (*Rubis fruticosus*), lantana (*Lantana camara*) and scotch broom (*Cytisus scoparius*).

### Feral animals and noxious or environmental weeds

As mentioned above, statewide data for PWD will be provided in a report 'Protecting our National Parks from Pests and Weeds', which will be released in 2007.

Forests NSW continues to be proactive in pursuing various feral animal and noxious weeds programs in cooperation with other land management agencies and neighbours. Forests NSW has generally found that the most effective and efficient way to spend money on the control of these species is when cooperative programs occur over a large regional area, such as the dog and fox control programs in the Southern/Eden regions.

In 2004/2005, Forests NSW directed over \$1.16 million towards the control of a range of negative agents across more than 1.9 million hectares of State forest in the UNE, LNE, Eden and Southern regions. Expenditure was relatively evenly spread across both weed and feral animal species, with around 50% of total expenditure spent on each.

Specifically, noxious and/or environmental weed control efforts were carried out over an estimated 59 550 hectares, at a cost of \$527 050. Thirteen weed species were subject to control works during the year, including, giant parramatta grass (*Sporobolus fertilis*), serrated tussock (*Nassella trichotoma*) and St John's wort (*Hypericum perforatum*). The most extensively treated weed species was blackberry (*Rubis fruticosus* sp. Agg.) over an area of 50 120 hectares at a cost of \$109 600 (table 2-3-A).

Table 2-3-A: Forests NSW control efforts for noxious/environmental weed species 2004/2005

Region	Number of species treated	Area treated (ha)	Expenditure (\$)
UNE	7	1 505	221 500
LNE	8	4 400	162 950
Eden	6	34 595	49 600
Southern	8	19 050	93 000
<b>total</b>	<b>13*</b>	<b>59 550</b>	<b>527 050</b>

\* total number of individual species treated across all regions

Source: Forests NSW data

Feral animal (including introduced predator) control efforts on State forests (all regions) were conducted over an estimated 1.89 million hectares at a cost of \$635 850 (table 2-3-B). Nine feral animal species were targeted in 2004/2005, including fox (*Vulpes vulpes*), wild dog (*Canis familiaris*) and rabbit (*Oryctolagus cuniculus*). Control efforts were most extensive in the Southern region, where about 38% of total expenditure was directed at eight species across more than 987 000 hectares of State forest.

Table 2-3-B: Forests NSW control efforts for feral animal species 2004/2005

Region	Number of species treated	Area treated (ha)	Expenditure (\$)
UNE	3	23 600	81 185
LNE	9	72 865	128 865
Eden	7	803 780	180 850
Southern	8	987 445	245 010
<b>Total</b>	<b>9*</b>	<b>1 887 690</b>	<b>635 850</b>

\* total number of individual species treated across all regions

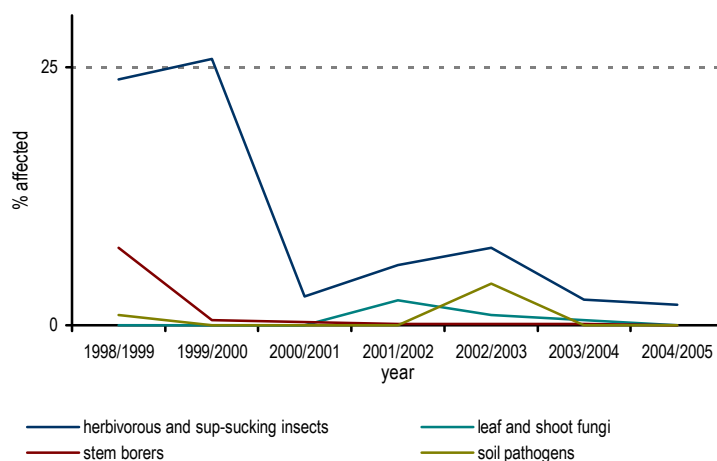
Source: Forests NSW data

In addition to the existing feral animal control activities mentioned above, Forests NSW has been working with the Game Council of NSW to identify State forests that could be opened up to hunters as part of an integrated approach to feral animal control. A number of broad areas on the north and south coasts and in western New South Wales have been highlighted as potentially suitable to become 'declared' public lands under the *Game and Feral Animal Control Act 2002*.

#### **Pests, disease and physical agents**

Fungal diseases, insect pests, fungi or other physical agents can severely affect the biodiversity of an area and its future productivity by altering the growth rate and survival of trees. Forests NSW carries out regular surveys to monitor the extent of biological agents and critical nutrient deficiencies in both hardwood and softwood plantations as part of its plantation establishment program. Forests NSW uses a range of methods, such as remote sensing, helicopter quadrant assessment and on ground surveys, and then uses the data as a planning tool for remedial and control measures.

Surveys are carried out for all agents, but only four selected agents are regularly reported in hardwood plantations: herbivorous and sap-sucking insects, leaf and shoot fungi, stem borers and soil pathogens. As illustrated in figure 2-3-A, all surveyed agents have decreased in extent over hardwood plantations since 1999/2000. The most extensive were herbivorous and sap-sucking insects, which have decreased from 23.8% of the hardwood plantation estate affected to 2% in 2004/2005. The other surveyed agents have been much less extensive over the years, and have been reduced to zero in 2004/2005.

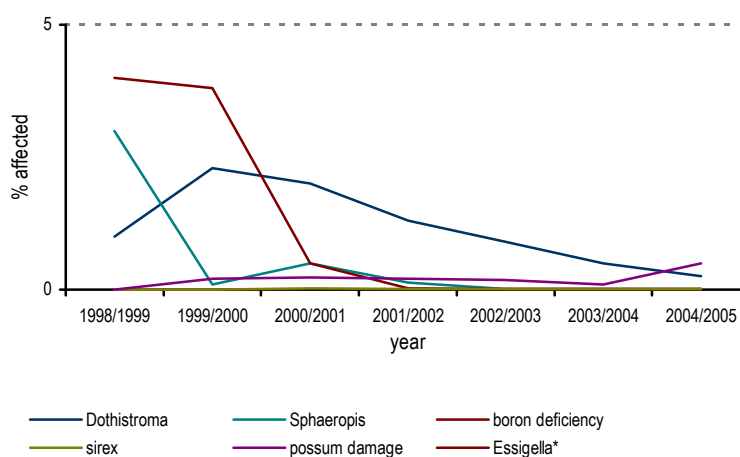


Note: The percentages shown are calculated across the entire planted hardwood forest (post-1995) estate in all Forests NSW regions (not just forest agreement regions).

Source: Forests NSW data

Figure 2-3-A: Percentage of new Forests NSW hardwood plantations affected by selected agents

Forests NSW surveys for five agents in softwood plantations: *Dothistroma* (needle blight), *Sphaeropsis* (fungus), boron deficiency, Sirex wood wasp and possum damage. Similar to hardwood plantations, all agents surveyed in softwood plantations have decreased in extent since ESFM monitoring began in 1999/2000 (figure 2-3-B). The most extensive agent in 1999/2000 was boron deficiency, which has decreased to less than 0.01% in 2004/2005. *Essigella californica* (Monterey pine aphid), not previously surveyed for, was the most extensive agent affecting Forests NSW softwood plantations in 2004/2005, affecting 15% of the estate. The aphid causes discolouration of leaves and loss of needles and can significantly reduce growth rates. Forests NSW researchers are working closely with operational staff to control this new pest agent. Forests NSW is also providing funds towards a national research program initiated to investigate this potentially serious problem.



\**Essigella* (15%) data provided for first time in 2004/2005 (not shown on graph)

Note The percentage shown is calculated across the entire softwood estate in all State forest regions (not just forest agreement regions).

Source: Forests NSW data

Figure 2-3-B: Percentage of new Forests NSW softwood plantations affected by selected agents



Bell Miner Associated Dieback is a continuing concern in the UNE and LNE regions. Helicopter mapping by DEC in 2003/2004 estimated that 20 000 hectares of forest in the Toonumbar/Richmond range is affected by dieback. Improvements in mapping dieback continue using remotely sensed satellite data. Initial funding for this project has been provided by the former Northern Rivers Catchment Management Board.

**Case Study: Controlling blackberries is a focus of a new biological trial (in Southern FA region)**

One of Australia’s worst weeds, blackberry, is being targeted in a trial biological control program near Tumbarumba and Tumut in southern New South Wales. Blackberry can thrive in a wide range of conditions, quickly invading and dominating river banks, bushland, plantations and farming land.

The trial to assess the effectiveness of new ‘rust’ strains in controlling blackberry has been undertaken by CSIRO with the financial support of the Riverina Highlands Weeds Working Group, of which Forests NSW is a member.

Secretary of the working group, Kylie Durant, said the ‘rust’ was a type of fungus, *Phragmidium violaceum*. “Earlier fungal strains were released in the 1980s, with variable results due to resistance of some of the blackberries to the strains, and unfavourable environmental conditions,” she said. There are at least 15 different varieties of European blackberry in Australia. Kylie said the CSIRO laboratory in France had established a garden of Australian blackberry genotypes to ‘trap’ new strains of the rust that specifically infect them.

This resulted in eight new strains being imported and tested for host-specificity in a high-security containment facility in 2002, with the new strains approved for release in February 2004. CSIRO then conducted seven releases at trial sites across the region, including some sites on State forests. “DNA samples from the trial sites have been collected and work is continuing on developing techniques to differentiate the new European strains from the existing populations of the rust, and to assess effectiveness,” Kylie said.

“The next step is to continue to improve the efficiency of the methods to mass produce the rust and develop a delivery system for future large-scale releases, as well as continuing to monitor the trial site”.. Forests NSW (2005)

**Fire**

Indicator 3.2 (Category B)

Impact of fire on forest related values (Eden region)

*This indicator is defined in the Eden region set of indicators. For continuity of reporting all regions are reported here.*

***In 2004/2005 bushfires affected 21 100 hectares of State forests and DEC estate.***

**Trend**



Area of forest affected by bushfire in State forests and DEC estate

**Data and interpretation**

The size, intensity and frequency of fire events are monitored across public forest areas to help identify the impact of fire on biodiversity and economic values and improve emergency and land management practices.

Fire events may be a bushfire or a prescribed burn. In general, prescribed burns are of lower intensity than bushfires and occur during the cooler months of the year. The exception to this is backburning to control the spread of bushfires.

Data provided for this indicator are for the DEC estate and State forests only. In previous reports DEC has supplied data that was additional to reporting requirements (such as number and types of ignition). This data has not been provided in 2004/2005.

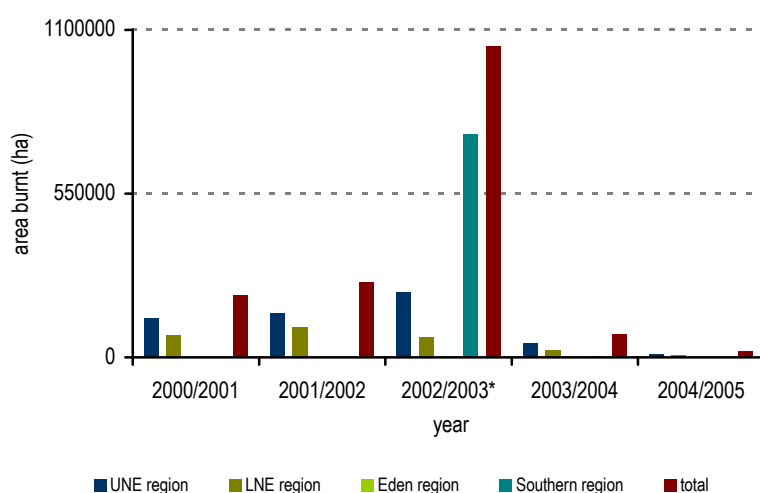
Data provided by DEC have been obtained from the PWD's Incident Database, compiled from daily situation reports during fire incidents. As it is a statewide data set it includes data for the entire LNE region.

Forests NSW's data have been drawn from its regional offices, based on regional fire plans, plans submitted to bushfire management coordinating committees and records of burning for each season.

### Bushfire

Bushfires are uncontrolled fire events of varying intensity that have the capacity to cause severe and widespread damage to the environment and infrastructure, and threaten human life. However, fire plays a crucial role on the diversity and productivity of the Australian bush. In 2004/2005, there was a reduction in the area of forest affected by bushfire from 2003/2004. However, a reduction in the area affected by bushfire is not necessarily a measure of management activity or success.

The 2004/2005 bushfire season was the least severe (in terms of total area burnt across State forests and DEC estate) since ESFM monitoring began. During 2004/2005, 21 100 hectares of the DEC estate and State forests were burnt as a result of bushfire. The total area affected by fire has decreased by 73% since 2003/2004 and a 98% reduction on 2002/2003 figures. The majority of the area burnt occurred within the UNE region (11 129 hectares) and LNE region (7 658 hectares) (figure 2-3-C).



\* Monitoring began for the Southern region in 2002/2003.

# data were incomplete for 1999/2000

Source: PWD and Forests NSW

Figure 2-3-C: Area burnt by bushfire – DEC estate and State forests – all regions

The DEC estate experienced a significant reduction in bushfire in all regions (13 520 ha), especially in the UNE and LNE regions. In the UNE region the extent of bushfire decreased by 75% from 21 205 hectares in 2003/2004 to 5 246 hectares this year; in the LNE region the extent of fire decreased by 55% from 14 276 hectares in 2003/2004 to 6 386 hectares this year. In 2004/2005, 384 hectares was burnt by bushfire in the Eden region.

In 2004/2005, the total area affected by bushfires in State forests also significantly decreased. The total area affected by bushfire fell from 53 754 (in 2003/2004) to 7 580 hectares (in 2004/2005), an 85% reduction. In the Southern region there was an 89% reduction in the area affected by bushfire (from 10 185 in 2003/2004 to 1 272 hectares in 2004/2005). The area burnt in the LNE region was reduced to 1 272 hectares in 2004/2005 from 10 185 hectares in 2003/2004 (an 88% reduction). The UNE region experienced a 78% reduction from 26 225 hectares in 2003/2004 to 5 883 hectares in 2004/2005. The area affected by bushfire in the Eden region was 212 hectares, 210 hectares of this was plantation. In 2004/2005, Eden was the only region that recorded bushfire events in the plantation estate.

#### *Prescribed burning*

Prescribed burning is an important part of fire management that assists in reducing the incidence and severity of bushfires and improving bushfire control. Planning involves predicting fire behaviour using rainfall or drought history, weather (temperature, humidity, wind speed and direction), vegetation and fuel characteristics and topography.

Data for 2004/2005 are only available for State forests. Prescribed burning carried out in State forests includes hazard reduction burns, post logging burns and area establishment burns (for plantations). Forests NSW had planned for hazard reduction burns and post-logging burns to be carried out on about 88 000 hectares of State forest across the four forest agreement regions. These burns were subsequently conducted over about 47 700 hectares. A further 3 800 hectares of plantation land was subject to area establishment burns. Much of the area treated by prescribed burns was in the Eden (approximately 18 600 hectares) and Southern region (approximately 15 800 hectares).

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

### 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, Southern 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)

***Road length within State forests increased by almost 1 800 kilometres in 2004/2005, bringing the total road length to a little over 34 520 kilometres.***

#### Trend

↑ State forests

N/A DEC estate

#### Yearly data/information discussion

In 2003/2004 due to a data entry error in its SEEDs database, Forests NSW provided information for the number of road maintenance/construction plans for its estate instead of strategic road management plans. This error has been corrected for 2004/2005.

Forests NSW have five strategic road network plans covering the four forest agreement areas. Currently these road network plans are internal Forests NSW documents, but may be used in the future as a basis for the preparation of regional ESFM supplementary plan for road management. These plans were implemented before 2004/2005, and covered 506 619 hectares; 256 015 hectares in the LNE region, 163 952 hectares in the Eden region and 86 652 hectares in the Southern region. No details on the area covered by the UNE region strategic road network plan have been provided. There has been no change in the area of State forest covered by road network plans in 2004/2005.

The total length of the road network within State forests across the forest agreement regions totalled 34 520 kilometres. Total road length has increased for all regions, except the LNE region (33 km decrease) during 2004/2005. The largest increase in total road length was for the Southern region (1 270 km) and Eden region (500 km). Only a small increase was recorded in the UNE region (18 km). Total road length by classification is presented for each region in table 2-4-A.

Table 2-4-A: Length of road by classification on State forests

Length of road by classification (km)	UNE	LNE	Eden	Southern
Primary access	309	40	285	614
Secondary access	399	676	759	1 630
Feeder	83	838	759	3 140
Harvesting, link and boundary	4 416	3 476	0	6 365
Fire trail and service trail	6 315	1 513	952	1 954
<b>Total road length</b>	<b>11 522</b>	<b>6 543</b>	<b>2 755</b>	<b>13 703</b>

Source: Forests NSW

A strategic road management plan for all UNE and LNE roads on the DEC estate was completed in 2001/2002. It is the current planning document and no new information is available.

Previously, data were provided by the PWD on the extent of each region's roads and trails on its estate. Comparison between regions was difficult because of different road classification systems. To add to the complexity, in the Southern region there is not a standard roads classification, so it is hard to amalgamate the data even within the region; roads data are not standardised.

Due to its complexity, Indicator 4.1 (Eden) has not previously been reported by the PWD and is not likely to be in the future.

## Soil erosion

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, Southern regions)

**Over 65 000 hectares of Forests NSW native forest were assessed for soil erosion hazard.**

### Trend

No trend available.

### Data/information discussion

As part of Forests NSW harvest planning process, harvest areas are assessed for potential and existing soil erosion issues. In 2004/2005, the gross area of State forest assessed for soil erosion hazard was over 65 000 hectares across all regions. The most extensive area assessed by region was the LNE region where a gross area of almost 26 000 hectares were assessed. Table 2-4-B details the gross and net harvest areas assessed in each region during the year.

Table 2-4-B: Area of Forests NSW native forest assessed for soil erosion hazard 2004/2005

Region	Gross area (ha)	Net harvest area (ha)
UNE	16 310	10 534
LNE	25 916	7 515
Eden	5 723	3 588
Southern	17 137	4 012
<b>Total</b>	<b>65 086</b>	<b>25 649</b>

Source: Forests NSW

Only activities such as those associated with roads, park management infrastructure and visitor facilities are likely to result in soil erosion issues on DEC estate. As a result, DEC does not make broad area assessments of soil erosion potential. However, when engaging in activities on parks or reserves, the PWD undertakes a Review of Environmental Factors under the provisions of the *Environmental Planning and Assessment Act, 1979*, which will consider the protection of soil and water values.

## Case Study – Water Quality Monitoring and Results Analysis.

The Environment Protection Licence (EPL) water quality monitoring (WQM) program forms an important component of the EPLs. The objective of the WQM program is to determine if there is an identifiable impact on water quality from licensed forestry activities and if so, to quantify the level of that impact. To meet these objectives, Forests NSW conducts water quality monitoring at a number of sites according to the conditions of the agreed program, details of which are contained in the document titled "*Water quality monitoring for forestry activities in State Forests, Phase 1, 3 February 2000*" (EPA, 2000). A former program conducted between 1994 and 1999 has been replaced by this program.

The program is conducted in a number of representative small catchments, as follows:

- Middle Brother (LNE region) paired catchment native forest program (1 control catchment, 1 treatment catchment)
- Kangaroo River (UNE region) replicated native forest program (2 control, 3 treatment)
- Yambulla (Eden region) replicated native forest program (2 control, 3 treatment)
- Canobolas (outside FA regions) softwoods program (1 native forest control, 2 treatment pine catchments, 1 downstream site, 1 integrated site – this location is however outside of the FA regions)
- Bago (Southern region) softwoods program (1 native forest control, 2 treatment pine catchments, 1 downstream site).

A total of 21 stations are monitored continuously for streamflows, rainfall and in-stream turbidity (as measured by a turbidity probe). Water samples are pumped from streams on the rising and falling limbs of flood events and at fortnightly intervals during intervening low-flow periods. The WQM program requires monitoring at each site for a minimum of 18 months before treatment catchments are harvested, then monitoring for a minimum of 18-months post-harvest.

The WQM program in each location is in varying stages of completion:

- The Middle Brother paired catchment program began in 1996 and harvesting of the treatment catchment occurred in 2000. Monitoring continued until 2003 when the program was terminated.
- The Kangaroo River replicated native forest program began in 2001 and is still in the pre-harvest phase. Harvesting of the treatment catchments is expected to occur during 2007.
- The Yambulla replicated native forest program began in 1999 and is still in the pre-harvest phase. Harvesting of the treatment catchments is expected to occur during 2007.
- The Canobolas softwoods program began in 1999 and harvesting of the treatment catchments occurred in 2002/3. Post-harvest monitoring continued until mid-2006 and Forests NSW is in the process of drafting a final report on the study outcomes.
- The Bago softwoods program began in 1999 and harvesting of the treatment catchments occurred during 2003/4. Post-harvest monitoring is continuing.

Upon completion of each of the WQM programs, Forests NSW is required to fully analyse the program results and report them to the DEC (completed in 2005). As stated, the Middle Brother paired catchment study was the first to be completed. The study results have been published in a refereed journal: Webb, A.A. & Haywood, A. (2005). 'Impact of mitigated forestry activities on turbidity: assessing the effect of improved harvesting practices', *Water*, 32 (8): 76-81.

### Post-Operational Audits Required under the Water Quality Monitoring Program

Following harvesting in Water Quality Monitoring Catchments, Forests NSW is required to undertake two audits:

- (i) an audit of compliance with conditions in the Environment Protection Licence; and
- (ii) an audit of soil disturbance within harvested treatment catchments

To date, harvesting has occurred in the Middle Brother, Canobolas and Bago WQM treatment catchments. Forests NSW has completed all required compliance and soil disturbance audits within the timeframes specified by DEC.

## Criterion 5: Maintenance of forest contribution to global carbon cycles

### 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 Southern regions)

**An estimated 3 079 606 tonnes of carbon were sequestered in Forests NSW hardwood and softwood plantations in the forest agreement regions.**

#### Trend



State forests

N/A DEC estate

#### Data and interpretation

Estimates of the total amount of carbon sequestered across the public forest estate are not available. While, DEC does not have the capacity to report on this indicator, Forests NSW estimates the amount of carbon sequestered in its planted forest estate. The assumptions for the carbon sequestration calculations are contained in table 2-5-A.

Table 2-5-A: Assumptions for the carbon sequestration on Forests NSW's planted forest estate

Assumptions	Softwood	Hardwood
CO <sub>2</sub> sequestered (tonnes CO <sub>2</sub> e) = net plantation area x Mean tree biomass increment (MTBI) X Carbon Proportion (CP) x Carbon to Carbon dioxide factor (CCF) where		
MTBI = SBI + CBI + RBI	9.487296	11.64735
SBI (stem biomass Increment) = TSVI x BD	6.72	8.25
TSVI (total stem volume increment)	16m <sup>3</sup> /ha/year	15m <sup>3</sup> /ha/yr
BD (basic density)	0.42 t/m <sup>3</sup>	0.55t/m <sup>3</sup>
CBI (canopy biomass increment) = SBI x .1765	1.18608	1.456125
RBI (root biomass increment) = (SBI + CBI) x .2	1.581216	1.941225
CP = 0.5	0.5	0.5
CCDF = 3.667	3.667	3.667

Source: Forests NSW

In 2004/2005, Forests NSW estimated that there were around three million tonnes of carbon sequestered in its planted forest estate (refer to figure 2-5-A). The Southern region is the largest contributor to this total of around two million tonnes of carbon sequestered in the softwood estate. The plantation estate in the UNE and LNE regions are currently estimated to have sequestered over 400 000 and 200 000 tonnes of carbon respectively. There is also an estimated 500 000 tonnes of carbon sequestered in softwood plantations in the Eden region.



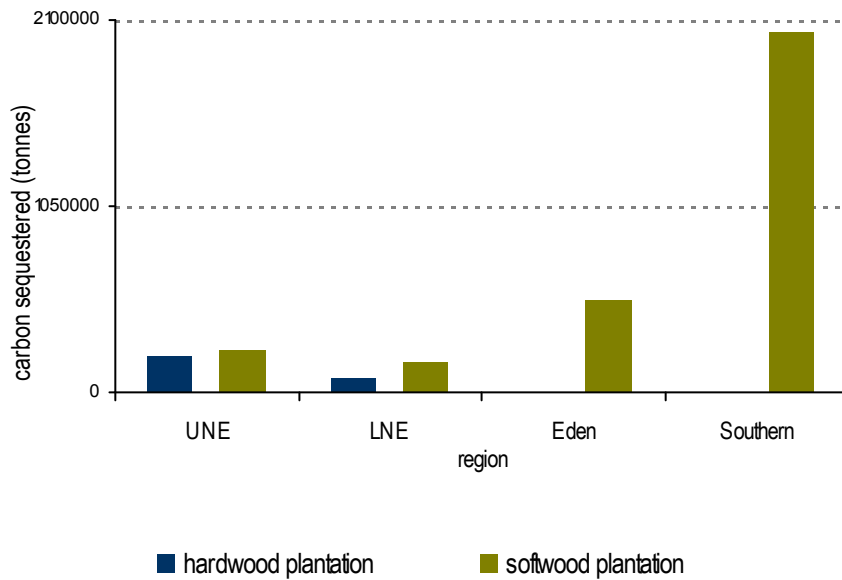


Figure 2-5-A: Sequestered carbon in Forests NSW hardwood and softwood plantations – all regions

In 2004/2005, Forests NSW has also become the first body in the world accredited under a registered greenhouse gas abatement scheme to trade in carbon credits. Refer to “A world first in carbon trading” in chapter 1 for more detail.

### Global carbon budget

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

**No outcomes to report**

No data available.

## Criterion 6: Socio-economic benefits

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### Visitation

Indicator 6.2.c

Number of visits per annum (UNE, LNE, Southern regions)

***About 16.5 million visits were made to national parks and reserves across the forest agreement regions.***

#### Trend



DEC estate

n/a

State forests

#### Data and interpretation

No data on the number of visits made to State forests were available for this report. However, Forests NSW does record some recreational usage through the issuing of permits for forest activities (refer to indicator 6.3 for details). Data on visits to the DEC estate have been provided annually for the UNE, LNE and Southern regions and for the Eden region since 2000/2001. However, data provided by PWD on visitor numbers have not been consistent or comprehensive in the past, as they rely on different recording mechanisms. Improvements to the accuracy of visitor numbers to the estate have been made in recent years due to the progressive application of better data collection techniques by the PWD. These improvements to data collection have resulted in an increase in the recorded number of visits made to parks and reserves in the regions. Detailed comparison of annual visitor numbers is not possible at present because of ongoing refinement to monitoring and data collection techniques.

Data provided by the PWD on visitor numbers in 2004/2005 have been obtained through its *State of the Parks* survey, where each park was required to calculate the annual number of visitors by the most accurate means available to them. Parks may have sourced their data from the Visitor Data System (VDS) (not yet available in all parks), estimates, recent counts or a combination of sources. Detailed information in relation to the VDS can be found in previous ESFM reports.

Some parks have not recorded any data. In 2004/2005, more parks used and specified their most reliable sources. These sources are the Visitor Data System (VDS) when available, estimates, recent counts or a combination. Table 2-6-A indicates that parks rely heavily on estimates of visitor numbers; however, with the development and expected application of the VDS in increasing numbers of parks, the accuracy of the data is expected to improve with time.

Table 2-6-A: Data sources for reporting number of visits to parks for each region (number of parks) – all regions

Region	UNE	LNE	Eden	Southern	Total
	n=193	n=194	n=19	n=127	
<i>Data sources</i>					
Visitor data system	9	5	4	4	22
Estimate	132	169	12	104	417
Recent count	2	1	0	0	3
Combination of sources	10	19	3	19	51

Source: PWD

There were an estimated 16.5 million visits to parks and reserves across all regions in 2004/2005. The Eden region, with the smallest area and the fewest number of parks had the least visitors. The Southern region, which includes the highest number of visitors to an individual park, Kosciusko National Park, received the highest visitor numbers overall.

For the UNE region there were an estimated 4.4 million visits to national parks and reserves. The top four parks visited in the region were Coffs Coast Regional Parks with one million visits (source: estimates), Cape Byron State Conservation Area with 800 000 visits (source: estimates) and both Yuraygir National Park and Mutton Bird Island Nature Reserve, which both reported an estimated 500 000 visits (source: VDS). Twenty parks reported no visits.

For the LNE region there were an estimated four million visits to national parks and reserves. The top three parks visited in the region were Arakoon State Conservation Area with 500 000 visits (source: VDS), Oxley Wild Rivers National Park with 275 000 visits (source: estimates) and Munmorah State Conservation Area with 260 000 visits (source: VDS). Nineteen parks reported no visits.

For the Eden region there were an estimated 414 360 visits to national parks and reserves. The top three parks visited in the region were Ben Boyd National Park with 200 000 visits (source: estimates), Mimoso Rocks National Park with 120 000 visits (combination of sources) and Bournda National Park with 24 000 visits (source: VDS). Dangelong Nature Reserve and Kybayan State Conservation Area reported no visits.

For the Southern region there were an estimated 5.7 million visits to national parks and reserves. The two parks with the highest visitation estimates were Kosciuszko National Park (est. 3 million) and Morton National Park (est. 1 million). There were no visitor estimates for twenty-one parks.

## Recreation and tourism facilities

Indicator 6.3 (Category B) Availability and usage of recreational / tourism facilities (Eden region)  
- Data have been provided for all regions

***The number of recreation and tourism facilities on State forests has remained stable.***

### Trend

↔ State forests

N/A DEC estate

### Data and interpretation

Comparable and consistent data for availability and usage of recreation and tourism facilities across both the DEC estate and State forests are not presently available. Although Forests NSW, and more recently the PWD, have provided data on the number of facilities, no data have yet been available on actual usage. The lack of usage data to date can be explained by the difficulty in measuring this with any accuracy, largely due to resourcing requirements and the remoteness of some of these facilities.

Furthermore, the PWD has previously provided data on the number of facilities available for recreation and tourism in its parks and reserves, but classification of visitor facilities was variable between regions making comparisons difficult. In 2004/2005 data for DEC estate in the Eden and Southern regions has been obtained from the *State of the Parks* survey.

Table 2-6-B shows the availability and appropriateness of visitor facilities in parks. The assessment criteria consider the suitability of facilities for existing users, but also how well the facilities help maintain park values. It is important not to build more visitor facilities when they will compromise reserve values or are not appropriate for the reserve category. For example, new structures in nature reserves are generally restricted to environmental management, not visitor infrastructure. Generally the visitor facilities measured here are picnic tables and camping areas, not information or educational structures.

More than half of the parks reported that there were no visitor facilities on the reserve and the nature and level of visitor use and reserve category did not justify their provision. This is mainly explained by the fact that over half the parks in each region are nature reserves: 55% in the UNE region, 76% in the LNE region, 78% in the Eden region and 79% in the Southern region.

Nearly a quarter of all parks (114 parks) reported that visitor facilities and services were appropriate to the reserve category and adequate for current levels and types of visitation.

Only 1% (seven parks) reported that there were no visitor facilities or services despite an identified need.

Table 2-6-B: Availability and appropriateness of visitor facilities within parks for each region (number of parks)

Assessment criteria	Region				
	UNE	LNE	Eden	Southern	Total
	n=153	n=194	n=19	n=127	n=493
Visitor facilities and services are appropriate to the reserve category and adequate for current levels and types of visitation	39	48	5	22	114
Visitor facilities and services are appropriate to the reserve category but are inappropriate for current levels and types of visitation	17	31	5	14	67
There are no visitor facilities or services despite an identified need	2	2	0	6	10
Existing facilities are inappropriate for the reserve category	1	2	0	4	7
There are no visitor facilities on this reserve and the nature and level of visitor use and reserve category do not justify their provision	94	111	9	81	295

Source: PWD

Forests NSW has continued to provide data on the actual number of facilities available on its estate. The number of recreational facilities available in State forests has remained stable since 2002/2003. This follows a fall in the number of facilities in the UNE, LNE and Eden regions in 2001/2002. Since the inclusion of the Southern region in 2002/2003, there have only been small annual variations across all regions.

At the end of 2004/2005, the total number of facilities was 112, which included lookouts, camping areas and roadside rest areas and picnic sites. These were largely located within State forests in the LNE region (55 facilities). Change in the total number of facilities situated in State forests in the forest agreement regions is due to an 18% decrease in the LNE region. This was largely due to a reduction in the number of lookouts and roadside rest areas or picnic sites. The number of facilities situated in all other regions remained stable (table 2-6-C).

There were also 38 forest walks and drives located within State forests across the regions. Most of these drives or walks were situated in the LNE region (23).

Table 2-6-C: Recreation/tourism facilities in State forests – all regions

Recreational facilities provided	Region				total
	UNE	LNE	Eden	Southern	
Roadside rest area/picnic area	2	17	8	12	39
Forest drives (marked)	2	1	1	0	4
Forest walks (marked)	3	22	2	7	34
Lookouts	1	8	0	6	15
Camping areas	1	23	3	15	42
Camps/huts/cottages	1	7	2	6	16
<b>Total facilities</b>	<b>10</b>	<b>78</b>	<b>16</b>	<b>46</b>	<b>150</b>

Source: Forests NSW

State forests are used for a range of recreation and educational activities, including horse riding, car and mountain bike rallies, orienteering, bushwalking and training/exercises. Permits were issued for 213 recreation or educational activities in State forests in 2004/2005. Permits were issued for activities largely in the LNE (86) and Southern regions (106).

The number of permits issued for activities in State forests has remained relatively stable over the past few years, following a marked decline around 2001/2002. The fall in permits in 2001/2002 is thought to be largely attributable to changes to public liability insurance and increasing premiums. As shown in figure 2-6-A, the number of permits issued across the regions increased in 2002/2003, due to the inclusion of data for the Southern region. However, actual permits issued on a regional basis have only shown minor annual variations.

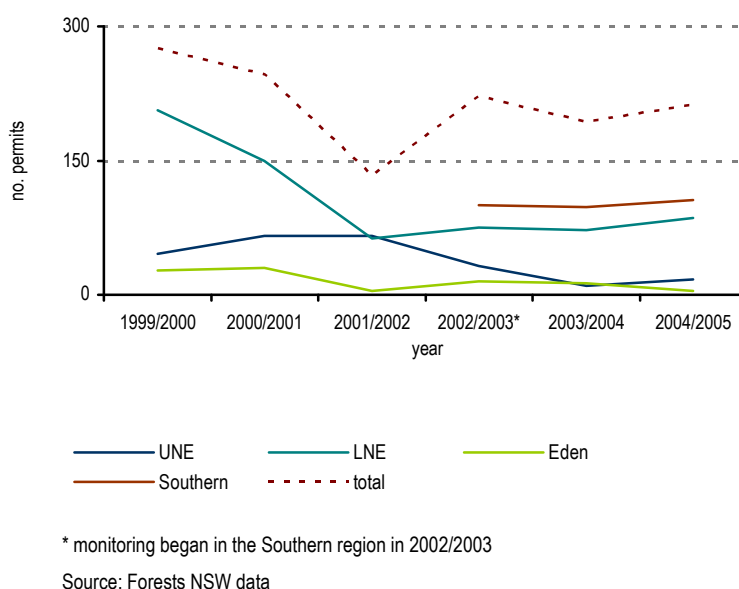


Figure 2-6-A: Permits issued for recreation/educational activities in State forests – all regions

## Employment

MIG indicator 6.5.a:	Direct and indirect employment in the forest sector and forest sector employment as a proportion/percentage of total employment (UNE, LNE, Eden, Southern regions)
Indicator 6.4:	Employment numbers by type across all forest users in the Eden region

**Combined regional employment by the PWD (direct) and Forests NSW (direct and indirect) has remained stable at about 6 978 EFT employees, increasing by less than 1% since 2002/2003.**

### Trend

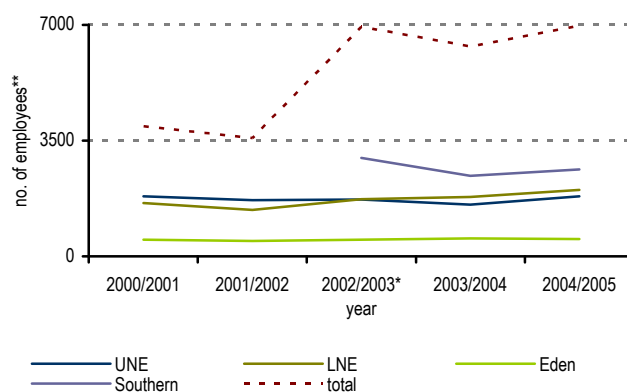
↔ Forests NSW and PWD

### Data and interpretation

Employment derived directly or indirectly from forests is an important measure of the value of these areas to the regional economy, much like tourism. Data are not comprehensive for this indicator at present. Data has been provided by DEC and Forests NSW.

Employment by both PWD and Forests NSW has remained relatively stable across the forest agreement regions since 2000/2001<sup>15</sup> (figure 2-6-B). Employment by these agencies in the UNE, LNE and Eden regions has increased by about 9%. Since the inclusion of the Southern region in 2002/2003, combined employment has increased by less than 1%. At the end of 2004/2005 combined employment by Forests NSW and PWD was 6 978 equivalent full-time (EFT) employees.

Total combined employment by these agencies in each region has remained relatively stable for the UNE and Eden regions. Since 2000/2001, employment in the UNE region has fallen by less than 1%, whilst employment has increased by 3% in the Eden region. Larger changes in employment have been recorded for the LNE and Southern regions, which are the location of the larger regional employment totals by Forests NSW and PWD. Since 2000/2001, combined regional employment by the agencies in the LNE region has increased by 20%, with annual variations between 3% and 19%. For the Southern region, since 2002/2003, total combined employment has decreased by 12%.



\*Marked rise in total employment in 2002/2003 due to the inclusion of employment figures for the Southern region.

\*\*Employment numbers include direct PWD employment calculated from its Establishment Plan and Forests NSW direct and indirect employment.

\*\*\* Data for 1999/2000 has not been included as an accounting error was made in employment figures for FNSW and incomplete data were available for employment by the PWD of DEC.

Source: DEC and Forests NSW data

Figure 2-6-B: Total PWD (direct) and Forests NSW (direct and indirect) regional employment

## DEC

At the end of 2004/2005 the number of permanent and temporary EFT positions<sup>16</sup> was 805.3 and by region was:

- 194.35 EFT in the UNE region;
- 281.05 EFT in the LNE region;
- 52.15 EFT in the Eden region; and
- 277.75 EFT in the Southern region.

In 2004/2005, data was provided via Aurion (a central Human Resource database used by PWD). The proportion of each PWD area within each region was determined through Arcview layers. This figure was multiplied by the total employment number within a particular PWD area, obtained from the

<sup>15</sup> Data for 1999/2000 has not been included as an accounting error was made in employment figures for Forests NSW and incomplete data were available for employment by the PWD of DEC.

<sup>16</sup> Does not include casual or seasonal positions.

Establishment Plan. Figures for PWD Regional, Section or Unit staff within branches were added to give a total employment figure for each region.

Employment figures included all staff located within each PWD region, although some proportion of staff time would also be spent outside the region. All staff from DEC Environmental Planning and Regulation Division (EPRD) Northern and Southern Branches, and relevant staff from its Central Branch have been included, although they may not all have done forest-related tasks. Staff from the PWD Reserve and Wildlife Conservation Branch have only been included where they clearly did only forest-related tasks. There may be other staff in DEC or PWD who have minor roles in forest-related tasks, but they have not been included.

In addition, the total number of EFT for Aboriginal and Torres Strait Islander EFT positions in PWD across the state was 132.

Figures on indirect employment in forest management by DEC are not available. Multipliers for calculating this have not been developed for the forest agreement regions.

#### *Forests NSW*

Total direct and indirect employment by Forests NSW at the end of the reporting period was 6 173 direct and indirect employees. By region, employment by Forests NSW was:

- 1 621 EFT in the UNE region;
- 1 731 EFT in the LNE region;
- 469 EFT in the Eden region; and
- 2 352 EFT in the Southern region.

Since 2000/2001, Forests NSW employment numbers have been variable, mainly because figures include indirect employment, which may be seasonal, temporary or casual employees and contractors.

Employment by Forests NSW covers a range of activities, including growing and managing of forests<sup>17</sup>, harvesting and haulage, primary processing<sup>18</sup>, apiary and other activities, such as gravel extraction and plantation establishment contractors. The largest employment sector by Forest NSW is primary processing, which makes up 67% of its total employment across the forest agreement regions.

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<sup>17</sup> Includes administration, maintenance activities, consultants and contractors.

<sup>18</sup> Processing done at a site where the input is raw material supplied by Forests NSW and includes hardwood and softwood mills.



## Places of cultural significance

Indicator 6.4.c	Change in condition and number of recorded places, artefacts, sites, buildings or other structures (UNE and LNE regions)
Indicator 6.4.c (i)	Change in condition and number of Aboriginal cultural heritage recorded places, artefacts, sites or other structures (Southern region)
Indicator 6.6	Change in condition and number of recorded places, artefacts, sites, buildings or other structures (Eden region)

***There was an 8% increase in the total Number of Aboriginal objects recorded on DEC estate. 312 new Aboriginal sites were identified on State forests during the year.***

### Trend



DEC estate



State forests (number of newly identified sites of cultural significance)

### Data and interpretation

Cultural, social and aesthetic cultural values of an area are often difficult to quantify. More often than not such values are intangible and their significance subjective. However, one indicative measure of how well forests are being managed for cultural values is the number of places or areas of cultural, social or aesthetic significance are identified and/or conserved.

The number of culturally significant sites; be it buildings, ceremonial sites, artefacts or places, have been consistently reported since ESFM monitoring began in 1999/2000. The availability of such data is largely due to other legislative responsibilities by both DEC and Forests NSW to appropriately identify and manage for such sites.

In 2001, PWD of DEC (then NPWS) installed two new management systems; the Aboriginal Heritage Information Management System (AHIMS) and the Historic Heritage Information Management System (HHIMS). These systems, in use since 2001, have greatly improved the quality of data and the PWD's ability to effectively report against these indicators. The development of these systems also helped improve the depth and amount of information about both Aboriginal and non-indigenous cultural heritage.

### *Aboriginal cultural heritage in the DEC estate*

Data provided by the PWD have been obtained from the AHIMS. GIS was used to intersect the AHIMS layer with the forest agreement regional boundaries to obtain the number of Aboriginal objects recorded in AHIMS for each region. This is a statewide data set and therefore includes data for the entire LNE region (parts of both DEC EPRD Northern and Central Branch management areas).

Sites identified by the PWD are referred to as 'Aboriginal objects', consistent with terminology used in AHIMS where the data are sourced. An Aboriginal object, as defined by the *National Parks and Wildlife Act*, is 'any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains'.

At the end of 2004/2005, there were 5 211 Aboriginal objects recorded on-park and 15 476 off-park across all regions by the DEC. The number of objects recorded on-park has increased by 8% since 2003/2004, while the number of objects recorded off-park has decreased by 9%.

Most Aboriginal objects recorded on-park were situated in the Southern (2 158) and LNE (2 143) regions. Fewer objects were recorded in the UNE (398) and Eden (512) regions. Similarly off-park, Aboriginal objects were largely located in the LNE region (8 403) and the Southern region (4 583). The remaining objects were located in the UNE (1 551) and Eden (939) regions.

The increase in the number of records in AHIMS is a result of survey and research activity, and increased community participation in providing information to AHIMS. In contrast, the number of Aboriginal objects recorded off-park actually decreased during the reporting period. It is likely that this is due to differences in the methodology for calculating the number of Aboriginal objects between 2003/2004 and 2004/2005, rather than a change in the number of sites per region. However, as the AHIMS database is constantly under review and subject to addition and subtraction of records, this may have contributed to the decrease in sites within these regions.

As required by the indicators, the condition of Aboriginal objects is reported for the first time in 2004/2005. The *State of the Parks* data presented this year will be considered by the PWD as its baseline information against which change will be measured in future. The assessment criteria outlined in table 2-6-D describe the condition of protected Aboriginal places and sites.

In the *State of the Parks* survey that produced the data in table 2-6-D, each park listed its five most significant reserve values. Almost half the parks identified no Aboriginal places or sites amongst their most important reserve values (241). For the 252 parks that did identify Aboriginal heritage as one of the significant reserve values:

- 42% reported that there was insufficient information available to assess the condition of the Aboriginal places and sites;
- 26% of parks with significant Aboriginal heritage values reported that most of the important Aboriginal places and sites were intact;
- 27% reported that some important Aboriginal places and sites were being degraded but the continued integrity of most of these was not currently at risk; and
- 5% reported that some important Aboriginal places and sites were being degraded and the integrity of these places and sites was at risk without corrective action.

Table 2-6-D: Condition of Aboriginal places and sites within parks for each region (number of parks)

Assessment criteria	Region				Total N=493
	UNE	LNE	Eden	Southern	
	n=153	n=194	n=19	n=127	
<b>Total number of parks for which Aboriginal Heritage was reported as a significant value</b>	87	88	17	60	<b>252</b>
<b>Aboriginal places and sites were not identified as being among the most important values</b>	66	106	2	67	<b>241</b>
Most important Aboriginal places and sites are intact	29	13	6	18	<b>66</b>
Some important Aboriginal places and sites are being degraded but the continued integrity of most of these is not currently at risk	16	32	5	14	<b>67</b>
Some important Aboriginal places and sites are being degraded and the integrity of these places and sites is at risk without corrective action	3	4	0	6	<b>13</b>
Important Aboriginal places and sites are being degraded	0	0	0	0	<b>0</b>
Insufficient information is available to assess the condition of the Aboriginal places and sites	39	39	6	22	<b>106</b>

Source: PWD

The lack of sufficient information available to assess the condition of Aboriginal places and sites in some parks are areas for management review.

#### *Aboriginal cultural heritage in State forests*

Forests NSW continues to survey for Aboriginal sites as part of its pre-harvest survey process. If a site is detected, the local Aboriginal land council or indigenous representatives are contacted to decide the protection given to the site. Forests NSW also seeks advice about the long-term management of these sites. Forests NSW also uses the AHIMS system to check that the Forests NSW system has not missed any detected sites. In addition, previously detected sites are also protected from the impact of harvesting operations.

Sites occurring in State forests include natural features, art and ceremonial sites, sites associated with tools, artefacts and hunting, and traditional Aboriginal life. In 2004/2005 Forests NSW was unable to provide detail of the total number of existing sites on State forests. However, there were 312 Aboriginal new sites identified during the year in all regions. New sites located were mostly in the UNE region (173). New sites were also found in the LNE (39), Southern (36) and Eden regions (19). No sites of Aboriginal significance were destroyed<sup>19</sup> during 2004/2005.

<sup>19</sup> The destruction of sites requires licence approval from DEC and consultation with the relevant local Aboriginal land council.

### *Historic heritage features on DEC Estate*

The number of historic heritage features within the park system has been reported since 1999/2000. 2004/2005 is the first year their condition has been reported.

On 15 February 2005, there were 6 323 historic items and places in the DEC estate. This is a substantial increase since 2003/2004, when there were 4 521. The increase can be attributed to expanded records in HHIMS for all regions.

Heritage sites were largely situated in the Southern region (2 581), followed by the LNE region (1 929), UNE region (1 473) and Eden region (340).

The data on the total number of historic places within the DEC estate for each region was taken from the HHIMS. GIS was used to intersect the HHIMS layer with the CRA boundaries to obtain the number of historic places recorded on-park in HHIMS for each forest agreement region.

This is a statewide data set and therefore includes data for the entire LNE region (parts of both PWD Northern and Central Branch management areas).

### *Condition of historic heritage features*

A significant development in indicator monitoring in 2004/2005 is the availability of data on the condition of heritage sites. Through its *State of the Parks* survey, the PWD was able to obtain data on site condition for each park that responded to the survey. As shown in table 2-6-E, each park was required to list the five most significant reserve values.

The majority of parks (64%) did not include non-indigenous (historic) values among their most important values. For parks that did identify these values as among their most important:

- 34% indicated that there was insufficient information to assess the condition of the non-indigenous (historic) values;
- 19% indicated that most of the important non-indigenous (historic) values were intact;
- 30% indicated that some important non-indigenous (historic) values were being degraded but the continued integrity of most of these values was not currently at risk;
- 15% indicated that some important non-indigenous (historic) values were being degraded and the integrity of these values maybe at risk without corrective action; and
- 3% reported that important non-indigenous (historic) values were being degraded.

The lack of sufficient information and the degradation of some of these non-indigenous (historic) values in some parks have been identified as areas for DEC management review.

Table 2-6-E: Condition of non-indigenous (historic) features within parks (number of parks) – all regions

Assessment criteria	Region				Total n= 493
	UNE	LNE	Eden	Southern	
	n=153	n=194	n=19	n=127	
<b>Total number of parks for which non-indigenous (historic) heritage was reported as a significant value</b>	51	73	10	44	<b>178</b>
<b>Non-indigenous (historic) values were not identified as being among the most important values</b>	102	121	9	83	<b>315</b>
Most important non-indigenous (historic) values are intact	15	6	2	10	<b>33</b>
Some important non-indigenous (historic) values are being degraded but the continued integrity of most of these values is not currently at risk	10	26	3	15	<b>54</b>
Some important non-indigenous (historic) values are being degraded and the integrity of these values may be at risk without corrective action	5	11	0	10	<b>26</b>
Important non-indigenous (historic) values are being degraded	2	3	0	0	<b>5</b>
Insufficient information is available to assess the condition of the non-indigenous (historic) values identified as valuable	19	27	5	9	<b>60</b>

Source: PWD

#### *Historic heritage features on State forests*

All sites of non-indigenous exploration and settlement that are assessed and recognised to be of local or regional historical significance are incorporated within Forests NSW GIS system. Potential buffers around significant sites are incorporated into the FMZ system. Sites determined to be of local or regional significance will also be entered into the regional heritage register.

The total area of State forest zoned for heritage value across the regions was 3169 hectares, with a further 27 773 hectares zoned primarily for aesthetic value. Most of these areas are located within the Eden and Southern regions. In addition there was one new non-indigenous historic site located this year in the Eden region.

## Criterion 7: Legal, institutional and economic frameworks

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Consistent with previous years' reporting, the information provided for Criterion 7 is presented on a statewide scale and in most cases is not directly attributable to individual regions. However, individual projects undertaken in particular forest agreement regions have been reported separately where possible.

### 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, Southern regions)

#### ***The legal framework for forests and forest management continues to be developed***

##### **Trend**

No trend available

##### **Data and interpretation**

The legal framework for forests and forest management is extensive and includes legislation, amendments to existing legislation, policies, guidelines and codes of practice. As a result the following discussion mainly includes information on legal framework for forests and forest management that has not been previously reported or that has been further developed in 2004/2005.

##### **Policy and guidelines**

The DEC and FNSW have numerous policies and guidelines that assist in supporting the conservation and sustainable management of forests.

A list of DEC policy documents is published each June and December in the *NSW Government Gazette*. The DEC website [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au) provides public access to policies and management documents. A number of these policies are relevant to sustainable forest management

They include corporate documents, scientific policies and manuals, personnel guidelines, field policies and procedures and are available for inspection by arrangement or purchase.

Forests NSW have a number of policies, codes and guidelines that assist in sustainable forest management. A number of Forests NSW's policies can be viewed on the Forests NSW website [www.dpi.nsw.gov.au/forests](http://www.dpi.nsw.gov.au/forests).

##### **Legal framework for Aboriginal interests**

###### *Aboriginal Areas*

The *NSW Native Title Act 1994* relates to this indicator. The *NSW Native Title Act* gives effect to the Commonwealth native title legislation. Section 104A of that Act protects existing native title rights in relation to activities associated with reserving land for protected areas and managing that land.

Under the *National Parks and Wildlife Act 1974*, lands can be reserved as Aboriginal Areas. These are associated with a person, event or historical theme, or contain a building, place, feature or landscape of cultural significance to Aboriginal people or that is important in improving public understanding of Aboriginal culture, its development and transitions. The areas are reserved to protect and conserve

these cultural values, from before and after European settlement, as well as natural values that are present. Aboriginal people may have special access for cultural purposes, and they can be used to promote public understanding of their values (*State of the Parks*, 2004). There are currently 11 Aboriginal Areas.

#### *Aboriginal co-management*

Aboriginal co-management of reserves mainly occurs through:

- lease back agreements;
- Indigenous Land Use Agreements (ILUAs)
- Memorandum of Understanding (MOU): Aboriginal communities can enter into a formal agreement with the PWD on their contribution to planning and management of national parks and other reserves; and
- informal agreements between Aboriginal communities and DEC.

#### *Lease back*

There are two types of lease back arrangements: one for reserves listed under Schedule 14 of the *National Parks and Wildlife Act*, and one for land claims made under *NSW Aboriginal Land Rights Act 1983*.

Seven reserves are listed under Schedule 14 of the *National Parks and Wildlife Act*, three in forest agreement regions. The handback of two of these reserves, Biamanga and Gulaga National Parks in the Eden region, is being negotiated. Negotiations for a third, Mount Yarrowyck Nature Reserve in the UNE region, have not started.

Two areas are subject to lease back agreements under s.36A of the *Aboriginal Land Rights Act*. Lands at Stockton Bight and at Warrell Creek (LNE region).

#### *ILUAs*

Indigenous Land Use Agreements (ILUAs) allow the Government to resolve native title claims over areas of land, and will generally involve allowance for some level of management by native title claimants. One ILUA has been finalised (the Arakwal National Park in the UNE region), there are three others under negotiation:

- Saltwater ILUA on the mid north coast, which will cover the new Saltwater National Park and Khappingat Nature Reserve (LNE region);
- Gundungurra ILUA in the Blue Mountains, this will cover parts of Blue Mountains National Park, Kanangra-Boyd National Park, Nattai National Park plus up to 12 other DEC reserves (some of which are in the forest agreement regions); and
- Githabul ILUA in Border Ranges, this will cover up to ten national parks including Border Ranges National Park, Yabbra National Park, Tooloom National Park, Toonumbar National Park (UNE region).

## MOUs

There are three MOUs in parks or reserves, none in a forest agreement region.

### *Informal agreements*

These include:

- Aboriginal people participating in existing management committees and advisory committees or the PWD creating new Aboriginal Advisory Committees; and
- an informal arrangement where the PWD and representatives of Aboriginal community agree on when and who the PWD should consult on particular issues.

An example is the Aboriginal Heritage Co-management Committee in Central Coast Hunter Range Region, which has representatives from 13 Aboriginal groups (Aboriginal land councils, traditional owners groups, Elders groups) in the Hunter Valley and on the Central Coast.

### *Review of Part 4A of the National Parks and Wildlife Act*

As reported last year, PWD is developing recommendations to improve Part 4A of the *National Parks and Wildlife Act* for submission to Parliament.

### *Cultural access policies*

Access to parks by Aboriginal people for cultural practices supports the continuation of Aboriginal culture as a living culture and furthers the culture heritage objectives of the *National Parks and Wildlife Act*. Cultural activities include wild resource use, visiting areas containing burials and other places of significance, and cultural camps.

DEC is developing policies to guide cultural access to lands handed back to Aboriginal owners under Part 4A of the *National Parks and Wildlife Act*, lands which may be subject to an ILUA and other lands of significance to Aboriginal people. DEC has also continued working with other government agencies to develop a whole of government framework for wild resource use under the Government's Aboriginal Affairs Strategy – Cultural and Heritage Action Plan.

PWD developing policy and the Cultural Heritage Division manages the whole-of-government framework.

## **Public participation in policy development**

The PWD continues to provide opportunities for public participation in policy development. Public participation in policy formulation is encouraged through bodies such as:

- National Parks and Wildlife Advisory Council;
- Aboriginal Cultural Heritage Advisory Committee. Currently there is a call for nominations; once established (in April 2006) the committee will call for nominations for two people to also sit on the National Parks and Wildlife Advisory Council;
- NPWS Regional Advisory Committees. The Minister for the Environment reconstituted 19 committees to serve from July 2004 until June 2008;
- Trusts appointed under the *National Parks and Wildlife Act*. So far the Cape Byron State Conservation Area Trust has been established; and



- Arakwal National Park Management Committee, Mount Grenfell Historic Site Board of Management and the Mutawintji Board of Management also allow for public participation.

Involving stakeholders in policy development is crucial to Forests NSW's role in managing forests on behalf on the people of New South Wales. Some examples of the ways Forests NSW has worked with stakeholders over the past year include:

- providing feedback and comment via the internet – an on-line forest visitor survey to capture the type of groups and number of people who use State forests; and
- providing for public comment on policy documents – Regional ESFM plans for forest agreement regions were on public display for review and comment in early 2005.

#### *Non indigenous participation*

In 2004/2005, details about non-indigenous participation in park management have been sourced from the *State of the Parks* survey. Table 2-7-A describes the level of community (non-indigenous) consultation and input into decision making.

*Table 2-7-A: Levels of community (non-indigenous) consultation and input into decision making for parks (number of parks) – all regions*

Assessment Criteria	Region				Total n=493
	UNE	LNE	Eden	Southern	
	n=153	n=194	n=19	n=127	
There is an established process of community consultation and input into decision making that covers all major aspects of reserve management of interest to the community	10	20	3	7	40
Community consultation and input into decision making occurs at the initiation of park managers	38	58	8	58	162
Community consultation is limited to responding to specific issues that have generated vocal public concern	16	26	4	14	60
Apart from any statutory management planning, there has been no community consultation about management of the reserve	21	18	1	4	44
A plan of management has been prepared in the last 12 months that has adequately addressed consultation needs for the reserve	51	44	2	35	132
There is insufficient public interest to merit community consultation about management of the reserve	17	28	1	9	55

Source: PWD

The majority of parks in the LNE, Eden and Southern regions that responded to the question reported that community consultation and input into decision making occurs at the initiation of park managers. The majority of parks in the UNE region indicated that a Plan of Management (PoM) had been prepared in the last 12 months that adequately addressed consultation needs for the reserve.

#### *Indigenous participation*

In 2004/2005, DEC developed interim community consultation requirements for applicants to guide people making applications for permits and consents under Part 6 of the *National Parks and Wildlife Act*.

Table 2-7-B: Levels of Aboriginal community consultation and input into decision making for parks (number of parks) – all regions

Assessment Criteria	Region				Total n=493
	UNE	LNE	Eden	Southern	
	n=153	n=194	n=19	n=127	
There is an established process of Aboriginal consultation and input into decision making that covers all major aspects of park management of interest to the community	21	13	1	0	35
There is an established process for consultation with relevant Aboriginal communities concerning management of the reserve using consultation processes that are appropriate for the communities involved	34	59	9	36	138
Specific efforts are made to consult with Aboriginal communities, using appropriate consultation processes, as part of broader community consultation exercises	20	43	4	38	105
Apart from any formal management planning and statutory processes, there are no specific programs or processes for consultation with relevant Aboriginal communities about management of the reserve	27	26	2	7	62
A plan of management has been prepared in the last 12 months that has adequately addressed consultation needs for the reserve	34	40	0	32	106
NPWS is unaware of an Aboriginal community with an interest in the reserve	17	13	3	14	47

Source: PWD

In 2004/2005, PWD has supplied data about indigenous participation in park management from the *State of the Parks* survey. Table 2-7-B describes the level of Aboriginal community consultation and input into decision making for parks in each region. The assessment criteria for this question consider the concepts of consulting with relevant indigenous communities, through to active involvement of communities in decision making.

For the UNE, 49% of the parks responding to the question reported that there is an established process or specific effort is made in consulting Aboriginal communities using various consultation processes. In addition, 22% of parks reported that a plan of management has been prepared in the last 12 months that has adequately addressed consultation needs for this reserve.

For the LNE region, 59% of the parks responding to the question reported that there is an established process or specific effort is made in consulting Aboriginal communities using various consultation processes. In addition, 21% of parks reported that a plan of management has been prepared in the last 12 months that has adequately addressed consultation needs for this reserve.

In the Eden region, 74% of the parks responding to the question reported that there is an established process or specific effort is made in consulting Aboriginal communities using various consultation processes.

For the Southern region, 58% of the parks responding to the question reported that there is an established process or specific effort is made in consulting Aboriginal communities using various consultation processes. In addition, 25% of parks reported that a plan of management has been prepared in the last 12 months that has adequately addressed consultation needs for this reserve.

Forests NSW's revised regional ESFM plans highlight its commitment to the involvement of Aboriginal communities in the management of State forests. In addition, as part of its EMS, Forests NSW is currently considering the drafting of guidelines for the involvement of Aboriginal communities in the protection of Aboriginal cultural heritage on its estate.

## Institutional framework

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

***Forests NSW and PWD of DEC continued to undertake various public education and awareness activities. PWD and Forests NSW staff continue to be provided with specialised training that assists in managing the conservation and sustainable management of forests***

### Trend

No trend available

### Data and interpretation

#### Public education and awareness

##### ***PWD of DEC***

In 2004/2005, the PWD provided data about public education and awareness from its *State of the Parks* survey. Table 2-7-C describes the levels of awareness and/or education programs and how far these meet management needs and visitor expectations. This includes interpretative activities and media, such as the *Discovery* program, which reach the broader community as well as park visitors. The assessment criteria consider visitor numbers and expectations of visitors.

Table 2-7-C: Levels of awareness and or education programs that exist and the level to which this meets the needs of park management and visitor expectations for parks (number of parks) – all regions

Assessment criteria	Region				Total
	UNE	LNE	Eden	Southern	
	n=153	n=194	n=19	n=127	
Implementation					
A planned approach to awareness or education information, facilities and activities is being implemented	39	61	8	35	143
Little or only reactive awareness or education information, facilities and activities are provided relating to the reserve	18	34	0	16	68
Effect of management					
The current needs of park management and legitimate visitor expectations are being substantially or fully met	36	55	7	30	128
The current needs of park management or legitimate visitor expectations are being met in part only	16	31	1	19	67
The current needs of park management and legitimate visitor expectations are not being met	5	9	0	2	16
The nature and level of visitor use does not justify the provision of an awareness or education program	96	99	11	76	282

Source: PWD

Table 2-7-C shows that, for over half of the 211 parks in RFA regions responding to this question, it is considered that the nature and level of visitor use did not justify providing an awareness or education program for the reserve.

Of the 211 parks responding, 68% reported that a planned management approach to awareness or education information, facilities and activities was in place and 61% indicated that the current needs of park management and legitimate visitor expectations were being fully or substantially met.

DEC has a number of programs and projects that raise awareness of, or involve the public in, forest conservation and management. These are described below.

#### *Discovery program*

PWD's *Discovery* program provides education through interpretation techniques, bringing the natural and cultural heritage alive in walks, talks and tours. Local people are employed as *Discovery* rangers and *Discovery* coordinators and there is a program of volunteer presenters.

During 2004/2005, 2 639 activities took place across the state as part of the PWD's *Discovery* program. Participation in these activities throughout the year exceeded 100 000 for the first time since the program began in 1993, with a total of 115 978 participants. The *Discovery* program's main achievements were:

- maintaining a very good to excellent rating from participants on their experience;
- evidence of community learning about natural and cultural heritage; and
- improvement in promotion through targeted advertisement, enhanced website and media coverage.

Seventeen PWD management regions delivered aspects of the Aboriginal *Discovery* program throughout the State during the year. Over 550 activities were held statewide, engaging 77 Aboriginal *Discovery* rangers with assistance from a further 23 Aboriginal volunteers involved in delivery training and helping develop activities.

#### *Discovery tour guide training for local Aboriginal people*

Seven PWD management regions conducted *Discovery* Tour Guide training for people from local Aboriginal communities; 104 trainees participated this year.

The Hunter region's strong support for the *Discovery* program led to an Environmental Trust grant and regional financial support. As a result, 67 local Aboriginal people trained as guides and 10 graduates were employed for 10 months as trainee *Discovery* rangers.

#### *School curriculum-based Aboriginal cultural activities*

Many regions now provide curriculum-based Aboriginal cultural activities for school students in the form of park excursions and school visits by Aboriginal *Discovery* rangers.

#### *Volunteering*

DEC and Conservation Volunteers Australia cooperatively run practical, educative and on-ground conservation projects in 19 national parks and nature reserves. During 2004/2005 they:

- had 402 volunteer days;
- planted 2 196 trees;
- propagated 200 plants;
- repaired 28 000 metres of tracks;
- removed 700 metres of fences;
- removed exotic weeds from 11.2 hectares of land.

#### *Conservation Agreements*

Twenty-three conservation agreements (CAs) (formerly termed Voluntary Conservation Agreements) were signed this year, covering 1 657 hectares. There are now 182 CAs in New South Wales, protecting an area of 13 603 hectares.

#### *Wildlife refuges*

Twenty-one wildlife refuges were gazetted this year, an area of 1 084 hectares. By 30 June 2005 there were 620 wildlife refuges in New South covering 1 715 135 hectares.

#### *Land for Wildlife*

Fifty-one landholders registered their properties for Land for Wildlife. These cover 2 696 hectares of which 603 hectares are retained as natural wildlife habitat. By the year's end, there were 347 landholders with full registration that cover 30 608 hectares, of which 16 123 hectares are retained as habitat. There were also 47 landholders (covering 397 ha) working towards registration.

### *Electronic service delivery*

The new DEC website provides agency-wide information and educational resources. It had 3.2 million 'visits' this year, a 'visits' consisting of one or more page views by a single visitor. The most popular pages for the PWD site were: find a park, specific national park pages, native plants and animals and Australian national parks.

DEC's new Environment Line is a 'one-stop-shop' for information and advice on the environment, conservation and sustainability. The public can request advice via phone calls, letters, faxes, emails and in person. There were 116 005 information requests this year, including those about national parks.

DEC published a number of documents in print and online formats, ranging from corporate publications, discussion papers and draft plans, guidelines and advisory documents, environmental and technical reports, fire management plans and strategies, plans of management, recovery plans, education and community relations, brochures, booklets and leaflets, new or revised parks and reserves brochures, newsletters and magazines and posters. The documents are listed in Appendix 14 of the DEC Annual Report 2004/2005, which can be found at:

[www.environment.nsw.gov.au/about/decar05.htm](http://www.environment.nsw.gov.au/about/decar05.htm).

### **Forests NSW**

Forests NSW continued to be involved in public education and awareness activities. These included field trips and professional study tours and meetings, presentations and community forums. Forests NSW hosted three teacher's bus trips, relevant for primary, secondary and tertiary teachers, at a range of State forest locations, providing teachers and educators with a unique experience to learn about many aspects of forestry.

Forests NSW employees were involved in 913 community forums, meetings or presentations across all forest agreement regions during 2004/2005. Of the total number of forums, 226 were held in the UNE region, 472 were held in the LNE region, 74 were held in the Eden region and 141 in the Southern region. These forums covered a wide range of matters related to forest management, including community bushfire management, cultural management, feral animal and noxious weed control and interactions with industry stakeholders.

Forests NSW also published a number of documents including its corporate annual report, *Seeing Report* and the *Bush Telegraph* magazine.

### **Planning, assessment and policy review**

#### Review of NSW forest agreements and integrated forest operations approvals

There is a formal requirement for PWD and Forests NSW to be involved in the five year review of the forest agreements. This process will be coordinated by FRIP, DIPNR.

#### State of the Parks report

In June 2005, DEC released *State of the Parks 2004*, a public report based on a rigorous survey of all aspects of management of the New South Wales park system. A brief summary of this report can be found in chapter 1.

### Park management planning

DEC is required by the *National Parks and Wildlife Act* to prepare a plan of management for each park and reserve. This year there were 20 new plans of management for 42 areas including:

- Tweed Caldera parks and reserves;
- Lake Macquarie State Conservation Area;
- Berowra Valley Regional Park;
- Gibraltar Range group of parks; and
- Yanununbeyan National Park, Nature Reserve and State Conservation Area.

Another 23 plans covering 28 areas were placed on public exhibition as a prelude to being adopted.

### Conservation compliance audit

The conservation compliance audit is a component of the Audit and Compliance Program, managed by a committee of PWD staff and independent members. An annual program plan of management self-audits began in 2002/2003.

Seventeen conservation compliance audits were carried out this year. Eight of these were in the forest agreement regions: Wyrabalong National Park, Sea Acres Nature Reserve, Kooregang and Hexham Swamp Nature Reserves (LNE region); Bongil Bongil National Park (UNE and LNE regions); Bald Rock and Boonoo Boonoo National Parks (UNE region); Seven Mile Beach National Park and Queanbeyan Nature Reserve (Southern region); and Davidson Whaling Station Historic Site (Eden region).

### ESFM planning

Forests NSW's revised Regional ESFM Plans for the Upper North East, the Lower North East, South Coast, Eden and Tumut State forest areas were on public display in early 2005. Further public and state agency comment will be considered before they are finalised.

The plans set out broad strategies, performance indicators and measurable outcomes for ecologically sustainable forest management in the regions, including the strategies that Forests NSW will put into practice to meet objectives in key areas of forest management.

## **Staff training and development**

A measure of the skills levels of PWD employees is the extent of their on-the-job training. In 2004/2005, 2 700 PWD employees participated in a range of training programs. These included field skills (1 767), occupational health and safety (703), management development (8), information management and technology (124) and professional development (98). Note that the number of employees who have participated in training programs exceeds the total number of PWD staff because the training categories identified above are composed of several individual programs.

The most common training was in field skills, which reflects PWD's emphasis on park management. The PWD is decentralised; about 65% of employees are based in regions. The PWD structure has four regional offices, in Coffs Harbour, Parramatta, Dubbo and Queanbeyan, and a central branch at Hurstville. The four field branches consist of 18 regions, made up of more than 50 area offices located in regional towns.

Forests NSW has an extensive training program for both its operational (field staff) and non-operational (office-based) staff. Forests NSW was only able to provide specific data for training of staff on a state-wide basis. In 2004/2005, there were 35 training categories (a training category may include more than one course) that were attended by one or more operational (field workers) or non-operational (office) staff. Training categories that were attended by the most operational staff were fire suppression (such as crew leader (149 staff) and basic firefighter (108 staff)), chainsaw use (156 staff), cultural heritage (169 staff) and first aid (148 staff). The main training courses attended by non-operational staff were designated training officer (60 staff), basic fire-fighting (50 staff) and first aid (44 staff).

### Enforce laws, regulations and guidelines

Data in this section has been derived from *State of the Parks* survey and are specifically about on-park law enforcement. Refer to chapter 3 for IFOA compliance and Forests NSW internal compliance information.

Table 2-7-D: Levels of management and impacts of illegal activities within parks (number of parks) – all regions

Assessment criteria	Region				Total
	UNE	LNE	Eden	Southern	
	n=153	n=194	n=19	n=127	
<b>Implementation</b>					
A planned approach to law enforcement is being implemented	17	33	2	25	77
Little or only reactive law enforcement is undertaken	69	86	7	46	208
<b>Effect of management</b>					
The impacts of illegal activity on important reserve values are slowly diminishing or controlled	33	40	3	36	112
The impacts of illegal activity on important reserve values are unchanged or increasing	53	79	6	35	173
Assessment criteria are not relevant for this reserve as law enforcement is not an issue or there is insufficient information to assess the negative impacts of illegal activities	64	69	7	53	193
parks not counted*	3	6	3	3	15

\* Due to a technical malfunction in the *State of the Parks* survey the parks indicated in the last row of the table have not been included in the calculations.

Source: PWD

Table 2-7-D is made up of two sets of assessment criteria that separately assess whether there is a planned approach to managing and implementing law enforcement and whether the impacts of illegal activities are being reduced.

Forty per cent of the 285 parks that responded indicated that law enforcement was not an issue for the reserve or that there was insufficient information to assess the negative impacts of illegal activities.



Of the 285 parks that responded to the question, 27% reported that they have a planned approach to law enforcement on-park and 39% indicated that the impacts of illegal activity on important reserve values were diminishing or controlled. This has identified a need for management review for parks with little or only reactive law enforcement planning or where the impacts of illegal activity on important reserve values are increasing.

## Capacity to measure and monitor change

MIG Indicator 7.3 (narrative): Capacity to measure and monitor changes in the conservation and sustainable management of forests (UNE, LNE, Eden, Southern regions)

### ***No outcomes to report***

#### **Trend**

No trend available

#### **Data and Interpretation**

The ESFM criteria and indicators (within this report) are the main mechanism to monitor changes in the conservation and sustainable management of forests in the UNE, LNE, Eden and Southern regions. The indicators monitor the effectiveness of management practices and their impact on the social, economic and environmental values of forests. The adequacy of the existing indicators will be assessed as a part of the five-yearly reviews of forest agreements.

Monitoring on a state-wide scale is provided on DEC estate through the *State of the Parks* reporting system (refer to Chapter 1) and on State forest estate through *SEEing* reporting.

## Research and development

MIG Indicator 7.4 (narrative): Capacity to conduct and apply research and development aimed at improving forest management and delivery of forest goods and services (UNE, LNE, Eden, Southern regions)

### ***No outcomes to report***

#### **Trend**

No trend available

#### **Data and interpretation**

In 2004/2005, as a result of its science review, DEC drafted a Science Investment Plan to link its science and research programs.

It is not possible to separate research work done by PWD staff from the whole of DEC. However, there were 104 papers published during 2004/2005 that may be relevant to the ESFM criteria and indicators.

For full details of the published papers refer to Appendix 15 of the *DEC Annual Report 2004/2005* at [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au).

Forests NSW's research activities focus on providing innovative science-based outcomes for forest resource development and sustainability. Research into adding value to the planted forests, commercial services and native forest businesses of Forests NSW remains a priority. Details of Forests NSW research activities can be found in its *Research and Development – Annual Report 2004/05* at [www.dpi.nsw.gov.au/forests](http://www.dpi.nsw.gov.au/forests)

Other natural resource agencies, such as DIPNR, also provide details of publications in their annual reports each year. These may be accessed through [www.nsw.gov.au](http://www.nsw.gov.au).

# 3 Compliance with the integrated forestry operations approvals

## Introduction

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The Integrated Forestry Operations Approvals (IFOAs) provide the operational framework for forestry operations in State forests and Crown timber land. The approvals, made under the *Forestry and National Park Estate Act 1998*, contain non-licence terms administered by FRIP of DIPNR, and three licences: the Threatened Species Licence and the Environment Protection Licence, administered by DEC, and the Fisheries Licence administered by DPI Fisheries. An IFOA enables authoritative, unambiguous and consistent environmental regulation of native forest harvesting operations.

There are four IFOAs currently in place, covering each forest agreement region.

The audit and enforcement functions for the Threatened Species Licence and the Environment Protection Licence were brought together into the Forestry Policy and Regulation Section of DEC, creating a coordinated and consistent approach to forestry regulation on public lands. DEC regularly audits the Environment Protection Licence and Threatened Species Licence. In 2004/2005, these audits resulted in a number of warning letters and penalty notices issued to Forests NSW.

Prosecution action was finalised in the Land and Environment Court after Forests NSW pleaded guilty to one charge under section 120 of the *Protection of the Environment Operations Act 1997*. This breach was identified during an audit in 2003.

DPI Fisheries did not report any breach of the Fisheries Licence in 2004/2005.

FRIP within DIPNR oversees the application of the non-licence terms of the IFOAs and also investigates complaints in relation to non-licence terms. In 2004/2005, FRIP investigated and discussed a number of issues with Forests NSW, including boundary definition and logging procedures near exclusion areas and rules associated with silvicultural systems and practices.

## IFOA amendments

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No amendments were made to existing IFOAs for the UNE, LNE, Eden and Southern regions in 2004/2005.

## Threatened Species and Environment Protection Licences

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DEC administers two licences contained in the IFOAs, the Environment Protection Licences made under the *Protection of the Environment Operations Act 1997* and the Threatened Species Licence made under the *Threatened Species Conservation Act 1995*.

DEC's role in the management of Forests NSW's forestry operations is mainly to protect the aquatic environment from water pollution and protect threatened species and their habitats. Compliance with the conditions set out in the Environment Protection Licences and Threatened Species Licences, which are issued to Forests NSW, are the main means by which this is done.

Threatened Species Licence coverage is mandatory in all active native forestry operations. Forests NSW may exercise its right not to seek Environment Protection Licence coverage for certain operations, however, these operations are still subject to section 120 of the *Protection of the Environment Operations Act*, which prohibits the pollution of waters.

### DEC Auditing Program

DEC has developed an active audit program of Forests NSW's forestry operations to determine Forests NSW's compliance with licence conditions and other relevant legislative requirements. The audit program ensures that Forests NSW is taking the required measures to protect the environment through responsible planning and operational activities.

Non-compliance with licence conditions are dealt with through meetings with senior Forests NSW officers, issuing feedback or warning letters, clean-up notices, penalty notices or prosecution action as appropriate to the circumstances.

#### UNE region

In the UNE region, Environment Protection Licence coverage applied to 43 separate forestry operations during the period. There were 119 operations where harvesting occurred without Environment Protection Licence coverage. The Threatened Species Licence applied to 162 forestry operations during the period in the region.

DEC conducted three proactive operational and/or planning audits of forestry operations in the UNE region for this period, identifying a total of 63 non-compliances with licence conditions. Sixty-one non-compliances related to the Environment Protection Licence requirements were identified. These non-compliances included inadequate pre-operational planning, instances where trees had been harvested within riparian protection zones, snig track crossbanks that were blocked or ineffective and snig track crossings not drained or not rehabilitated in accordance with the best practice licence conditions. Non-compliance with Threatened Species Licence conditions included not retaining sufficient habitat trees.

DEC also received and investigated two community complaints about water pollution and threatened species breaches in the UNE region.

As a result of these audits and investigations, DEC provided feedback and sent two warning letters to Forests NSW outlining the issues of non-compliance identified. DEC also required that expert soil conservation advice be sought on two occasions and that remedial work be carried out at five locations. One penalty notice was issued following an audit in UNE region.

## **LNE region**

In the LNE region Environment Protection Licence coverage applied to 41 separate Forests NSW's operations. There were 114 operations where harvesting occurred without Environment Protection Licence coverage. The Threatened Species Licence applied to 155 forestry operations in the region during the period.

DEC conducted three operational and planning audits of forestry operations in the region that identified 66 non-compliances of Environment Protection Licence best practice conditions. These included inadequate pre-operational planning, inadequate road drainage on the approaches to stream crossings, harvesting and burning within stream riparian zones and not discharging road drainage onto stable surfaces. Twenty-seven non-compliances were recorded against the Threatened Species Licence, which included inadequate pre-operational planning, not retaining sufficient habitat trees, harvesting within stream exclusion zones and felling a tree within mapped high conservation value old growth forest.

DEC also received two community complaints about potential water pollution and threatened species breaches in the LNE region. Both these matters resulted in field audits by DEC.

As a result of these audits in the LNE region, DEC provided feedback and sent three warning letters to Forests NSW regarding non-compliance with licence conditions. Forests NSW was required to carry out remedial work at seven sites and seek expert soil conservation advice on two occasions. Following the receipt of soil conservation advice, DEC issued Forests NSW with a clean-up notice on each occasion. Two penalty notices have been issued after an audit in the LNE region and regulatory action is outstanding for a separate audit.

DEC also finalised prosecution action about a collapsed road in Chichester State Forest that occurred in May 2003. Forests NSW pleaded guilty to the offence of water pollution and received a \$30 000 fine and was required to pay DEC's costs by the Land and Environment Court.

As a result of this prosecution, Forests NSW is endeavouring to reduce the risk of such an event occurring again, including:

- drafting of regional road and fire trail management plans incorporating measures for assessing environmental risk and prioritising road works;
- development of a road works system manual by staff engineers to ensure road planning and construction is undertaken by appropriately skilled staff; and
- initiation of 'roading schools' to give guidance to employees on good engineering principles; instruction in safe, stable design and construction; surveying; and road maintenance.

## **Eden region**

Environment Protection Licence and Threatened Species Licence coverage applied to 98 separate Forests NSW operations in the Eden region.

DEC conducted four operational and/or planning audits within the region and identified a total of 17 non-compliances with licence conditions. All seventeen non-compliances related to the Environment Protection Licence, including inadequate pre-operational planning and drainage outlets on roads that were blocked.

DEC also received three new community complaints about potential water pollution and threatened species breaches in the Eden region. All these matters resulted in field audits by DEC.

As a result of these audits, DEC provided feedback to Forests NSW and issued two warning letters regarding non-compliance with the Environment Protection Licence for the Eden region. DEC required Forests NSW to carry out remedial work at five sites and seek expert soil conservation advice on one occasion.

### **Southern region**

Environment Protection Licence coverage applied to 61 separate Forests NSW operations in the Southern region. There were 16 operations where harvesting occurred without Environment Protection Licence coverage. The Threatened Species Licence applied to 77 forestry operations during the period in the region.

DEC conducted two audits of operational and planning activities undertaken by Forests NSW. DEC identified one non-compliance with planning requirements of the Environment Protection Licence and one audit is still outstanding.

DEC received and investigated three new community complaints about potential water pollution and threatened species breaches in the Southern forest region.

As a result of these audits and investigations, DEC required Forests NSW to carry out remedial work at one site. Regulatory action for one audit is still outstanding.

## **Fisheries Threatened Species Licence**

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The Fisheries Threatened Species Licence is issued under Part 7A of the *Fisheries Management Act 1994* and administered by DPI Fisheries. The licence is to ensure forestry operations do not negatively impact on threatened fish species or aquatic habitat.

Compliance management of the licence falls into three main areas of operation that are detailed below.

### **Review of planning documentation**

Desktop reviews of harvest planning documentation are carried out routinely as documents are received. They concentrate on providing exclusion zones for specified aquatic habitats and on appropriate road locations. These are necessary to minimise the number of watercourse crossings.

### **Digital species distribution data**

Compliance with planning and on-ground conditions of the Fisheries Licence depends on providing detailed digital species distribution data compiled from surveys, expert assessment and community sightings reports.

Preparation of distribution data for the Oxleyan pygmy perch (*Nannoperca oxleyana*), a species occurring in coastal areas of northern New South Wales, and Macquarie perch (*Macquaria australasica*) occurring in streams of the southern highlands and slopes, is complete. Both species

could be affected by forestry operations and the distribution data is expected to be provided to Forests NSW shortly.

### **Random inspections and response to complaints**

DPI Fisheries audits the compliance with the Fisheries Threatened Species Licence in conjunction with its other compliance duties. Complaints are investigated when received.

There were no known contraventions of the Threatened Species Licence under the *Fisheries Management Act* during 2004/2005.

### **Aquatic habitat management in State forests**

DPI Fisheries continues to work with Forests NSW to increase awareness and understanding of aquatic habitat management on the forest estate. Improved environmental assessment procedures for road crossings have been developed, and DPI Fisheries is working with Forests NSW to develop a comprehensive aquatic habitat management strategy, which is expected to not only assist compliance with the Fisheries Threatened Species Licence but also improve outcomes for general aquatic habitat protection in all aspects of forest management.

### **Non-Licence Terms**

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In 2004/2005, Forests NSW continued to implement the non-licence conditions of the UNE, LNE, Southern and Eden IFOAs. Additionally, Forests NSW provided FRIP with required documentation, in accordance with the non-licence terms, including an annual plan of logging operations and annual plan of forest products operations.

In 2004/2005, FRIP investigated complaints and held discussions about the following issues with Forests NSW to ensure compliance with the non-licence terms of the IFOAs.

- Identification and distinguishing of logging exclusion boundaries (such as rainforest boundaries).
- Logging procedures near exclusion boundaries (such as drainage features).
- Permissible operations in Special Management Zones<sup>20</sup> and Forest Management Zones 2 and 3A<sup>21</sup>.
- Rules associated with the implementation of silvicultural systems and practices.
- Management implications of forest health issues (such as Bell Miner Associated Dieback).

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<sup>20</sup> As stipulated in Section 21A of the *Forestry Act 1916*.

<sup>21</sup> As defined within: *Managing our forests sustainably: Forest Management Zoning in NSW State Forests*.

## Forests NSW internal compliance program

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Forestry operations carried out in State forests and on Crown timber land are governed by the terms and conditions of the IFOAs and Forests NSW's internal codes of practice. To ensure its compliance, Forests NSW conducts regular internal compliance monitoring. Forests NSW's internal audits system consists of a four-tiered system of compliance monitoring that provides a structure for monitoring the compliance of forestry operations. Any non-compliance requires corrective action to address the non-compliance and to minimise any future re-occurrence.

The Forests NSW internal audit system comprises a four-tiered system of compliance monitoring to be applied in all regions. It provides for:

- Tier 1 monitoring – on-site monitoring by the Supervising Forest Officer, to ensure compliance with operational conditions;
- Tier 2 monitoring – on-site checking of the Tier 1 level by the Supervising Forest Officer's supervisor to ensure correct application of standards;
- Tier 3 audits – independent audit of the Tier 1 and Tier 2 levels by regional staff not directly involved in the operation, and/or independent audit by the EMS Audit team from Environmental Management Branch;
- Tier 4 audits – independent audit by Management Audit and Review Branch.

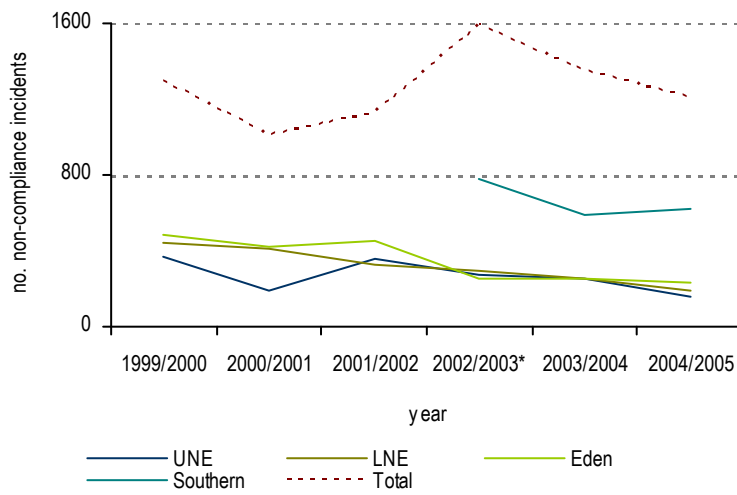
All operations are covered by the audit procedure with risk assessments determining the focus of Tier 1 and Tier 2 monitoring and of the Tier 3 and Tier 4 audits.

During 2004/2005, 2,795 compliance sheets were filled out by Forests NSW staff under its four-tier audit system across all regions. Of 216, 580 potential compliance areas identified and assessed under tier one audits 1 206 incidents of non-compliance, were identified. This was a compliance rate of over 99%.

The 1 206 incidents across all regions represents a decrease in non-compliance of 12% on 2003/2004 figures (figure 3-1-A). The number of incidents fell in all regions except the Southern region which increased by 5%.

Compliance checks were carried out against four key areas; soil and water quality, flora and fauna, fish habitat and passage, and other issues such as safety. Unlike previous years, the main area of non-compliance was relatively evenly spread across, soil and water quality (38%), flora and fauna (32%) and other issues (30%). The actual number of incidents recorded being related to soil and water quality and flora and fauna decreased between 2003/2004 and 2004/2005, whilst those related to other issues increased. No issues related to fish habitat and passage were recorded in any region.





\* monitoring for the Southern region commenced in 2002/2003.

Source: Forests NSW data

Figure 3-1-A: Non-compliance incidents recorded through Forests NSW internal monitoring – all regions

## Further reading

Department of Environment and Conservation (NSW) 2004, *State of the Parks Guidelines*, unpublished Department of Environment and Conservation, Hurstville.

Department of Environment and Conservation (NSW) 2005, *State of the Parks 2004*, Department of Environment and Conservation, Sydney South.

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ESFM Technical Committee 1999a, *Criteria, Indicators, Targets and Monitoring Processes of Ecologically Sustainable Forest Management for the Eden Forest Agreement: A Project Undertaken as Part of the NSW Comprehensive Regional Assessments Project Number NE XX/ESFM*, Resource and Conservation Division, Department of Urban Affairs and Planning, Sydney.

ESFM Technical Committee 1999b, *Criteria, Indicators, Targets and Monitoring Processes of Ecologically Sustainable Forest Management for the Upper North East and Lower North East RFA Regions: A Project Undertaken as Part of the NSW Comprehensive Regional Assessments Project Number NA41/ESFM*, Resource and Conservation Division, Department of Urban Affairs and Planning, Sydney.

ESFM Technical Committee 2000, *Criteria, Indicators, Targets and Monitoring Processes of Ecologically Sustainable Forest Management for Southern RFA Region: A Project Undertaken as Part of the NSW Comprehensive Regional Assessments Project Number NA 41/ESFM*, Resource and Conservation Division, Department of Urban Affairs and Planning, Sydney.

Forests NSW 2005, *Bush Telegraph*, Summer 2005, Forests NSW, Pennant Hills.

MIG 1998, *A Framework of Regional (Sub-National) Level Criteria and Indicators of Sustainable Forest Management in Australia*, Montreal Implementation Group, Canberra.

NSW Government 1999, *Forest Agreement for Eden Region*, Department of Urban Affairs and Planning, Sydney.

NSW Government 1999, *Forest Agreement for Lower North East Region*, Department of Urban Affairs and Planning, Sydney.

NSW Government 1999, *Forest Agreement for Upper North East Region*, Department of Urban Affairs and Planning, Sydney.



# Appendix 1.1

## **Individual milestone progress**

Discussion of some of these milestones is contained in chapter 1.

## **Definitions of milestones status**

<b>Completed</b>	Indicates that the milestone required (the production of a document or plan) has been produced.
<b>Implemented</b>	Indicates that the milestone required (a process or system to be put in place) has been put in place.
<b>Continuing</b>	Indicates a product or process is ongoing or annually required.
<b>In progress</b>	Indicates a product or process is still being developed or is draft.
<b>Deferred</b>	Indicates that the action required by the milestone has been postponed.
<b>No reporting required</b>	Indicates an action which is no longer required to be reported or is reported in another way such as in the five-year review or on an 'as needed basis'.

## **Agency terminology**

In September 2003, the Department of Environment and Conservation (DEC) was formed through the amalgamation of the Environment Protection Authority, National Parks and Wildlife Service (NPWS), Botanic Gardens Trust and Resource NSW. The former NPWS is now referred to as the Parks and Wildlife Division (PWD) of DEC. Within the 'progress' column of appendix 1.1, the agency will be referred to as NPWS if the milestone was completed/implemented before September 2003, otherwise the agency will be referred to as PWD.

The Department of Primary Industries (DPI) was formed in July 2004. It involved amalgamating State Forests of New South Wales (SFNSW), NSW Fisheries, Department of Agriculture and Department of Mineral Resources. The former SFNSW is now referred to as Forests NSW (FNSW). Within the 'progress' column of appendix 1.1, the agency will be referred to as SFNSW if the milestone was completed/implemented before July 2004, otherwise the agency will be referred to as FNSW. Similarly, where applicable, the Department of Mineral Resources (DMR) is now referred to as DPI Minerals and NSW Fisheries is now referred to as DPI Fisheries.

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 3 Att 4	Preparation of SFNSW EMS – Native Forest Management System.	<p><b>In progress</b></p> <p>FNSW's EMS system development has continued to progress. Forests NSW has conducted a review of the significant environmental effect of its business. Forests NSW have also continued to develop various EMS components including implementation of a corporate document control system, application of corporate environmental systems and ensuring consistency in the regional standards of its environmental controls. In addition, Ecological Sustainable Forest Management (ESFM) plans and associated supplementary plans, which form a component of FNSW's EMS, continue to be developed (refer to "Regional ESFM Plan" milestones (pg 95)).</p> <p>In 2004 / 2005 senior management of FNSW approved an audit program for the native forest regions to assess the workings of its Environmental systems. This program was not completed in the plantation areas however it did influence the environmental program for its development in all operational areas of FNSW business.</p> <p>FNSW aims to achieve certification to ISO 14001, the international standard for an EMS, by early 2006 and it is intended to apply to the plantation and native forest operational divisions.</p> <p>In addition, FNSW is considering the ramifications of certifying its forest area through one of two world certifying systems (Australian Forest Standard (AFS) or Forestry Stewardship Council (FSC)). These systems work either better with native forest or plantation and currently management is uncertain on which system is best for both areas of FNSW business.</p>
2003	30 June	Sthn	2.1.1 Att 2 & 3 Att 6(2c)	Complete and implement SFNSW EMS.	<p><b>In progress</b></p> <p>Refer to milestone above</p>
2003	31 December	Sthn	2.1.1	A further part of the EMS will be prepared to cover the planted forest component.	<p><b>In progress</b></p> <p>Refer to the milestone above</p>
2004	1 April	UNE, LNE, Eden	2.1.2 Att 3	Preparation of NPWS Environmental Management Systems.	<p><b>In progress</b></p> <p>DEC is developing a Park Management Program that will provide an important component of an EMS. The program will define DEC's objectives for park management, and integrate park policy, planning, operations, monitoring, evaluation, reporting and feedback. It provides the tools to make better decisions and will also improve coordination across DEC to make it easier for staff to access information to guide park management. One of the components of the program is the State of the Parks program that will form an important part of the monitoring framework that will be part of an EMS.</p>
2004	30 April	Sthn	2.1.2 Att 6 (2b)	Development and implementation of and EMS by NPWS.	<p><b>In progress</b></p> <p>Refer to milestone above</p>
Ongoing		Sthn	2.1.2	To facilitate implementation of the EMS, NPWS staff and contractors must continue to receive appropriate competency-based training.	<p><b>Continuing</b></p>

Due date	Region	FA section*	Milestone	Progress
<b>PLANS OF MANAGEMENT</b>				
<b>Plans of management for the NPWS 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><b>In progress</b></p> <p>Plans of Management under the <i>National Parks and Wildlife Act 1974</i> continue to be prepared.</p> <p><b>UNE/LNE</b></p> <p>Of the 339 reserves in the UNE and LNE region, 126 have plans of management adopted by the NSW Minister for the Environment. A further 45 draft plans have been publicly exhibited and another 86 are in preparation with six of these being in draft form. The remaining 82 plans of management are yet to be started.</p> <p>The increase in the total number of reserves since the last reporting period reflects the addition of new reserves in 2004/2005 – Garby Nature Reserve and Saltwater National Park.</p> <p><b>Eden</b></p> <p>Of the 18 reserves in the Eden region, 10 have plans of management adopted by the NSW Minister for the Environment. A further three draft plans have been publicly exhibited and another three are in preparation. Preparation of a plan for Biamanga National Park will not start until leaseback arrangements with the Aboriginal owners are finalised. Preparation of a plan of management for Dangelong Nature Reserve had not yet begun.</p>
2006	31 January	Sthn	2.3.2  Preparation of plans of management for dedicated reserves under the <i>National Parks and Wildlife Act 1974</i> .	<p><b>In progress</b></p> <p>Of the 125 reserves in the Southern region, 24 have plans of management adopted by the NSW Minister for the Environment. A further 15 draft plans have been publicly exhibited and another 46 are in preparation with 14 of these being in draft form. Forty plans have yet to begin.</p> <p>The increase in the total number of reserves is due to the inclusion of four new SCAs that were previously Crown reserves. Two Crown reserves remain in the Southern region.</p>
1999	31 March	UNE, LNE, Eden	2.4.1 Att 8  Release and adoption of NSW Biodiversity Strategy.	<p><b>Completed</b></p> <p>The <i>NSW Biodiversity Strategy</i> was released in March 1999 and has since been implemented.</p>
Ongoing		Sthn	2.4.1 Att 6(2d)  Implementation of NSW Biodiversity Strategy.	<p><b>Implemented</b></p> <p>Refer to milestone above.</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.	<b>In progress</b> FNSW revised Regional ESFM Plans were placed on public display in 2005, further public and state agency comment will be considered before they are finalised. The final ESFM plans are expected to be published in late 2005.
2002	31 August	Sthn	2.2.1, 4.3 Att 6(1) & 2(a)	Preparation of Regional ESFM Plans.	<b>In progress</b> Refer to milestone above.
Annually		UNE, LNE, Eden	2.2.6	Report on progress on meeting targets in Regional ESFM Plans.	<b>Continuing</b> Regional ESFM Plans are not yet finalised (refer to milestones above). Therefore, no progress reports on meeting targets in Regional ESFM plans have been completed.
Annually		Sthn	2.2.6	Progress in meeting the targets in the Regional ESFM Plans must be reported annually through Regional ESFM reports.	<b>Continuing</b> Refer to milestone above.
2002	30 June	Sthn	6.16	Formation of a working group to make recommendations on the management and tenure of areas of State forests that is isolated from the productive State forests.	<b>In progress</b> Working group is yet to be formed.
<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 attached to the Regional ESFM Plans.	<b>In progress</b> Working plans for flora reserves, approved by the Minister for Forests are available for most flora reserves. Outstanding plans for new flora reserves are due for completion and submission to the Minister for approval by December 2005. All older pre-existing flora reserves have a management plan and any newly dedicated reserves will be incorporated into the revised ESFM plans.
2002	31 August	Sthn	2.2.2 2.3.2	Complete and make public working plans for land dedicated or set apart as flora reserves (attached to the Regional ESFM Plans).	<b>In progress</b> Refer to milestone above.
<b>Informal reserves</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.	<b>In progress</b> A model plan for Informal reserves is being developed as an ESFM supplementary plan and is expected to be available in December 2007.

Due date		Region	FA section*	Milestone	Progress
2002	31 August	Sthn	2.3.3	Preparation of working plans for informal reserves (FMZ 2 and 3a) and guidelines for areas managed by prescription (FMZ 3b and 4) in consultation with DoP, NPWS and DMR.	<b>In progress</b> Refer to milestone above.
<b>Larger more significant exclusion areas of rainforest, high conservation value old growth forest and other prescriptive exclusions</b>					
2001	30 June	UNE, LNE, Eden	2.4.4.5	Directors-General of NPWS, Planning NSW and CEO SFNSW to agree on the larger more significant exclusion areas of rainforest, high conservation value old growth and other prescriptive exclusions.	<b>In progress</b> No further progress on this milestone has occurred this year..
2002	31 December	Sthn	2.4.5.6	The larger more significant exclusion areas will be those as agreed between the Director-General of NPWS, Chief Executive Officer of SFNSW and the Director-General of DoP.	<b>In progress</b> Refer to milestone above.
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).	<b>In progress</b> Refer to milestone above.
2002	31 August	Sthn	2.4.5.6	Preparation of guidelines for the management of large areas of rainforest, high conservation value old growth and other areas excluded by prescription and attached to the Regional ESFM Plan.	<b>In progress</b> Refer to milestone above.
<b>Creation of special management zones</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'.	<b>In progress</b> <b>UNE &amp; LNE</b> – The <i>National Park Estate (Reservations) Act 2003</i> provided for the declaration of certain lands within the UNE and LNE regions as special management zones. No additional special management zones (SMZs) were declared during 2004/2005. <b>Eden</b> – SMZs are being considered.
2002	31 August	Sthn	2.3.1	Creation of special management zones on State forests.	<b>In progress</b> <b>Southern</b> – SMZs are being considered.



Due date		Region	FA section*	Milestone	Progress
<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.	<b>In progress</b> The FMZ layers for the Eden region were attached to FNSW draft Regional ESFM Plans in 2000. Final maps showing the FMZ layers will be attached to the revised Regional ESFM Plans. Revised Regional ESFM Plans were on public display in early 2005.
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.	<b>In progress</b> The FMZ layers for the UNE and LNE region were attached to FNSW draft Regional ESFM Plans in 2000. Final maps showing the FMZ layers will be attached to the revised Regional ESFM Plans. Revised Regional ESFM Plans were on public display in early 2005.
2002	31 August	Sthn	2.2.2	Provision of mapped FMZ on all State forests attached to the Regional ESFM Plans.	<b>In progress</b> FMZ maps have been attached to revised Regional ESFM plans, which were on public display in early 2005. Final maps showing the FMZ layer will be included in the revised Regional ESFM Plans and released with the final Regional ESFM Plans.
Ongoing		UNE, LNE, Eden	Att 8	Implement the Forest Management Zoning System.	<b>Implemented</b> The Forest Management Zoning (FMZ) system for State forests was publicly announced in March 1999 with the release of <i>Managing Our Forests Sustainably: Forest Management Zoning in NSW State Forests</i> . Implementation of this FMZ system continues in accordance with this document.
<b>CAR RESERVE SYSTEM</b>					
<b>Additions to the NPWS 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.	<b>Continuing</b> Acquisitions are ongoing. DEC received a Treasury commitment of \$1.5 million/year for five years (2001/2002-2005/2006) to purchase leasehold and freehold lands as required by the UNE and LNE Forest Agreements. In 2004/2005, DEC purchased one leasehold property in UNE of which 374 hectares can be gazetted to the formal reserve system.
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 into the NPWS estate as soon as practical.	<b>Continuing</b> <b>UNE/LNE</b> – During 2004/2005, one forest lease (2970 hectares) in UNE was incorporated into the PWD estate. <b>Eden</b> – During 2004/2005, DEC purchased one Crown lease for addition to South East Forest National Park. It will be incorporated into the DEC estate as soon as practicable.
1999	31 August	UNE, LNE, Eden	6.16.2 6.16.1 (E)	Preparation of procedures for purchasing leases on land.	<b>In progress</b> <b>UNE/LNE</b> – Standard DEC acquisition procedures have been utilised for the voluntary acquisition of leases as they have been offered and as RFA funds have been available. 2005/2006 will be the final year of the five-year \$1.5M/yr budget allocation for these acquisitions. <b>Eden</b> – Procedures have not been developed. DEC has continued voluntary acquisition of leases as they have been offered and as funds have allowed. In the absence of dedicated funding, proposals for purchase of any leases that come on the market must compete with statewide priorities.

Due date		Region	FA section*	Milestone	Progress
2001	1 April	Eden	6.16.1	Pursue the voluntary purchase of any leases on State forest tenure that has been revoked.	<b>In progress</b> During 2004/2005, DEC purchased one Crown lease for addition to South East Forest National Park.
<b>Aquatic reserves</b>					
Ongoing	As required	UNE, LNE, Eden	2.3.4	Minister for Fisheries may declare aquatic reserves under the <i>Fisheries Management Act 1994</i> within State forests, national parks, native reserves and other Crown lands and develop management arrangements for these reserves.	<b>Continuing</b> No aquatic reserves were declared under the <i>Fisheries Management Act</i> .
Ongoing	As required	Sthn	2.3.4	Minister for Fisheries may declare aquatic reserves.	<b>Continuing</b> No aquatic reserves were declared under the <i>Fisheries Management Act</i> .
<b>Upgrading FMZ areas/Mineral and petroleum interests/Additional Conservation areas</b>					
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 Planning NSW Memo dated 4 February 1999, and entitled 'Procedure for dealing with lands for further consideration for reservation'.	<b>In progress</b> No further progress on this milestone has occurred this year.
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.	<b>In progress</b> No further progress on this milestone has occurred this year.
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.	<b>In progress</b> No further progress on this milestone has occurred this year.
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.	<b>In progress</b> No further progress on this milestone has occurred this year.

Due date		Region	FA section*	Milestone	Progress
Ongoing	Every five 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.	<b>Continuing</b> No further progress on this milestone has occurred this year.
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.	<b>Continuing</b> Process covered in the FNSW Operation Circular Guidelines for using the FMZ system. No further progress on this milestone has occurred this year.
2007	30 April and every five-year review	Sthn	2.3.3	Review of mineral and petroleum objections over FMZ 2 and FMZ 3 lands.	<b>In progress</b> No further progress on this milestone has occurred this year.
<b>Crown reserves</b>					
1999	30 September	UNE, LNE, Eden	2.3.3	MOU regarding the management of Crown reserves.	<b>Completed</b> No Crown reserves managed by PWD remain in the Eden, UNE and LNE regions. All crown reserves were reclassified as SCAs.
1999	30 September	UNE, LNE, Eden	2.3.3	Formation of a management committee regarding the management of Crown reserves.	<b>No reporting required</b> Refer to milestone above.
2002	30 June	Sthn	2.3.3	Formation of a committee to advise the Manager of the Reserve Trust on the matters specified in the MOU concerning Crown Reserves.	<b>No reporting required</b> An MOU between DEC and the DPI Minerals provides for the formation of a Crown Reserves Minerals Advisory Board. No issues requiring the board's consideration have yet arisen.
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.	<b>Continuing</b> The last review of Crown reserves occurred in 2003, which resulted in the reclassification of most of the Crown Reserves to SCAs (except for Southern region). The next review is due in late 2007 (and coincides with the equivalent review for SCAs). The process for review of State Conservation Areas and Crown Reserves is set out in an MOU between DEC and DPI Minerals. The intent is that, every five years, DPI Minerals must provide reasons why a SCA could not be upgraded to a national park or nature reserve.
2007	30 April and each five-year period	Sthn	2.3.3	Undertaking of a review of Crown Reserves every five years.	<b>In progress</b> Refer to milestone above.

Due date		Region	FA section*	Milestone	Progress
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> .	<b>Completed</b> No Crown reserves remain in the Eden region.
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> .	<b>No reporting required</b> No Crown reserves remain in the UNE and LNE regions.
2006	31 January	Sthn	2.3.3	Preparation of plans of management for Crown Reserves.	<b>In progress</b> Four of the remaining six Crown Reserves were reclassified as SCAs in April 2005. This will allow management plans to be prepared. The remaining two Crown Reserves – Mullengandra and Woomargama (both in the Tumut sub-region) – are still subject to DPI Minerals' objections to conversion to SCAs. A process for the preparation of plans of management for the remaining two Crown Reserves has not yet been established. Despite the lack of a plan of management, general park management still occurs as required.
<b>Crown land</b>					
2003	1 January	UNE, LNE	6.16.2	NPWS to assess forest conservation values on remaining vacant Crown land in consultation with the DLWC, DMR and other relevant stakeholders.	<b>In progress</b> During 2004/2005, negotiations between DEC and Department of Lands about reserve proposals have recommenced. Additionally discussions are occurring with DPI Minerals. At this stage approximately 9000 hectares of land are available to be added to the formal reserve system.
<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.	<b>Implemented</b> DEC has implemented a process that mirrors the one adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act 1995</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 DEC, FNSW 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.
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.	<b>Continuing</b> Where the application of Threatened Species Licence conditions results in 20% or more of the area of net logging area of a compartment being made unavailable because of exclusion zones, FNSW may request that PWD review the conditions. In 2004/2005, this rule was triggered in the Eden region due to records of Southern Brown Bandicoot, Smokey Mouse and Giant Burrowing Frog. DEC and FNSW are negotiating improved management practices for these species.

Due date		Region	FA section*	Milestone	Progress
Ongoing		Sthn	2.4.5.4	New information is to be assessed, and where required Threatened Species Licence is reviewed and IFOA amended.	<b>Implemented</b> Refer to milestone above.
Ongoing		Sthn	2.4.5.4	Where new information on the distribution, population size or ecology of threatened flora and fauna suggests that the species allocation to a particular condition of the Threatened Species Licence needs to be reviewed, NPWS and SFNSW will undertake such a review.	<b>Implemented</b> A process was implemented in 1999/2000 that mirrors the one adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act 1995</i> (stipulated in Condition 1.3 of Appendix B and Appendix C in the IFOA for the Southern region). 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 DEC, FNSW and, where appropriate, independent experts. Recommendations from such reviews are provided to the relevant Ministers for approval as they arise. This process was not required to be implemented during 2004/2005.
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.	<b>Implemented</b> Process has been established and has been included in the IFOAs. The process was not required to be implemented during 2004/2005.
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.	<b>Implemented</b> FNSW process included in provisions of the IFOAs. DEC notification occurs as required. DEC routinely notifies FNSW of preliminary and final determinations made by the Scientific Committee for the listing of species in schedules of the <i>Threatened Species Conservation Act 1995</i> . DEC is not permitted to provide information on non-DEC proposals for listings or de-listings until the Scientific Committee has made at least a preliminary determination.
Ongoing		Sthn	2.4.4	Notify NPWS/SFNSW of listing and delisting of threatened species, populations, etc and review IFOA for changes to schedules on Threatened Species Licence.	<b>Implemented</b> Refer to milestone above.
Ongoing		Sthn	2.4.5.1	Review IFOA for changes to schedules on Threatened Species Licence.	<b>Implemented</b> Refer to milestone above.
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.	<b>Implemented</b> 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 Eden, UNE, LNE and Southern IFOAs and also Appendix C in the Southern IFOA). 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 DEC advises FNSW of the determination and the need to apply condition 1.2 of the Threatened Species Licence.  Regular updates of the <i>Wildlife Atlas</i> are provided to FNSW of all threatened species under its data licence with the DEC. The provision of this information assists FNSW in planning its logging operations. If a newly listed species is present in a compartment planned for logging, the Forest Policy and Regulation Section of DEC is contacted, which then assesses the conservation requirements of the species and advise FNSW of an appropriate condition. The Threatened Species Licence does not cover 'Endangered Ecological Communities', therefore FNSW is not authorised to conduct activities that may affect Endangered Ecological Communities.

Due date	Region	FA section*	Milestone	Progress
Ongoing	Sthn	2.4.5.3	Implement stated process where important new record was discovered in an area.	<b>Implemented</b> This process was not implemented during 2004/2005.
Ongoing	Sthn	2.4.5.3	Conservation requirements must be developed and implemented for new records of threatened species, populations and ecological populations and IFOA must be reviewed.	<b>Implemented</b> This process was not implemented during 2004/2005.
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.	<b>Implemented</b> The process mirrors that adopted for species newly listed in schedules of the <i>Threatened Species Conservation Act 1995</i> (stipulated in Condition 1.3 of Appendix B in the Eden, UNE, LNE and Southern IFOAs and also Appendix C in the Southern IFOA). This process was not implemented during 2004/2005.
Ongoing	UNE, LNE, Eden	2.4.4.1	Details the process to be followed when a species new to science is found.	<b>Implemented</b> Refer to milestone above.
Ongoing	Sthn	2.4.5.2	Implement stated process when species new to science are found.	<b>Continuing</b> This process was not implemented during 2004/2005.
Ongoing	Sthn	2.4.5.2	Conservation requirements must be developed and implemented for species new to science and IFOA must be reviewed.	<b>Implemented</b> Refer to milestone above.
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.	<b>Implemented</b> Cooperation continues as necessary. For instance, various recovery plans and threat abatement plans being prepared by DEC involve FNSW through: provision of FNSW expertise; representation on recovery teams; implementation of specific actions by FNSW; and consultation during the drafting and public exhibition of plans.
Ongoing	Sthn	2.4.4	Preparation of cooperative approaches for non-licence components of the <i>Threatened Species Conservation Act 1995</i> and <i>Fisheries Management Act 1994</i> such as nomination of species, populations, ecological communities and key threatening processes, recovery plans, threat abatement plans and critical habitat.	<b>Implemented</b> Refer to milestone above.

Due date		Region	FA section*	Milestone	Progress
<b>Management and recovery planning</b>					
1999	31 December	UNE, LNE	2.4.3	Refinement of models to identify Hastings River Mouse habitat.	<b>In Progress</b> A draft Threatened Species Recovery Plan for the Hastings River Mouse is awaiting final approval at the Ministerial level. Actions within the plan, including predictive habitat modelling, are subject to budgetary constraints as noted in the plan.
Ongoing		UNE, LNE, Eden	2.4.3	Continued implementation of joint management plans such as Pine Creek Koala Management Plan.	<b>Implemented</b> Pine Creek has been largely converted to a nature reserve in 2004 and high priority koala habitat was specifically included in the reserve. FNSW continues to implement the Pine Creek Koala Management Plan in remaining sections of Pine Creek State Forest. Amendments to the Pine Creek Koala Management Plan for the Pine Creek State Forest in the UNE region may be considered in the future. This is due to the fact that a large portion of the former Pine Creek State Forest has now been added to the Bongil Bongil National Park.
<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.	<b>Completed</b> Baiting was under way throughout 1999 on lands transferred to the PWD estate where FNSW had provided approval. Baiting continues in accordance with PWD regional pest management strategies.
2005	1 April	UNE, LNE, Eden	2.4.2	Preparation of grazing management plans, predator and feral control plans and threatened flora species management plans.	<b>In progress</b> Model ESFM plans have been approved for Weeds and Pest Animal control. Regional ESFM plans for Weed and Pest Animal management based on these models will be completed by 30 June 2006. A model ESFM Plan for Grazing is due for completion in December 2006 and regional ESFM grazing plans based on that model will be available in mid 2007. Species Management Plans for specific threatened flora are prepared where required in consultation with DEC.
2006	31 July	Sthn	2.4.3	Preparation of grazing management plans and feral and introduced predator control plans.	<b>In progress</b> Refer to milestone above.
Ongoing		UNE, LNE	2.12	Cooperative programs in addressing noxious weed control, feral animal control and other matter relating to forest health.	<b>Continuing</b> FNSW continues to participate in local Weed Management Committees and works in close cooperation with rural lands protection boards and wild dog associations to decide local control priorities and cooperative control programs. Details of these arrangements will be listed in the Regional ESFM Supplementary Plans – Weed Management Plan and Pest Animal Control Plan. These Regional ESFM supplementary plans are expected to be completed by the end of 2005. DEC has established cooperative programs with a variety of landholders, land management agencies and interest groups to manage pest animals (e.g. foxes, wild dogs, feral horses, pigs, deer), weeds (e.g. bitou bush, lantana, <i>Asparagus</i> species, scotch broom) and forest health (e.g. Bell Miner Associated Dieback). Pest animal and weed control programs are also integrated into DEC plans of management, recovery plans and threat abatement plans. Additionally, Regional Pest Management Strategies have been prepared that: outline objectives and strategies for managing priority pest animals and weeds across the PWD estate; aim to maximise the effectiveness of pest control programs; and outline how DEC will cooperatively manage pest issues across the landscape with other State government land management agencies, local government, Rural Lands Protection Boards, landowners and community groups. See the DEC website for examples of relevant programs and strategies.

Due date		Region	FA section*	Milestone	Progress
					<p><b>UNE/LNE</b> – Pest management strategies have been prepared for all five regions within the DEC (PWD) Northern Branch. Also a Bell Miner Associated Dieback (BMAD) strategy that was jointly developed by DEC, FNSW, other government agencies and stakeholders in 2004, has been launched by the Minister for the Environment and outlines the details for agreed action to identify solutions that will address BMAD. Trials have started to implement a coordinated cross tenure approach to BMAD, a major forum took place to address stakeholder concerns and needs and a major literature review has been completed.</p> <p><b>Eden</b> – Cooperative wild dog/fox management plans (the Bombala and Far South Coast Community Wild Dog Control Plan and the Wadbilliga Wild Dog Control Plan) have been developed between the RLPB, FNSW, PWD and the community.</p>
Ongoing		Sthn	2.12	NPWS and SFNSW must participate in cooperative programs where a broader landscape approach is most effective in addressing noxious weed control, feral animal control or other matters relating to forest health.	<p><b>Continuing</b></p> <p>Refer to milestone above.</p> <p>Regional Pest Management Strategies have been completed for the DEC (PWD) South Coast and South West Slopes Regions, and co-operative wild dog/fox management plans developed between the RLPB, FNSW, DEC and the community in the DEC (PWD) Snowy Mountains, South Coast and Far South Coast regions. There is also a cooperative program covering bitou bush management, shorebird protection and conservation initiatives on private land.</p>
2007	30 April	Sthn	Att 6(2m)	Incorporate into Regional ESFM Plans and plans of management under the <i>National Parks and Wildlife Act 1974</i> integrated feral animal and weed control programs.	<p><b>In progress</b></p> <p>DEC reserve plans of management identify priority pest and weed problems and the need for actions, which are in turn addressed by statewide threat abatement plans or regional pest management strategies. Details of FNSW cooperative control programs will be listed in the Regional ESFM Supplementary Plans – Weed Management Plan and Pest Animal Control Plan.</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><b>Completed</b></p> <p>The Regional Native Vegetation Committee has been established. It held its first meeting in October 2000, with representatives from Planning NSW, NPWS, SFNSW and DLWC.</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><b>Completed</b></p> <p>Refer to milestone above.</p>
2002	30 June	Sthn	2.9	Establishment of a committee to look at conservation issues on private land.	<p><b>Completed</b></p> <p>Refer to milestone above.</p>



Due date		Region	FA section*	Milestone	Progress
<b>Regional Vegetation Management Plans</b>					
Ongoing		Sthn	Att 6(2e) Att 6(3) point 4	Establishment of Regional Vegetation Management Plans under the <i>Native Vegetation Conservation Act 1997</i> , to cover private lands and form a basis for strategic regional planning of private native forestry.	<b>No reporting required</b>  Two Regional Vegetation Management Plans (RVMPs) were finalised under the <i>Native Vegetation Conservation Act 1997</i> : the Mid Lachlan RVMP and the Riverina Highlands RVMP. A number of other RVMPs were in final draft form when the <i>Native Vegetation Act 2003</i> was assented to in December 2003. The <i>Native Vegetation Act 2003</i> establishes a different regime that does not include RVMPs. The focus of the native vegetation reforms is on Catchment Action Plans prepared by Catchment Management Authorities (CMAs), and on individual property vegetation plans (PVPs). The <i>Native Vegetation Act</i> was not in force for this reporting period.
<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.	<b>In progress</b>  The forest agreements require identification of forest ecosystems on private land for inclusion in the CAR reserve system (list contained in Att 2 NE RFA). As stated in the UNE/LNE forest agreements, this will require completion and incorporation of the CRAFT1 data into regional databases. This project was completed in an amended form for UNE in 2005 in conjunction with the Northern Rivers Catchment Management Authority. The project will be completed for LNE in 2006.
2002	30 June	Sthn	2.9	Identification of forest ecosystems on private land that are a conservation priority for inclusion in the CAR reserve system.	<b>In progress</b>  Priority forest ecosystems for voluntary protection on private land are identified in Attachment 2 of the Southern RFA..
<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.).	<b>Continuing</b>  Voluntary mechanisms (such as VCAs) and principles that may assist conservation on private land are being applied. Twenty-three voluntary conservation agreements (VCAs) were signed this year, covering 1 657 hectares. There are now 182 VCAs in New South Wales, protecting an area of 13 603 hectares.
Ongoing		Sthn	2.9 Att 5	Voluntary conservation of private land, where conservation values either do not occur on public land or are not adequately reserved on public land. According to principles in Attachment 5.	<b>Continuing</b>  Refer to milestone above.
<b>Private native forestry and plantations</b>					
2007	30 April	Sthn	Att 6(3) point 3	Codes of Practice for private plantations and private native forests will be in place within five years. The State will also provide advice regarding marketing and pricing.	<b>In progress – native forest</b>  The <i>Native Vegetation Conservation Act 1997</i> was replaced by the <i>Native Vegetation Act 2003</i> (NV Act). In accordance with the NV Act, private native forestry operations will be required to maintain or improve environmental outcomes in accordance with a native vegetation regulation.  The Code of Practice will set minimum operating standards for private native forestry operations to satisfy the "maintain or improve" test that is required by the draft regulation. Initial planning for the draft Code of Practice is currently occurring and it is expected to be released for public comment in 2006. No decision has been made to provide advice on marketing and pricing.

Due date		Region	FA section*	Milestone	Progress
					<p><b>Complete – plantations</b></p> <p>This milestone was achieved with the implementation of the <i>Plantations and Reafforestation (Code) Regulation 2001</i> in December 2001. The <i>Plantations and Reafforestation Act 1999</i> and the Code provide certainty for harvesting, which was previously provided under the <i>Timber Plantations (Harvest Guarantee) Act 1995</i>. Plantations certified under the <i>Timber Plantations (Harvest Guarantee) Act</i> are deemed to be authorised under the <i>Plantations and Reafforestation Act</i>.</p> <p>A statutory review of the Act and Code began in January 2005; the first stage was the release of a discussion paper in June 2005. The review will include consultation with stakeholders.</p>
Ongoing		Sthn	Att 6(3) point 2	As a means of encouraging private forestry development, the State will develop a regulatory framework that enables a more efficient integrated approval process to allow for effective private forestry development.	<p><b>Continuing</b></p> <p>The development of the regulatory framework highlighted in the milestone above will ensure a more efficient integrated approval process.</p>
2001	Code commenced 14 December	Sthn	Att 6(3) point 5	NSW will ensure that an integrated Code of Practice is developed for plantation activities across all tenures, under the <i>Plantations and Reafforestation Act 1999</i> . Existing plantations can also continue to obtain certainty for the purposes of harvesting as per the <i>Timber Plantations (Harvest Guarantee) Act 1995</i> , and similar provisions included in the <i>Plantations and Reafforestation Act</i> .	<p><b>Implemented</b></p> <p>Refer to milestone above.</p>
Ongoing		Sthn	2.2.3	For activities regulated under the <i>Plantations and Reafforestation Act 1999</i> plans must be prepared as required in the <i>Plantations and Reafforestation (Code) Regulation 2001</i> .	<p><b>Implemented</b></p> <p>The <i>Plantations and Reafforestation (Code) Regulation 2001</i> requires applicants for plantation authorisation to submit a plantation plan as part of their application. Refer to clause 14 of the Code.</p> <p>Operational plans are also required for specified plantation operations – site preparation involving ripping and ploughing, construction crossing rivers, and harvesting exceeding a certain volume. Refer to clauses 26 &amp; 27 of the Code.</p>
Ongoing		Sthn	Att 6(3) point 4	With appropriate public involvement, and consistent with the <i>Native Vegetation Conservation Act 1997</i> , the Regional Vegetation Management Committees will pursue planning policies that provide for appropriate long term, secure, management provisions for private native forests including harvesting for commercial wood production.	<p><b>No reporting required</b></p> <p>The <i>Native Vegetation Act 2003</i> establishes a different regime that does not include Regional Vegetation Management Committees. The Catchment Management Authorities have subsumed their role.</p>
Ongoing		Sthn	Att 6(3)	Improve administrative arrangements and cooperation and coordination by State agencies to facilitate the timber industry utilising private forest resources.	<p><b>Continuing</b></p> <p>No further progress to report.</p>

Due date		Region	FA section*	Milestone	Progress
Ongoing		Sthn	Att 6(3) point 1	Arrangements to ensure ESFM on private forests involving the provision of technical advice, extension services, research and assistance in the estimation of Sustainable Yield.	<b>Continuing</b> No further progress to report.
Ongoing		Sthn	Att 6(4)	Undertake a private forest inventory of southern NSW to determine the basis of yield of wood products from private land is required, with the agreement of forest owner groups.	<b>Continuing</b> No further progress to report.
<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.	<b>Completed</b> The <i>Northern Wilderness Assessment Report</i> was publicly exhibited in mid 2001.
2002	31 December	Sthn	2.5	NPWS must provide advice to the Minister administering the <i>National Parks and Wildlife Act 1974</i> on the submissions received during public consultation and the areas recommended for wilderness declaration.	<b>Completed</b> The NPWS provided advice to the Minister for the Environment about the 27 500 submissions received during the public exhibition of the <i>Southern Wilderness Assessment Report</i> .
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.	<b>Completed</b> On 19 February 2003, 151 000 hectares of wilderness were declared in northern New South Wales. Seven new wilderness areas were created: the Levers, Bundjalung, Banyabba, Cathedral Rock, Carrai, Mount Seaview and Limeburners Creek. The declarations also included additions to the Washpool, Bindery-Mann, Guy Fawkes, New England, Macleay Gorges, Kunderang, Willi Willi and Barrington wilderness areas. These declarations were formally gazetted on 21 March 2003.  It is also worth noting that recent additions to the parks and reserve system will enable the eventual declaration of two new wilderness areas. One is the Chaelundi Wilderness (11 000 hectares) within Chaelundi National Park. The other is the Mummel Gulf Wilderness (10 790 hectares) within Mummel Gulf National Park. These areas were assessed during the Comprehensive Regional Assessment but were previously too small for declaration. However, substantial Crown land acquisitions that adjoin these areas have since been made.
2001	1 April	UNE, LNE	2.7	Review of CERRA World Heritage Areas to identify any additional rainforest to be included.	<b>In progress</b> The Central Eastern Rainforest Reserves of Australia (CERRA) Technical & Scientific Advisory Committee (TSAC) has recently provided a ranked list of potential sites to the CERRA Ministerial Council as the recommended starting point for the expansion of CERRA on its current rainforest theme. These areas include those which form part of existing parks in CERRA, those which have been previously recommended by the IUCN and those which scored highly when assessed against criteria linked to CERRA's world heritage values. DEC provided assistance in refining and applying these criteria to potential reserves. The Commonwealth Minister has declined to coordinate a process to develop a nomination to extend CERRA until he receives a formal approach from both relevant NSW and Queensland State Ministers. DEC is reviewing the TSAC list (to ensure that regional issues and management implications are considered) and will work with the NSW Cabinet Office in determining statewide priorities.

Due date		Region	FA section*	Milestone	Progress
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.	<p><b>In progress</b></p> <p><b>UNE/LNE</b> – A consultant's report commissioned by the Commonwealth Government's Department of Environment and Heritage is expected to be completed in July 2005. The report will identify potential sites of national significance in the broader CERRA region based on the following themes: Aboriginal earthen ceremonial initiation sites ('bora rings'), stone arrangements, dreaming/creation places, working together and resistance sites. Once the report is reviewed by the Commonwealth Department of Environment and Heritage and finalised, the next step will be to work towards seeking National Heritage Listing for some or all of the sites and, potentially, eventually, a World Heritage nomination.</p> <p><b>Eden</b> – No further studies are currently planned.</p>
2004	30 April	Sthn	2.7	Studies of the dedicated reserve system to identify World Heritage values.	<p><b>In progress</b></p> <p>An assessment of the Australian Alps (including Kosciuszcko NP) has been completed and NSW Cabinet is now considering a joint nomination of the Australian Alps for National Heritage Listing. A National Heritage Listing is a prerequisite before consideration can be given to World Heritage nomination.</p> <p>No further action on-park, but a pilot study of world heritage values was completed for Meroo Lake by Francis Bray of the DEC (PWD) South Coast Region Advisory Committee as a subset of the mooted south coast lakes world heritage assessment and/or nomination.</p>
<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.	<p><b>Completed</b></p> <p>Cultural heritage guidelines have been attached to the LNE, UNE and Eden IFOAs.</p>
2002	30 June	Sthn	2.8	SFNSW cultural heritage management guidelines should be attached to the IFOA.	<p><b>Completed</b></p> <p>Cultural heritage guidelines have been attached to the Southern IFOA.</p>
1999	1 April	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><b>Completed</b></p> <p>Cultural heritage policies endorsed by the NPWS Executive include its Cultural Heritage Strategic Policy, Consultation Policy, Cultural Heritage Information Policy and Guidelines for the Assessment of Impact on Heritage Places. These policies are consistent with the principles contained in the CRA/RFA project reports: <i>Protective Mechanisms for Cultural Heritage – Generic Version</i> (Cultural Heritage Working Group, 2000a) and <i>Protective Mechanisms for Cultural Heritage – Lower North East Region</i> (Cultural Heritage Working Group, 2000b). Ongoing review of NPWS statewide guidelines is also consistent with the principles contained in the above mentioned reports.</p>
2001	1 April	UNE, LNE, Eden	2.8 2.7 (E)	Finalisation of SFNSW policy on Indigenous and Non-indigenous cultural heritage.	<p><b>In progress</b></p> <p>Regional indigenous and non-indigenous policies will be incorporated in the final Regional ESFM Plans to be finalised by December 2005.</p> <p>When finalised the Operational Guidelines for Aboriginal Cultural Heritage Management will incorporate Forests NSW's statewide Aboriginal Cultural Heritage management policy.</p>
2002	31 August	Sthn	2.8	Finalisation of policy on Aboriginal and Non-Aboriginal cultural heritage (SFNSW).	<p><b>In progress</b></p> <p>Refer to milestone above.</p>

Due date		Region	FA section*	Milestone	Progress
Annually	Sthn	UNE, LNE, Eden Sthn	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.	<b>Continuing</b> Reporting on cultural heritage by FNSW is contained within its <i>SEEing</i> report for 2004/2005 (see indicator 10 page 29). Cultural heritage performance and achievements are outlined in DEC's annual report. More detailed performance indicators for cultural heritage are included in State of the Parks reporting. The second <i>State of the Parks</i> report was released in June 2005. FNSW and DEC also contribute significant information to this report each year, which includes cultural heritage indicators.
Ongoing		UNE, LNE, Eden	Att 8	Manage cultural values, both Aboriginal and non-Aboriginal, according to guidelines.	<b>Continuing</b> Operational Guidelines for Aboriginal Cultural Heritage Management have been prepared to assist FNSW develop and maintain a systematic approach to consultation with Aboriginal communities about forest management and to manage Aboriginal values in State forests. A draft is being expected to be provided to DEC in late 2005. Cultural values for the national park estate are managed according to DEC's legislative responsibilities and existing statewide policies and guidelines. These include a Cultural Heritage Strategic Policy, Consultation Policy, Cultural Heritage Information Policy and Guidelines for the Assessment of Impact on Heritage Places.
Ongoing		Sthn	2.8	Apply cultural heritage management guidelines when managing cultural heritage.	<b>Continuing</b> Refer to milestone above.
2005	31 December	Sthn	5.1.4.5	All NPWS staff located in the Southern Directorate be provided with adequate cultural awareness training to improve customer relations with Aboriginal communities.	<b>In progress</b> Most staff in the DEC (PWD) South West Slopes, South Coast and Far South Coast regions have attended Aboriginal cultural awareness training. In the Snowy Mountains region some staff have been given one-on-one training via the Indigenous education officer. Further training for all these regions is planned for 2006.
<b>Places of cultural significance</b>					
Ongoing	Sthn	UNE, LNE, Eden Sthn	2.8 2.7 (E)	Updating of section 170 register, sites of state significance will also be listed.	<b>Continuing</b> <b>DEC</b> – DEC began using a new Historic Heritage Information Management System in August 2002. The system contains DEC's section 170 register and was updated as necessary during 2004/2005. <b>FNSW</b> – All sites of non-indigenous exploration and settlement that are assessed and recognised to be of local or regional historical significance are incorporated within Forests NSW GIS system. Potential buffers around significant sites are incorporated into the FMZ system. Sites determined to be of local or regional significance are entered into the regional heritage register.
<b>Places of Aboriginal cultural 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.	<b>In progress</b> DEC is reviewing guidelines for assessment of Aboriginal cultural heritage significance and impacts as part of the NSW whole-of-government <i>Two Ways Together</i> initiative for improving the economic, social and cultural wellbeing of Aboriginal communities.

Due date		Region	FA section*	Milestone	Progress
2005	31 August	Sthn	2.8	NPWS to review processes for Aboriginal cultural heritage management.	<b>In progress</b> Refer to milestone above.
Ongoing		UNE, LNE	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> .	<b>Continuing</b> Guidelines have been developed for the assessment of all parks to determine whether they should be included in Schedule 14 of the <i>National Parks and Wildlife Act 1974</i> . No preliminary assessments have been made to date; however, DEC continues to proceed with the return to Aboriginal ownership of those reserves already listed on Schedule 14, and to respond to further nominations as they occur. One such nomination has been received for Tooloom, Toonumbar and Yabbra National Parks in the UNE and an assessment is under way and due to be completed in 2005/2006.
2006	31 December	Sthn	5.1.1	Assessment of all parks to determine if any could be added to Schedule 14 of the <i>National Parks and Wildlife Act 1974</i> .	<b>In progress</b> Guidelines have been developed for the assessment of all parks to determine whether they should be included in Schedule 14 of the <i>National Parks and Wildlife Act 1974</i> . No preliminary assessments have been undertaken to date, however DEC continues to progress the return to Aboriginal ownership of those reserves already listed on Schedule 14 (e.g. Biamanga and Gulaga National Parks) and to respond to further nominations as they occur. Lease negotiations for the return of Biamanga (in the Eden Region) and Gulaga National Parks to their Aboriginal owners is continuing. In the DEC (PWD) South West Slopes Region a number of systematic surveys for Aboriginal cultural heritage features have been undertaken. Numerous artefacts, sites and other structures were recorded as a consequence of these studies, all of which are logged on the DEC Aboriginal Heritage Information Management System (AHIMS). This information will assist in any future Schedule 14 assessments.
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).	<b>Continuing</b> DEC started to use the AHIMS in June 2001 after two rounds of statewide consultation in December 2000 and June 2001. Newly discovered Aboriginal sites/artefacts are registered on AHIMS regularly.
Ongoing		Sthn	2.8	Preparation of an information management system for Aboriginal heritage including maintenance of Aboriginal Sites Register.	<b>Continuing</b> Refer to milestone above.
2006	31 December	Sthn	5.1.4.3	Creation of a zone to protect Aboriginal cultural heritage, with adequate measures (including buffers) to protect against adverse impacts by forest activities, soil erosion and visitation to sensitive cultural areas.	<b>In progress</b> FNSW protect Aboriginal cultural heritage in accordance with legislative requirements.

Due date	Region	FA section*	Milestone	Progress
<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><b>In progress</b></p> <p>The revised regional ESFM plans highlight FNSW's commitment to the involvement of Aboriginal communities in the management of State forests. These revised regional ESFM plans were on public display in early 2005.</p> <p>Draft reserve plans of management are referred to relevant Aboriginal organisations and DEC Regional Advisory Committees, which include Aboriginal representatives, for comment. DEC also continues to engage Aboriginal traditional knowledge holders in the management of threatened species. In some instances major development proposals are referred to Aboriginal organisations for comment.</p> <p><b>UNE/LNE</b> – DEC has not yet developed a strategy. However, local arrangements occur, For example, DEC (PWD) Northern Branch are is seeking external funding to extend the employment of a Cultural Heritage Project Officer who can work with staff and the local Aboriginal communities to foster better partnerships in the management of Aboriginal cultural heritage. DEC is also continuing to develop a draft consultation toolkit to assist the agency to more effectively engage with Aboriginal communities in park management.</p> <p><b>Eden</b> – A draft joint strategy has been prepared by DEC and FNSW. However, the strategy is yet to be finalised. Delays have been due in part to a focusing of resources on the return of Biamanga and Gulaga National Parks to Aboriginal ownership. For parks in the Far South Coast, including Biamanga and Gulaga National Parks, the DEC continued to release the newsletter <i>Coastal Custodians</i>, a specialist Aboriginal newsletter designed to increase awareness and participation of Aboriginal people in the DEC estate. There are also two steering committees, mostly comprised of Aboriginal people, for the Bega and Eurobodalla Aboriginal heritage studies. Details of projects overseen by these committees are outline in the "Ventures likely to generate mutual benefits ..." milestone on page 105.</p>
2003	30 June	Sthn	5.1.3	Preparation of a strategy to ensure that Aboriginal communities and stakeholders are given a greater participatory role in forest management.
				<p><b>In progress</b></p> <p>A strategy has not yet been developed by DEC. However, draft reserve plans of management are referred to relevant Aboriginal organisations and DEC Regional Advisory Committees, which include Aboriginal representatives, for comment. DEC also continue to engage Aboriginal traditional knowledge holders in the management of threatened species. Other local arrangements occur, e.g. in some instances major development proposals (such as Granite Falls lookout) are referred to Aboriginal organisations for comment. Joint management arrangements that provide for a participatory role for Aboriginal communities are noted at 321.6.</p>
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><b>In progress</b></p> <p>Aboriginal communities were consulted in the development of regional ESFM plans and Operational Guidelines for Aboriginal Cultural Heritage Management on State forests. The operational guidelines include consultative arrangements FNSW regions will follow with local Aboriginal communities on forest activities and when communication with the community could be expected.</p>
2003	30 June	Sthn	5.1.3	SFNSW must 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 EMS-NFMS.
				<p><b>In progress</b></p> <p>Refer to milestone above.</p>
<b>Co-management and joint venture arrangements</b>				

Due date		Region	FA section*	Milestone	Progress
Ongoing		UNE, LNE, Eden	5.1.1	SFNSW and NPWS must progressively negotiate joint management arrangements and joint ventures with local Aboriginal communities.	<p><b>Continuing</b></p> <p>In 2004/2005, no new arrangements were entered into by FNSW. However, FNSW continues to explore the possibility of further co-management and joint venture arrangements. Previously initiated arrangements (such as the Keepa Keepa Elders project) continued to be developed during 2004/2005. Operational Guidelines for Aboriginal Cultural Heritage Management assist with a comprehensive consultative process that will capture these negotiations.</p> <p><b>UNE/LNE</b> – DEC has various joint management, access or hunting and gathering arrangements in place, including the first Indigenous Land Use Agreement in the State, at Arakwal.</p> <p><b>Eden</b> – Lease negotiations for the return of Biamanga National Park to Aboriginal owners are continuing. DEC has established two permanent culture camps with basic infrastructure on-park under joint management arrangements with local Aboriginal communities. In addition, DEC has negotiated a Statement of Joint Intent with the Eden Local Aboriginal Land Council to allow support for informal culture camping and cultural activities in other areas throughout the Eden Management Area. Relevant amendments are being drafted to plans of management for Wadbilliga, Mimosa Rocks and Ben Boyd National Parks to accommodate these culture camps and cultural activities.</p>
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><b>In progress</b></p> <p>Revised regional ESFM plans identify Forests NSW's commitment to co-management and joint venture arrangements with Aboriginal communities. In September 2004 a Memorandum of Understanding (MOU) was signed between the Anaiwan Aboriginal and Traditional Owners Natural Resource and Cultural Heritage Management Association Incorporated and FNSW. The MOU covers co-operative arrangements for the management of Aboriginal cultural heritage and Aboriginal interests in the Riamukka and Nowendoc State forests (near Walcha). This MOU provides for sharing of knowledge, Aboriginal access to appropriate land and traditional resources and Aboriginal involvement in the management of jointly identified areas.</p>
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><b>Continuing</b></p> <p><b>FNSW</b> – Revised regional ESFM plans identify FNSW's commitment to Aboriginal community ventures. No new venture arrangements were considered in 2004/2005.</p> <p><b>DEC – UNE/LNE</b> An Arakwal cultural centre has been approved. There have also been several cultural heritage surveys conducted in the UNE area. These initiatives have developed increased community awareness and understanding of the cultural heritage on PWD estate. From these initiatives the Aboriginal community have been able to make recommendations and provide valuable input into the planning and development of facilities, interpretation/education and also the development of increased awareness in the broader community of the cultural context of park areas. The Jubullum Flat Camp Aboriginal Area was gazetted during 2004/2005.</p> <p><b>DEC – Eden</b> Five projects involving Aboriginal communities have been completed or are nearing completion: (i) mapping of Aboriginal pathways on the Far South Coast; (ii) Bega Oral History Stage 3, combining historical and oral history into one document; (iii) Bega Oral History Stage 4, presentation of information gathered in Stage 3 (started); (iv) Eurobodalla Stage 1 Aboriginal History, an annotated bibliography of cultural heritage research; and (v) Eurobodalla Oral History Stage 2 Aboriginal History of Eurobodalla.</p>



Due date		Region	FA section*	Milestone	Progress
2006	31 December	Sthn	5.1.1	SFNSW and NPWS must progressively negotiate joint management arrangements and joint ventures with local Aboriginal communities.	<p><b>In progress</b></p> <p><b>FNSW</b> – Revised regional ESFM plans identify FNSW’s commitment to co-management and joint venture arrangements with Aboriginal communities. No new co-management or joint venture arrangements were considered in 2004/2005.</p> <p><b>DEC</b> – Joint management of Jervis Bay National Park is currently being sought. Negotiations are still on hold while land claims are being processed. Lease negotiations for the return of Gulaga National Park to Aboriginal owners are continuing. Additionally, DEC is a member of the Department of Lands project with Gundungurra Tribal Council to negotiate a non-native title Indigenous Land Use Agreement over parts of DEC estate, including Bangadilly National Park.</p>
Annually		Sthn	5.1.1	Annual reporting to RACD on the progress by NPWS and SFNSW on negotiating co-management and joint management arrangements with Aboriginal communities.	<p><b>Continuing</b></p> <p>Refer to milestones above.</p>
Ongoing		Sthn	5.1.1	Ventures likely to generate mutual benefits to the Aboriginal, as well as the wider, community must also be considered.	<p><b>Continuing</b></p> <p>Revised regional ESFM plans identify Forests NSW’s commitment to Aboriginal community ventures. No new venture arrangements were considered in 2004/2005.</p> <p>PWD South Coast Region continued its strong Aboriginal Discovery Ranger (ADR) Program run by six ADRs. The program involves 90 schools and 22 000 children plus vacation discovery tours on-park. DEC also contracted two Aboriginal groups for weed control works on Seven Mile Beach National Park and Murramarang Aboriginal Area.</p>
Ongoing		Sthn	5.1.1	Where further analysis indicates the feasibility of other ventures, project plan must be developed for implementation.	<p><b>Continuing</b></p> <p>No new ventures requiring project plans were initiated during 2004/2005. Refer to milestone above.</p>
2006	31 December	Sthn	5.1.4.1	Where consideration has identified venture, project plans must be developed for their implementation.	<p><b>In progress</b></p> <p>No new ventures requiring project plans were initiated during 2004/2005.</p>
2004	31 December	Sthn	5.1.1	SFNSW will examine any State forest that could be considered for co-management or joint venture arrangements.	<p><b>In progress</b></p> <p>Revised Regional ESFM Plans identify FNSW’s commitment to co-management and joint venture arrangements with Aboriginal communities. No new co-management or joint venture arrangements were considered in 2004/2005. No further progress on this milestone has occurred this year.</p>
<b>Cooperative management arrangements</b>					
2006	31 December	Sthn	5.1.4.1	SFNSW and NPWS must progressively negotiate separate cooperative management agreements with local Aboriginal communities that enable Aboriginal people to be involved in the management of State forests and national parks.	<p><b>In progress</b></p> <p>Revised Regional ESFM Plans identify Forests NSW’s commitment to co-management and joint venture arrangements with Aboriginal communities. No new cooperative management agreements were considered in 2004/2005.</p> <p>The Aboriginal Management Committee for the DEC (PWD) South West Slopes Region was established during the year (and held its first meeting and drafted terms of reference) and will be considering joint management arrangements as part of its Terms of Reference and aims.</p>

Due date		Region	FA section*	Milestone	Progress
2006	31 December	Sthn	5.1.4.1	Explore opportunities for joint ventures with SFNSW and NPWS that promote recognition, awareness and respect for Aboriginal cultural heritage. Other ventures likely to generate mutual benefits to the Aboriginal community must also be considered.	<b>In progress</b> No further progress on this milestone has occurred this year.
2006	31 December	Sthn	5.1.4.5	NPWS should enter into a cooperative management agreement with the relevant Aboriginal communities to develop cooperative management and funding strategies to ensure the effective protection and management of Aboriginal cultural heritage on the NPWS estate, subject to funding.	<b>In progress</b> Refer to milestone above.
2006-	31 December	Sthn	5.1.4.5	Aboriginal communities consider it a NPWS responsibility to develop and implement a policy in relation to access to parks, nature reserves and other appropriate service estate for traditional purposes. This policy framework will be developed by the Aboriginal Management Committee.	<b>In progress</b> The Aboriginal Management Committee, which was established during the year, is yet to develop a policy framework.
<b>Access for traditional and cultural purposes</b>					
2006	31 December	Sthn	5.1.4.3	Areas of State forest to be identified and set aside for Aboriginal education and specific community activities in accordance with Aboriginal traditional practices. Such areas to be determined and agreed upon by the Aboriginal Management Committees.	<b>In progress</b> In 2004/2005, FNSW in cooperation with the Tumut/ Brungle Local Aboriginal Land Council (LALC) and the local Tumut Community Development Employment Project (CDEP) organised the construction of an outdoor natural amphitheatre in the Tumut sub-region. This program used the resources of local Aboriginal labourers from the Tumut region to assist FNSW field staff and the Tumut/Brungle LALC to create a venue that the Aboriginal and general Tumut community could use to promote cultural events in a natural setting.
2000	1 April	UNE, LNE, Eden	5.1.1	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).	<b>In progress</b> A joint PWD and FNSW strategy has not been developed at this stage. <b>FNSW</b> – Revised regional ESFM plans identify Forests NSW’s commitment to a strategy to allow local Aboriginal communities access to forest resources for traditional/cultural purposes. Forests NSW responds to specific requests from Aboriginal communities for access to forest resources. In 2004/2005, FNSW issued a letter of Authority to the Bhortoo Corporation (in the Taree area) to gather small amounts of plants, plant parts and material for traditional use (e.g. in implement making). <b>DEC</b> – As part of the NSW whole-of-government <i>Two Ways Together</i> initiative (being led by the Department of Aboriginal Affairs) for improving the economic, social and cultural wellbeing of Aboriginal communities, DEC is leading the development of a Wild Resource Use Policy to apply to all NSW Government lands. This work will also inform the development of a DEC policy and is linked to the development of an access policy under <i>Two Ways Together</i> . In the meantime, Aboriginal access to forest resources for traditional purposes is being facilitated by DEC on an “as needs” basis at regional level (e.g. the establishment of permanent culture camps in the Eden region) and includes informal arrangements for Aboriginal people to participate in cultural activities.

Due date		Region	FA section*	Milestone	Progress
					In the Eden region, DEC is involved in a regional heritage study that will identify areas and their scope for access for cultural resources, and which will include the scoping of planning mechanisms required to enable Aboriginal people to achieve their aspirations both on- and off-park..
2003	31 December	Sthn	5.1.1	Joint strategy on how Aboriginal communities can gain access to materials for art and craft purposes, food sources and medicine; access to firewood and opportunities for traditional use and cultural activity.	<p><b>In progress</b></p> <p>A joint PWD and FNSW strategy has not been developed at this stage. In the meantime, DEC and FNSW continue to proceed with their own initiatives.</p> <p><b>FNSW</b> – Draft Regional ESFM Plans identify Forests NSW’s commitment to a joint strategy to allow local Aboriginal communities access to forest resources for traditional/cultural purposes. Forests NSW responds to specific requests from Aboriginal communities for access to forest resources. During 2004/2005, three Aboriginal groups were issued with commercial firewood collection licences.</p> <p><b>DEC</b> –The strategy to provide access to Aboriginal people for traditional cultural purposes in Southern region will be based on the strategy that is being developed for the Eden region. Also, as part of the NSW whole-of-government <i>Two Ways Together</i> initiative (being led by the Department of Aboriginal Affairs) for improving the economic, social and cultural wellbeing of Aboriginal communities, DEC is leading the development of a Wild Resource Use Policy to apply to all NSW Government lands. This work will also inform the development of a DEC policy and is linked to the development of an access policy under <i>Two Ways Together</i>. In the meantime, Aboriginal access to forest resources for traditional purposes is being assisted by DEC on an “as needs” basis at regional level and includes informal arrangements that provide for the waiver of fees for Aboriginal people to participate in cultural activities.</p>
<b>Employment and training opportunities</b>					
2000	1 April	UNE, LNE	5.1.2	Preparation of a joint strategy to facilitate employment and development program for Aboriginal people.	<p><b>In progress</b></p> <p>A joint DEC and FNSW strategy has not been developed. In the meantime, DEC and FNSW continue to proceed with their own initiatives.</p> <p><b>DEC</b> – DEC continued to put in place its Aboriginal Employment and Training Strategy that seeks to assist employment and development opportunities for Aboriginal people. As part of this strategy cross-agency approaches to training are being examined. The strategy could be used as the basis of future negotiations on a joint strategy.</p> <p><b>FNSW</b> – There is potential for Aboriginal people to become more involved in the timber and forestry industries. It is recognised that some functions are specialised and require specific skills that depend on training. FNSW is assisting with the Commonwealth’s development of a National Indigenous Forestry Strategy (NIFS). A FNSW Aboriginal Liaison Officer has been appointed to the NIFS working group, which oversees the development of the strategy. The potential for further Aboriginal employment and measures to overcome barriers to involvement will be investigated as part of the Indigenous Forest Strategy development. It is expected this strategy will provide and identify opportunities within a framework applicable to each region, although specific involvement would likely vary depending on the area involved.</p>
2003	30 June	Sthn	5.1.2	Preparation of an employment and economic opportunities program with Aboriginal people.	<p><b>In progress</b></p> <p>Whilst an economic opportunities program has not proceeded, DEC continued with its Aboriginal Employment and Training Strategy to assist employment and development opportunities for Aboriginal people. In the PWD Snowy Mountains region, a permanent full-time indigenous community and liaison officer was employed in 2004/2005 with contributory funding from the Elsa Dixon Program. In the PWD South Coast region, one cadet Aboriginal trainee ranger is employed at Ulladulla Area, three Aboriginal field officers and one ranger (Highlands Area) are also employed in the region, and an Aboriginal Heritage Conservation Officer is stationed in the South Coast Area. An additional ranger cadet position has been identified for the Nowra Area to start in 2006.</p>

Due date		Region	FA section*	Milestone	Progress
Ongoing		UNE, LNE, Eden	5.1.2	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.	<b>Continuing</b> <b>UNE/LNE</b> – In DEC (PWD) Northern Branch there were an additional four permanent Aboriginal positions created during 2004/2005, comprising one senior field supervisor and three field officers. <b>Eden</b> – Five Aboriginal staff were appointed by DEC as a result of funding provided for management of additions to the reserve system. These were: a trainee field officer, two Aboriginal sites officers (one male and one female), one project officer to manage the handback of Biamanga and Gulaga National Parks and a cadet trainee field officer (who is now a ranger). Additional employment areas include the Discovery Ranger Program.
2005	31 December	Sthn	5.1.4.2	Enterprise development with SFNSW has been identified as a major interest for Aboriginal communities. Some examples are provided in the forest agreement.	<b>In progress</b> No progress to report.
2005	31 December	Sthn	5.1.4.4	SFNSW should initiate the specified employment opportunities to enable active Aboriginal participation in the management of forests, subject to funding.	<b>In progress</b> FNSW provides employment opportunities for Aboriginal people in regional areas, in particular seasonal fire fighting and Aboriginal field work (casual/part-time). During 2004/2005 one Aboriginal Cultural Heritage officer was employed in a permanent capacity and one Aboriginal field worker was employed in a temporary capacity.
2005	31 December	Sthn	5.1.4.6	Specified employment opportunities in NPWS were identified as a major priority for Aboriginal communities in the Southern region, subject to external funding.	<b>In progress</b> In the DEC (PWD) South West Slopes region two aboriginal field officer positions have been established and filled. The PWD provides contract opportunities and employs Aboriginal contractors where available. Some NPWS regions, such as South West Slopes region, are also participating in the PWD Aboriginal Cadet Ranger program.
<b>Aboriginal Management Committee for the Southern region</b>					
2003	31 December	Sthn	5.1.4.1	An Aboriginal Management Committee will be established for both State forests and national parks to represent and manage Aboriginal cultural heritage on State forests and national parks respectively.	<b>In progress</b> An Aboriginal Management Committee for State forests is yet to be established For PWD (South West Slopes region) an Aboriginal Management Committee was established during the year, has held the first meeting and drafted terms of reference.
2003	31 December	Sthn	5.1.4.1	Terms of Reference for the Committees will be determined and developed by the Committee members upon establishment. Terms of Reference must include specified aspects.	<b>In progress</b> Refer to milestone above.
2003	31 December	Sthn	5.1.4.1	Development of a Plan of Management which will address the management principles, guidelines and objectives of the Aboriginal Management Committee.	<b>In progress</b> The Aboriginal Management Committee is being consulted in the development of the draft Plan of Management for Kosciuszko National Park.

Due date		Region	FA section*	Milestone	Progress
2005	31 December	Sthn	5.1.4.5	A provision be created for two Aboriginal representatives to sit on the South West Slopes Regional Advisory Committee.	<b>Completed</b> Three Aboriginal representatives were appointed to the DEC (PWD) South West Slopes Regional Advisory Committee in 2003/2004.
<b>MANAGING FOR OTHER FOREST VALUES AND USES</b>					
<b>Occupation permits on State forests</b>					
1999	1 July	UE, LNE, Eden	2.3.3	Formation of Occupation Permit Taskforce. (Taskforce will also consider issues in the Eden region)	<b>Completed</b> A taskforce of representatives from the NPWS, SFNSW and NSW Farmers was formed in November 2000.
2000	1 July	UNE, LNE	2.3.3	Phasing out of occupation permits.	<b>In progress</b> Following the finalisation of the Government's decisions on reserves, joint agency recommendations for phase out are being considered.
2002	31 December	Sthn	2.3.3	Consideration of the Southern region by the Occupation Permit and Permissive Occupancy Taskforce.	<b>Completed</b> A steering group comprised of representatives from DLWC, NSW Farmers, SFNSW and NPWS met several times over 2001/2002 to oversee the phase out of occupation permits and permissive occupancies. The group was chaired by NPWS. The phase out, which affected about 120 people, was completed over an 18 month period ending in June 2003.
Within 18 months of gazettal of new reserves		Sthn	2.3.3	Phasing out of occupation permits in State forests which currently exist in areas identified as formal reserves and informal reserves and permissive occupancies on Crown land identified as formal reserves and informal reserves.	<b>Completed</b> See above.
<b>Roads and trails</b>					
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.	<b>Completed</b> <b>UNE and LNE regions</b> –NPWS & SFNSW entered into a draft MOU in January 2000. <b>In progress</b> <b>Eden region</b> – A draft MOU has been prepared but will be reviewed before finalisation to ensure compatibility with a similar plan to be developed for the Southern region.
2002	31 December	Sthn	2.13.4	MOU on the usage of roads and trails maintenance and access arrangements.	<b>In progress</b> There has been no further progress by FNSW and PWD on the development of the MOU for the Southern region. In the meantime, local discussions between the two agencies are occurring as the need arises.

Due date		Region	FA section*	Milestone	Progress
<b>Fire management</b>					
2001	1 April	UNE, LNE, Eden	2.10 2.9 (E)	Preparation of a joint agreement with District Fire Committees for the prevention, detection and suppression of bush fires.	<b>Implemented</b>  FNSW and the PWD continue to be represented on the District Fire Committees, formed under <i>Rural Fires Act 1997</i> , along with DLWC and the NSW Rural Fire Service. FNSW and the PWD are recognised as two of four fire authorities under the <i>Rural Fires Act</i> . FNSW and the PWD are also members of the NSW Bush Fire Coordinating Committee. The Bush Fire Coordinating Committee is the statutory body responsible for the coordination of all state fire fighting agencies, including the NSW Rural Fire Service, NSW Fire Brigades, FNSW, the PWD and various animal and environment agencies and land managers, and for planning in relation to bush fire prevention and coordinated fire fighting. The Bush Fire Coordinating Committee advises the Commissioner of the NSW Rural Fire Service about bush fire prevention, mitigation and coordinated bush fire suppression.
Ongoing		Sthn	2.10	Continuing participation in District Fire Management Committees for the prevention, detection and suppression of bush fires.	<b>Continuing</b>  Refer to milestone above.
2007	30 April	Sthn	Att 6(2)	Incorporate into Regional ESFM Plans and plans of management under the <i>National Parks and Wildlife Act 1974</i> , provisions which address bush and other fires ensuring ecologically sustainable forest management of forests.	<b>In progress</b>  This milestone is addressed through District Fire Committees under the <i>Rural Fires Act 1997</i> where these values are considered before District Hazard Reduction Plans are finalised. PWD also addresses ESFM principles through reserve plans of management and Reserve Fire Management Plans at the individual reserve level. These address the provisions outlined and are also important for risk management, threatened species management and recovery planning.  Revised regional ESFM Plans identify FNSW fire management commitments. These revised regional ESFM Plans were on public display in early 2005 and are expected to be published in late 2005. FNSW's corporate fuel management plan is under review by FNSW Fire Management Branch and it will be open for FNSW internal comment in 2006.
<b>Recreation and tourism</b>					
2001	1 April	UNE, LNE, Eden	2.13.1 2.12.1 (E)	Preparation of joint regional recreation and tourism plans.	<b>In progress</b>  <b>UNE/LNE</b> – A joint DEC and FNSW plan has not been prepared. However, a DEC statewide strategy for sustainable visits ( <i>Living Parks</i> ) is scheduled for completion in 2005. A key action specified within <i>Living Parks</i> is the development of Branch Visitation Management Plans, which will guide regional recreation and tourism planning on the PWD estate. A framework for the development of these plans is expected to be completed in 2005/2006.  FNSW has drafted a strategy for part of the LNE Region called <i>A recreation and tourism strategy for the State forests of the Central Coast and Lower Hunter</i> . This strategy is being developed by Forests NSW in collaboration with the community. PWD participated in the consultation phase of this initiative.  <b>Eden/Southern</b> – The <i>Far South Coast Nature Tourism and Recreation Plan</i> , a multi-agency cooperative plan, was completed in May 2004 and is now being implemented. Developing the plan involved representatives from FNSW, the NPWS, Eurobodalla Tourism, Sapphire Coast Tourism, Ummurra Aboriginal Cultural Heritage Tours and Department of Lands. The plan includes areas within the Eden region and some of the forests within the Southern region ( <a href="http://www.nationalparks.nsw.gov.au/npws.nsf/Content/fsc_escarpment_relatedinfo">www.nationalparks.nsw.gov.au/npws.nsf/Content/fsc_escarpment_relatedinfo</a> ). In addition, a South East Forests map and booklet has been completed and is on sale to the public. This is a cooperative venture between DEC, FNSW, Bega Valley Shire Council and Tourism NSW that aims to promote ecotourism in the South East Forests and surrounding areas.

Due date		Region	FA section*	Milestone	Progress
2003	31 August	Sthn	2.13.1	Preparation of joint regional recreation and tourism plans.	<p><b>In progress</b></p> <p>Refer to milestone above.</p> <p>In addition, a draft inter-departmental Nature Tourism Strategy (Nature and Tourism) has been prepared by the Southern Highlands and Illawarra Regional Tourism Task Force. DEC (PWD) South Coast Region is providing a leading role but the initiative also involves FNSW, NSW Department of Lands, local councils, tourism organisations and others. The strategy promotes integrated and ecologically sustainable nature tourism in the Southern Highlands, part Southern Tablelands and Shoalhaven areas. The document is proposed to be placed on public exhibition at an unspecified time in the future.</p> <p>DEC is also represented on the board of Tourism Snowy Mountains and was a funding partner for the tourist map covering the Australian Alps, which was updated during 2005.</p>
<b>Carbon sequestration opportunities</b>					
2004	1 April	UNE	2.13.2	Undertaking of a revegetation project that includes carbon sequestration opportunities.	<p><b>In progress</b></p> <p>No further progress to report.</p>
<b>Plantation areas within national parks</b>					
2001	30 June	UNE, LNE	3.3 6.16.1 Att 11	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><b>In progress</b></p> <p>No areas of plantation in dedicated national park were logged or required rehabilitation.</p>
Ongoing	Within six months of harvest	UNE, LNE	6.16.1	Rehabilitation works on plantation areas within national parks must be completed within six months of harvest completion.	<p><b>Continuing</b></p> <p>Refer to milestone above.</p>
Ongoing		UNE, LNE	6.16.1	Works programs and rehabilitation plans to be jointly prepared and approved. Rehabilitation costs to be funded by sale royalties.	<p><b>Continuing</b></p> <p>Refer to milestone above.</p>

Due date		Region	FA section*	Milestone	Progress
<b>MANAGING TIMBER SUPPLY</b>					
<b>Supply arrangements</b>					
1999	1 March	UNE, LNE	3.2	Amendment of wood supply agreement with Boral.	<b>Completed</b> Amended wood supply agreement was signed on 5 March 1999.
1999	31 December	UNE, LNE, Eden	Att 8	Review legislation and policies relevant to the allocation and pricing of hardwood logs from State forest before the end of 1999.	<b>In progress</b> No further work has occurred on this milestone in this reporting period.
2000	1 April	UNE, LNE	3.2	Wood supply agreement arrangements for processing thinnings.	<b>Completed</b> No new agreements have been entered into.
2000	1 April	Eden	3.2	Amendment of wood supply agreement with Harris Daishowa Australia.	<b>Completed</b> The wood supply agreement was signed on 5 March 1999 and amended on 29 September 1999.
2000	31 December	UNE, LNE	3.2	Additional volumes supplied under a transitional "top-up" arrangement over two years to assist industry adjustments to terminate by 31 December 2000.	<b>Completed</b> SFNSW made arrangements for additional wood supply volumes over a two-year period. These arrangements were terminated on 31 December 2000.
Ongoing	Sthn	UNE, LNE, Eden, Sthn	3.4 4.3	Consultation on timber supply arrangements must occur through the development of Plans of Operation.	<b>Continuing</b> Consultation with industry is accepted practice as part of developing an annual plan of operations.
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 Planning NSW 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.	<b>In progress</b> Discussions have occurred between FNSW and PWD on the development of a process for considering unmet CAR conservation targets when FNSW purchases land to supplement timber supply. Pending a further outcome, when purchasing new lands, FNSW is using an internal process that considers unmet CAR conservation targets.



Due date		Region	FA section*	Milestone	Progress
2002	30 June	Sthn	3.3.3	The process (prior to purchase) of selecting land for purchase by SFNSW for timber supply must address criteria to be agreed between SFNSW and NPWS. These criteria will consider: the key substantially unmet CAR conservation targets; whether there is any need for access through reserves; issues of reserve design; and proximity to national parks/reserves.	<b>In progress</b> Refer to milestone above.
<b>Resource availability and sustainable yield</b>					
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.	<b>In progress</b> No progress to report.
Ongoing	Within next five 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).	<b>In progress</b> A Draft Inventory Policy is being is planned to be finalised in late 2005. Consultation with FNSW field staff is occurring and implementation planning is proceeding in association with the policy development. Continuous replacement of FRAMES plots is part of new inventory policy. No additional inventory plots have been set up during this reporting period.
Ongoing		Eden	3.5 Att 8	Refinement of resource availability by improving the inventory such as additional plot measurements.	<b>In progress</b> Inventory of the regrowth area in the Eden region is ongoing and intensive.
2007	30 April	Sthn	3.5 Att 6(6e)	Refinement of resource availability on native forests by additional inventory plot measurements to improve volume estimates at a regional level.	<b>In progress</b> No additional inventory plots have been set up during this reporting period.
Ongoing		Sthn	3.5	The results of resource inventory and annual monitoring of actual and predicted timber volumes must be used to review the performance in achieving the implementation of sustainable yield of timber products.	<b>Continuing</b> No progress to report.
<b>FRAMES improvement and review</b>					
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.	<b>Continuing</b> <b>UNE/LNE</b> – The main focus of FRAMES development in the North East has been in the strategic wood modelling area. Key improvements have been achieved through the introduction of <i>Woodstock</i> for yield scheduling analyses. This tool has spatial data linkages that will enable plans to be more readily displayed and interpreted. Improvements have also been achieved in spatial data management and there is an ongoing program of improvement to the growth and yield modelling system. FRAMES biometrics was reviewed with improvements to models based on recent data collection. This work will continue.

Due date		Region	FA section*	Milestone	Progress
					<p>No significant further developments in the inventory system used in FRAMES in the north-east has occurred this year, However, Atlas Cruiser, which is an inventory framework, is being considered by FNSW. This software will be used to house and analyse regrowth forest inventory data. The system will also encapsulate the biometric equations necessary to reliably predict growth and yields.</p> <p><b>Eden</b> – In 2004/05 upgrades occurred to the REDEN inventory analysis system. REDEN is an inventory-plot management system for the Eden region. The system is designed to provide strategic analysis output for the even aged regrowth forests and includes biometrics specific to the regrowth forests of the south east of the State. In 2004/2005, the output of this system was incorporated in a Spatial Woodstock wood flow model to meet the requirements of monitoring and managing the regrowth resource. An evaluation of the initial outputs from the system will be completed in late 2005.</p>
2006	31 December	Sthn	Att 6(7)	Establishment of an ongoing FRAMES development program to include the listed elements.	<p><b>In progress</b></p> <p>Much of the effort on FRAMES development improvements have been specifically focused on the North East region (see milestone above). These improvements will be applied to other FA regions. FRAMES development for the Southern region will be able to proceed more rapidly once improvements to FRAMES systems in the North East region are finalised.</p>
2006	31 December	Sthn	3.5 Att 6(7)	Enhancement of modifier models in FRAMES including refinement of harvesting area exclusions and FRAMES parameters (such as the tree defect and tree availability modifier models), using locally specific data to replace RFA regional average modifier models.	<p><b>In progress</b></p> <p>Refer to milestones above.</p>
Ongoing		UNE, LNE, Eden	3.5	SFNSW consultation with NPWS and Planning NSW on the terms and conduct of the FRAMES assessment.	<p><b>Continuing</b></p> <p>No formal consultation has occurred this year.</p>
2002	30 September	Sthn	3.5 Att 6(7)	SFNSW will consult with NPWS, EPA and DoP on the terms and conduct of the FRAMES review/development program.	<p><b>In progress</b></p> <p>No formal consultation has taken place this year.</p>
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.	<p><b>In progress</b></p> <p>Timber supply on the North Coast was subject to a review in 2003 after changes to FNSW estate announced by the NSW Government. Subsequent changes to the wood supply agreements were negotiated and finalised. Industry has extended the commitment period from 2018 to 2023. These contracts recognise the changing nature of future timber resources, particularly the increased supply from hardwood plantations and the capacity of industry to process and add value to smaller, lower quality logs. The changes will also ensure the best use of the available wood resource.</p>
<b>FRAMES monitoring and processes</b>					
2004	1 April	UNE, LNE	3.5	SFNSW, NPWS and Planning NSW will consult on appropriate spatial scales for reporting actual yields against FRAMES estimates.	<p><b>In progress</b></p> <p>Formal consultation in relation to this milestone is yet to take place.</p>

Due date		Region	FA section*	Milestone	Progress
Ongoing	Sthn	Eden, Sthn	3.5	SFNSW, NPWS and Planning NSW will consult on appropriate spatial scales to reporting actual yields against FRAMES estimates.	<b>Continuing</b> Refer to milestone above.
Annually		UNE, LNE, Eden	3.5	Reporting on actual versus predicted volume at the scale determined by SFNSW, Planning NSW and NPWS. To be included in the annual report to Parliament.	<b>Continuing</b> Actual timber harvest volumes against IFOA supply commitments are incorporated into this implementation report. However, there are a number of issues related to information on actual yields against FRAMES estimates that have hindered comprehensive reporting. SFNSW highlighted problems with 'actual versus predicted' methods in 2001/2002 that have prevented any meaningful comparison of FRAMES estimates with actual volumes harvested. These problems are to be dealt with by further studies of yield regulation processes and the development of a systematic harvest event recording system built on geo-database technology.
Annually		Sthn	3.5 Att 6(6d)	Information on actual yields against FRAMES estimates at the agreed scale to be provided to DoP and included in the Annual Report to the NSW Parliament (at the determined scale).	<b>Continuing</b> Refer to milestone above.
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.	<b>Continuing</b> Refer to milestone above.
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.	<b>Continuing</b> Refer to milestone above.
Annually		Sthn	3.5 Att 6(6f)	Monitoring and review of FRAMES performance to include comparison of actual versus predicted volumes for each financial year.	<b>Continuing</b> Refer to milestone above.
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.	<b>Continuing</b> Refer to milestone above.
Annually		Sthn	3.5	Monitoring and review of FRAMES performance to include assessment of progressive 20 year supply.	<b>Continuing</b> Refer to milestone above.
2006	31 December	Sthn	Att 6(8) point 2	Commission and publish an independent review of the enhanced systems and process, models, information base, and assumptions which contribute to the FRAMES system applying to both the South Coast and Tumut subregions of the Southern region.	<b>In progress</b> Improvements to FRAMES not yet finalised. Therefore, an independent review of enhanced FRAMES has not been commissioned.

Due date		Region	FA section*	Milestone	Progress
2007	30 April and each five-year review	Sthn	Att 6(8) point 2	Undertake a review of sustainable yield every five years using enhanced FRAMES systems and information bases. The results of this will inform the annual volume which may be harvested from the Southern region (or subregion), being mindful of achieving long-term sustainable yield and optimising sustainable use objectives consistent with this Agreement.	<b>In progress</b> No work done to date. Milestone not due until 2007.
2007	30 April and each five-year review	Sthn	Att 6(8) point 3	Undertake independent audits of sustainable yield to be completed and published in time for each subsequent five year review.	<b>In progress</b> No work done to date. Milestone not due until 2007.
2007	30 April	Sthn	Att 6(6c) point 2	The FRAMES models will reflect the site-specific silvicultural regimes applied in the Southern Region.	<b>In progress</b> No work done to date. Milestone not due until 2007.
<b>Production of timber products</b>					
Annually		UNE, LNE, Eden	3.5	Report on annual production of timber products other than the production of quota sawlogs.	<b>Continuing</b> FNSW reports annually on the production of timber products in its <i>SEeing</i> report. Information for annual production of timber products (including those other than quota sawlogs) is also contained within this report (refer to Criterion 2 in chapter 2).
Annually		Sthn	3.5 Att 6(6d)	A report to DoP, NPWS and EPA on annual production of products other than production of quota sawlogs for each financial year.	<b>Continuing</b> Refer to milestone above.
<b>Timber supply arrangements and management and charcoal production</b>					
2002	30 September	Sthn	3.3.2	SFNSW must undertake a baseline analysis of tree species mix, size, quality and quantity for each compartment within State forest (post-forest agreement) using existing data contained in harvesting records and other sources (i.e. sales data on sawlogs and higher value products). The results of this analysis must be provided to NPWS and DoP.	<b>No reporting required</b> Milestone no longer required.

Due date		Region	FA section*	Milestone	Progress
Annually		Sthn	3.3.2	Each year SFNSW must monitor and report as part of the forest agreement annual report process, the amount of residual timber (tonnage) harvested from each compartment and amount of species, size, quality and quantity of trees harvested in each compartment from sales data on sawlogs and higher value products and compare this to the baseline data.	<b>No reporting required</b> Milestone no longer required.
Annually		Sthn	3.3.2	If monitoring each year indicates a change in these parameters (i.e. amount of species, size, quality and quantity of trees harvested), SFNSW must consult DoP and NPWS to determine if remedial action is required and SFNSW must implement appropriate actions agreed between the three agencies.	<b>No reporting required</b> Milestone no longer required.
Annually		Sthn	3.3.2	Each year SFNSW must monitor and report, as part of the forest agreement annual reporting process, the total quantity (tonnes) of fluxwood (if this is sourced from either as part of the 200 000 tonnes of residue timber or thinnings) and the total quantity (tonnes) of thinnings.	<b>No reporting required</b> Milestone no longer required.
<b>Silviculture practices</b>					
1999	1 December	UNE, LNE	2.2.4	Preparation of Eco-field Guides.	<b>Completed</b> A combined Ecofield guide for the Upper North East and Lower North East regions has been published and can be purchased through FNSW.
2002	31 August	Sthn	2.2.4 4.3	Prepare and publish Eco-field Guides for the Southern region.	<b>In progress</b> The final draft of the Eco-field guide has been completed and DPI is preparing to print. it.
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> No progress to report.
2002	30 June	Sthn	2.2.4 Att 4	SFNSW Forest Practices Code: Part 5 – Wildlife Management in Native Forests.	<b>In progress</b> No progress to report.

Due date		Region	FA section*	Milestone	Progress
2001 Ongoing (Sthn)	1 April	UNE, LNE, Eden Sthn	2.2.8 Att 6(2c) (S)	Native forests silvicultural regimes must be implemented on State forests.	<b>Implemented</b> FNSW has published a <i>Native Forests Silvicultural Manual</i> that complements its field guides and training programs. The manual provides a description of silvicultural practices that are applied in State forests. In addition, two documents have been prepared – Circular 2002/02 <i>Implementing Silviculture in LNE AND UNE regions</i> and Circular 2002/03 <i>Implementation of IFOA Silviculture in the Southern Forest Agreement Region</i> , which provide further instruction on applying silviculture according to the IFOAs. Site-specific requirements are documented in each harvesting plan and the implementation and outcomes of each plan (including silviculture) are subject to monitoring and reporting, as required by Circular 2003/01 <i>Monitoring and Measuring Compliance of Operations</i> .
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>In progress</b> Silvicultural practices may be subject to auditing in accordance with Circular 2003/01 <i>Monitoring and Measuring Compliance of Operations</i> . Three silvicultural demonstration areas have been established in the Lower North East region. These sites are at Queens Lake (2001), Kiwarrak (2002) and Tuggolo (2004) State forests. The three sites continued to be available throughout 2004/2005 to assist the training of forest operators. These sites cover a range of forest types and silvicultural regimes permissible under the IFOA. No formal silvicultural demonstration sites have been set up in the Eden region.
2003	30 September	Sthn	2.2.8 Att 2(o) 4.2	Preparation of arrangements for silvicultural practices including demonstration areas (for silvicultural practices and suite of silvicultural regimes), auditing, report area harvested and silvicultural types and consult on ecosystem management.	<b>In progress</b> Refer to milestone above. No formal silvicultural demonstration areas have been set up in the Southern region.
Ongoing		UNE, LNE, Eden	2.2.5	SFNSW to employ internal audit system to ensure consistent application of standards across Crown-timber lands.	<b>Continuing</b> Circular 2003/01 <i>Monitoring and Measuring Compliance of Operations</i> continued to define FNSW supervision, monitoring and audit requirements for forest operational activities within the regions and divisions. In addition to supervision and monitoring done by regions for their operational activities, a series of internal "environmental management system" audits were carried out during 2004 in Native Forest Regions as part of the EMS development process. These audits were in addition to the normal programme of tier 4 environmental compliance audits.
Ongoing		Sthn	2.2.5	SFNSW to employ an internal audit system to ensure consistent application of standards and monitor compliance with IFOA.	<b>Continuing</b> Refer to milestone above.
Ongoing		Sthn	2.2.5	The results of this monitoring and auditing should be reported using a mechanism determined by DoP, NPWS, SFNSW, NSW Fisheries and EPA.	<b>Continuing</b> Public reporting of compliance is included in FNSW' annual <i>SEEing</i> Report for 2004/2005. See chapter 3 for a description of FNSW's compliance with IFOAs.

Due date		Region	FA section*	Milestone	Progress
Ongoing		UNE, LNE, Eden	2.2.3	Harvesting plans to be prepared for all logging operations and forest products conducted under a Timber Licence.	<b>Completed</b> Harvesting plans are prepared for all logging operations done under a timber licence. A harvesting manual detailing the requirements has been developed to ensure consistency and standards.
Ongoing		Sthn	2.2.3	For activities regulated under Part 4 of the <i>Forestry and National Park Estate Act</i> , harvesting plans must be prepared for all logging operations conducted under a Timber Licence.	<b>Completed</b> Refer to milestone above.
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 Planning NSW, NPWS, EPA and NSW Fisheries as outlined in IFOA arrangements.	<b>Implemented</b> Location of forest operations are provided to regulatory agencies in the monthly IFOA report.
Ongoing		Sthn	2.2.6	Notification of the location and nature of forestry operations to NPWS, EPA, NSWFW and DoP as outlined in IFOA arrangements.	<b>Implemented</b> Refer to milestone above.
Ongoing	No less than two months before commencement of forest agreement	UNE LNE Eden	2.2.7	Liaison by SFNSW with DUAP, NPWS, and EPA on proposed forestry operations and activities not originally covered by forest agreement or IFOA. SFNSW must carry out an appropriate assessment of the impacts resulting from any proposed changes and each agency must consider the environmental consequences of any proposed changes in terms of their regulatory responsibility.	<b>Continuing</b> This process was not required during 2004/2005.
Ongoing	two months before activities begin	Sthn	2.2.7	Liaise with DoP, NPWS and EPA on proposed forestry activities not covered by forest agreement and integrated forestry operations approval. Impacts from the proposed forestry activities must be assessed.	<b>Continuing</b> Refer to milestone above.
2002	31 December	Sthn	Att 6(2n)	Establish a process, including public reporting, for regular audits of compliance and reviews of Codes of Practice, Eco-field Guides and Regional prescriptions.	<b>In progress</b> FNSW internal audit procedure is defined in FNSW Circular 2003/01 <i>Monitoring and Measuring Compliance of Operations</i> . FNSW publicly reports, at a statewide level, compliance and monitoring results in its <i>SEEing</i> report each year. As part of the implementation of FNSW EMS all operational control documents (including codes of practice and eco field guides) will be regularly reviewed and updated. DEC audits and enforces of FNSW's compliance with the Threatened Species Licences and Environment Protection Licences. The PWD of DEC is responsible for assessing compliance with the Threatened Species Licences; the former Environment Protection Authority (EPA) branch of DEC assesses compliance with the Environment Protection Licences. With the formation of DEC, the approach to auditing forestry operations for threatened species and water quality is being updated. A new audit and enforcement strategy is currently being developed.

Due date		Region	FA section*	Milestone	Progress
					<p>DEC assesses compliance with the Threatened Species Licence in accordance with comprehensive guidelines and procedures (endorsed in March 2002). The guidelines and procedures were compiled into handbook form and are used across the PWD to ensure a consistent approach to compliance monitoring and enforcement.</p> <p>DEC has also carried out an active audit program of FNSW's forestry operations to assess compliance with the Environment Protection Licence. The audit program ensures that FNSW is taking the required measures to protect the aquatic environment through responsible planning and operational activities. Non-compliance with conditions of the Environment Protection Licence are dealt with through meetings with senior FNSW officers, issuing feedback or warning letters, clean-up notices, penalty notices or prosecution actions as appropriate at the circumstances.</p> <p>DPI Fisheries carries out opportunistic threatened species compliance activities in relation to forestry operations where they coincide with other fishery compliance duties. DPI Fisheries investigates complaints when received.</p> <p>Public reporting of compliance audits is described in chapter 3.</p>
2007	30 April and each five-year review	Sthn	Att 6(2n)	Undertaking audits of compliance at first and subsequent five-yearly reviews.	<p><b>In progress</b></p> <p>Refer to milestone above.</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 Eden, 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>Continuing</b></p> <p>FNSW staff and contractors are continuing to receive appropriate competency based training, with the records maintained on the corporate Complete Human Resource Information System (CHRIS) database. Records of contractor competencies are maintained on the FNSW Contractor and Operators Licencing and Permits system. Competencies are subject to the FNSW internal audit system described in Circular 2003/01 <i>Monitoring and Measuring Compliance of Operations</i>.</p>
Ongoing		Sthn	2.1.1 Att 6(2k)	Field staff and contractors of SFNSW must continue to receive appropriate competency-based training including training in biodiversity management, soil and water management, log grading, silviculture, harvest planning and cultural heritage.	<p><b>Continuing</b></p> <p>Refer to milestone above.</p>



Due date		Region	FA section*	Milestone	Progress
Ongoing		UNE, LNE, Eden	2.1.2	NPWS field staff and contractors must receive appropriate competency-based training.	<b>Continuing</b> DEC continues to provide staff training programs. These 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.
2005	31 December	Sthn	5.1.4.5	All NPWS staff located in the Southern Directorate be provided with adequate cultural awareness training, to improve customer relations with Aboriginal communities.	<b>In progress</b> Most staff in the DEC (PWD) South West Slopes, South Coast and Far South Coast regions have attended Aboriginal cultural awareness training. In the Snowy Mountains region some staff have been given one-on-one training via the indigenous education officer. Further training for all these regions is planned for 2006.
<b>Employment and industry initiatives</b>					
Ongoing Sthn	Subject to funding	UNE, LNE, Eden Sthn	3.6 Att 10 Att 8 (S)	Employ a range of initiatives to facilitate employment, subject to funding.	<b>Continuing</b> <b>UNE/LNE</b> – Since 1998, 105 positions have been filled to manage the additions to PWD estate. <b>Eden</b> – A total of 38 new permanent positions have been established since the south east forest reform program began in 1994. This includes the 14 jobs required for managing the additions to DEC estate referred to in the FA. <b>Southern</b> - Funded initiatives included pest species management, fire management, asset maintenance, preparation of management plans, Aboriginal heritage management and neighbour relations. Capital works outsourced by DEC since the FA was signed include lookout and walking track construction, camping area development and interpretation facilities. As identified in the Forest Agreement, 91 positions for conservation and Aboriginal heritage management were funded and included four Aboriginal Cultural Heritage Officers (of which one is a female position).
<b>Industry initiatives</b>					
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.	<b>In progress</b> <b>UNE and LNE</b> – In 2004/2005, one additional property was purchased in the LNE region. This property covers an area of 26 hectares and contains an estimated 646 m <sup>3</sup> of high quality quota sawlogs. FNSW will undertake forest management zoning on this property prior to harvesting. Cumulatively, eleven properties have been purchased in the UNE and LNE regions as part of the Private Property Timber Supplementation Program. Nine of these properties have been purchased using FISAP funding (refer to 'Extension of FISAP to fund various initiatives ...' milestone on page 123). Additionally, one Timber Sale Agreement for the purchase of timber rights was implemented in the LNE Region this year. <b>Eden</b> – No private property was purchased in 2004/2005 under the Private Property Timber Supplementation Program.

Due date		Region	FA section*	Milestone	Progress
Ongoing		Sthn	3.3.3	SFNSW will undertake a private property supplementation program (such as purchase of timber rights or private property) and when any private land is purchased and dedicated as State forest, harvesting and roading operations must be subject to forest agreement and conditions of the IFOA.	<b>Continuing</b> No progress to report.
Ongoing	Subject to funding	UNE, LNE, Eden	3.6	Extension of FISAP to fund various initiatives in the UNE, LNE and Eden regions.	<b>Continuing</b> <b>UNE and LNE</b> – FISAP allocated \$7.5 million to the Private Property Timber Supplementation Program to assist FNSW purchase timbered property as a means of providing additional resources to the native timber industry in the UNE and LNE regions. Funding for this program was finalised in 2002/2003. During the period of implementation, nine properties were purchased using the allocated FISAP funds.  The Log Haulage Assistance program continued to be applied across the UNE and LNE regions. 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. In March 2003, the Premier announced a two-year extension of the Log Haulage Assistance program, to 31 December 2005, with additional funding from FNSW. To 30 June 2005, \$4,139,031 in FISAP funds had been expended on Log Haulage Assistance.  <b>Eden</b> – \$1 million was allocated to the Commercial Regrowth Thinnings initiative to provide assistance to enable one or more of the existing integrated harvesting crews expand the commercial thinnings operations already occurring. The initiative was under existing FISAP programs. More than \$1 million has been expended to contractors in the Eden area to buy mechanised harvesting equipment under the Industry Development Assistance (IDA) program of FISAP. Training has taken place under the FISAP Training Strategy to meet the aims of the Commercial Regrowth Thinnings initiative.
2006	30 June	Sthn	3.6	FISAP applies in the Southern region and will be available to fund initiatives until 20 June 2006.	<b>In progress</b> \$2.5 million of FISAP funds have been allocated towards the Sawlog Productivity Program – Silvicultural Program for the South East region. Both the NSW and Federal Government contribute to this initiative.  The initiative aims to improve the sawlog productivity of South Coast forests. Within the operational constraints of the RFA and IFOA the strategy is to select and cull unmerchantable trees to restore productivity to degraded timber stands capable of improved sawlog growth, and to release young, potentially merchantable trees otherwise inhibited by the non-merchantable overstorey.  To 30 June 2004, \$1 825 000 has been expended under this program and 5 322 hectares have been treated.  FISAP payments under this initiative are scheduled to conclude in February 2006.

Due date		Region	FA section*	Milestone	Progress
<b>COMMUNITY PARTICIPATION, EDUCATION AND AWARENESS</b>					
<b>Complaint handling</b>					
2000	1 January	UNE, LNE, Eden	6.15	Devise and implement a coordinated complaint handling and response system.	<b>Implemented</b> A coordinated complaint handling protocol was developed and implemented in 2001.
2002	30 June	Sthn	6.15	Devise and implement a coordinated complaint handling and response system for the IFOA.	<b>Implemented</b> Refer to milestone above.
Ongoing	When making an amendment	Sthn	6.2	Public participation is required when making a forest agreement or when an amendment or revocation occurs.	<b>Continuing</b> No amendments to the Southern Forest Agreement have occurred during 2004/2005.
<b>Community awareness and education</b>					
Ongoing Sthn		UNE, LNE, Eden, Sthn	Att 8 Att 6(2g) (S)	Providing ongoing formal participation to raise awareness and understanding of ESFM and how it can be achieved in New South Wales forests.	<b>Continuing</b> In 2004/2005 Forests NSW finalised <i>Living, working, playing ... forests</i> a strategy for managing State forests for sustainable recreation, sport, tourism and training. This strategy was developed in cooperation with peak groups representing forest users, as well as other relevant government agencies. <i>Living, working, playing ... forests</i> has helped to raise awareness of ESFM strategic objectives.  Forests are only one element of a much broader landscape managed by DEC, hence ESFM is indirectly addressed as part of the broader conservation awareness and understanding promoted by the agency, rather than being a specific component. Public and educational programs provided by DEC include: guided walks and tag-along 4WD tours; ranger talks and on-site inspections; development of the Sustainable Schools Program in NSW; training, planning and control programs for pest species; and the <i>Discovery</i> program, which focuses on providing community education opportunities for the general public and interested groups on natural and cultural heritage.  In relation to private plantations, process information/extension services are provided by regional plantation officers when undertaking site inspections. This advice is aimed at ensuring compliance with the Plantations Code, which will also assist in achieving an aspect of sustainable forest management.  In relation to private native forests, it is proposed that a package will accompany the introduction of the PNF Code of Practice will include an Operations Manual and an external training program that will encompass ecologically sustainable management principles.
Ongoing		Sthn	Att 6(2j)	Developing and implementing public education programs to deal with ecologically sustainable management issues including management requirements for conservation and codes of forest practice governing activities in both public and private forests.	<b>Continuing</b> Refer to milestone above.

Due date	Region	FA section*	Milestone	Progress	
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).	<b>Continuing</b> No progress to report.	
Ongoing Sthn	UNE, LNE, Eden, Sthn	Att 8 Att 6(2i) (S)	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.	<b>Continuing</b> No progress to report.	
Ongoing	Sthn	Att 6(2f)	Improving the coordination and effective use of resources allocated to research for ESFM in New South Wales.	<b>Continuing</b> No progress to report.	
<b>INFORMING THE PUBLIC</b>					
<b>Access to information</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.	<b>Completed</b> IFOAs for the UNE, LNE and Eden regions were signed 21 December 1999, and commenced 1 January 2000. Subsequent amendments were made to the IFOAs. Amendment 1 for the UNE, LNE and Eden regions commenced 1 December 2001, and Amendment 2 for the UNE, LNE and Eden regions commenced 3 May 2003. Amendment No 3 commenced on the 31 May 2004.
2002	ASAP	Sthn	1.6.1 Att 6(1) & (2a)	Granting of an IFOA for the Southern region.	<b>Completed</b> An IFOA for the Southern Region was signed by the NSW Ministers for Planning, Environment, Forestry and Fisheries on 3 May 2002, and commenced 13 May 2002. Amendment No 1 to the IFOA for the Southern region commenced on 31 May 2004.
1999	Within seven 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.	<b>Completed</b> Furnishing of the forest agreement for the UNE, LNE and Eden regions 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.
2002	Within seven days of signing	Sthn	6.10 6.1	A copy of the forest agreement including any amendment or termination of the agreement must be furnished to the Presiding Officer, so it can be laid before that House within 15 sitting days of that House after it is received by the Presiding Officer.	<b>Completed</b> Furnishing of the forest agreement and IFOA for the Southern region to the Presiding Officer of each House of Parliament occurred in May 2002.
Ongoing	When making or amending	Sthn	6.2	Public participation is required when making a forest agreement or when an amendment or revocation occurs.	<b>Continuing</b> Public consultation occurred during the making of the forest agreements. No amendments to the agreements have been made to date.

Due date		Region	FA section*	Milestone	Progress
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.	<b>Completed</b> Public notice of the making of the forest agreements was made in March 1999, and for the IFOA in December 1999.
2002	Within seven days after signing	Sthn	6.11	Public notice in a newspaper circulating throughout the State and also in a newspaper circulating in the region, about the making of the forest agreement and IFOA or amendment.	<b>Completed</b> Public notice of the making of the forest agreement and IFOA has been made.
<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.	<b>Completed</b> All CRA/RFA project reports can be obtained by request through e-mailing requests to: <a href="mailto:info_racu@environment.nsw.gov.au">info_racu@environment.nsw.gov.au</a> . Some project reports can also be viewed through a link on the RACAC website ( <a href="http://www.racac.nsw.gov.au">www.racac.nsw.gov.au</a> ) and the Australian Governments RFA website ( <a href="http://www.rfa.gov.au">www.rfa.gov.au</a> ).
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 Planning NSW.	<b>Completed</b> Forest agreements were signed on 5 March 1999 – deposited at Planning NSW's (now DIPNR) head office in Sydney, regional offices in Newcastle, Queanbeyan and Grafton; FNSW regional offices in Casino, Glen Innes, Grafton, Coffs Harbour, and Eden; NPWS regional offices in Port Macquarie, Armidale, Grafton, Glen Innes, Alstonville and Merimbula. IFOAs were signed on 21 December 1999 – deposited at Planning NSW's (now DIPNR) head office in Sydney, regional offices in Newcastle, Grafton and Queanbeyan; SFNSW regional offices in Walcha, Taree, Casino, Eden and Coffs Harbour; NPWS regional offices in Glen Innes, Alstonville, Merimbula, Armidale and Port Macquarie.
2002	Within seven days after signing	Sthn	6.11	Copies of documents to be made available for public inspection at the head office and other regional offices of the Department of Planning.	<b>Continuing</b> Refer to milestone above.
1999	1 May	UNE, LNE, Eden	6.11	Copies of documents made available on the Internet by means of the website of the Planning NSW.	<b>Completed</b> The NSW forest agreements and IFOAs were made available on the RACAC website ( <a href="http://www.racac.nsw.gov.au">www.racac.nsw.gov.au</a> ) in March 1999 and April 2000 respectively. The site also contains links to the Commonwealth Government's RFA website ( <a href="http://www.rfa.gov.au">www.rfa.gov.au</a> ), which contains project reports carried out as part of the CRA/RFAs for the UNE, LNE and Eden regions.
2002	As soon as practical after documents made public	Sthn	6.11	Copies of documents made available on the Internet by means of the website of the Department of Planning.	<b>Completed</b> The NSW forest agreement and IFOA were made available on the RACAC website ( <a href="http://www.racac.nsw.gov.au">www.racac.nsw.gov.au</a> ) in 2003. The site also contains links to the Commonwealth Government's RFA website ( <a href="http://www.rfa.gov.au">www.rfa.gov.au</a> ), which contains project reports carried out as part of the CRA/RFAs for the Southern region.

Due date		Region	FA section*	Milestone	Progress
2002	30 June	Sthn	2.11.3	All project reports relevant to the regional forest assessment must be made public.	<b>Completed</b> All CRA/RFA project reports have been published, and are publicly available via the Commonwealth Government's RFA website and on request from DIPNR.
2002	Within six months of signing	Sthn	Att 6(5)	Publish all FRAMES CRA reports for Southern.	<b>Completed</b> All FRAMES CRA reports for the Southern region have been completed and are publicly available.
<b>Additional reporting mechanisms</b>					
2000	1 April	UNE, LNE, Eden	4.2	Additional reporting and consultative mechanisms for NPWS (e.g. <i>State of the Parks</i> report, NPWS Advisory Council, District Advisory Committee).	<b>In progress</b> DEC Regional Advisory Committees continue to provide advice to the National Parks Advisory Council and DEC on a 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 first <i>State of the Parks</i> report was released in November 2001. It provided an overview of the conservation values and their management within the parks system. The second <i>State of the Parks</i> survey occurred in late 2004, with a public report released in June 2005. This report examined key issues for management within NSW parks and included data on the effectiveness of park management. A third survey is planned for late 2005.
2002	31 August	Sthn	4.2	Additional reporting and consultative mechanisms for NPWS such as State of the Parks report.	<b>In progress</b> Refer to milestone above.
2000	1 April	UNE, LNE, Eden	4.3	Additional reporting mechanisms for SFNSW (e.g. Plan of Operations, Regional ESFM Plans).	<b>In progress</b> FNSW has regional/corporate reporting and consultative mechanisms for considering forest management, including the annual plan of operations (supplied to regulators) and publicly exhibited documents like the ESFM model/regional plans that incorporated public comments.  Other reporting mechanisms, such as the <i>Bush Telegraph</i> , also continued to be published every two months by FNSW, as well as its Research Division's annual report prepared each financial year.
2002	31 August	Sthn	4.3 Att 2p Att 6(7c)	Additional reporting and consultative mechanisms for SFNSW such as Plan of Operations, NFMS and any committee established to implement forest management at the landscape level. Document basis for silvicultural practices and publish Native Forest Silvicultural Manual.	<b>In progress</b> Refer to milestone above.  FNSW has published a Native Forests Silvicultural Manual that complements its field guides and training programs. The manual documents the basis for FNSW's silvicultural practices and contains the silvicultural specifications and guidelines required by the FAs and IFOAs.
Annually Sthn		UNE, LNE, Eden Sthn	2.2.6	SFNSW reporting at state-wide level through Environmental and Social Values Report.	<b>Continuing</b> FNSW's <i>SEEing</i> report has been published for 2004/2005.

Due date		Region	FA section*	Milestone	Progress
2000	1 April	UNE, LNE, Eden	4.5	Additional reporting mechanisms, such as committees, by other agencies.	<b>In progress</b> Limited information about plantation authorisations under the <i>Plantations and Reafforestation Act 1999</i> is contained in DNR's annual reports. DNR also maintains a public register of plantation authorisations under the <i>Plantations and Reafforestation Act 1999</i> .
<b>ESFM CRITERIA AND INDICATORS</b>					
<b>Monitoring</b>					
Ongoing Sthn		UNE, LNE, Eden, Sthn	2.11.2 2.10.2 (E) Att 7 (S)	Monitoring of ESFM criteria and indicators.	<b>Continuing</b> Monitoring of the ESFM criteria and indicators for the UNE, LNE and Eden regions began in 1999/2000, and for the Southern region in 2002/2003. See chapter 2 for ESFM Criteria and Indicators monitoring details. DEC continues to monitor and report annually on its progress towards achieving ESFM through the criteria and indicators, to concentrate on improving internal systems for managing the data in order to improve the usefulness of the data for use within the agency, and to improve efficiency by enabling data collected to meet multiple reporting needs. FNSW improved its ability to monitor the ESFM criteria and indicators following the implementation of its SEEDs computer application in 2001/2002. The system allows for improved management of data, its storage, and retrieval in order to meet various data requirements; including the ESFM criteria and indicators, MIG and FNSW's <i>SEEing</i> reporting. The SEEDs application provides a set structure and definitions to standardise the provision of regional data thereby increasing its consistency and accuracy.
<b>Reporting</b>					
Annually Sthn		UNE, LNE, Eden Sthn	2.11.2 2.10.2 (E) Att 9	Reporting on indicators to contribute to annual report to Parliament.	<b>Continuing</b> Reporting of the ESFM criteria and indicators has been incorporated into the NSW forest agreement reporting process for the UNE, LNE and Eden regions since 1999/2000, and from 2002/2003 for the Southern region. See chapter 2 for information on the results of monitoring.
<b>Trial and assessment</b>					
2000	1 April	UNE, LNE, Eden	2.11.2 2.10.2 (E)	Preparation of evaluation framework for the criteria and indicators, to provide basis for five-year review.	<b>Completed</b> A draft evaluation framework was devised by Planning NSW (now DIPNR) 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. The framework has since been applied. The purpose of the framework is to collect information on the appropriateness of each indicator, such as cost-effectiveness, 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. An assessment of the ESFM criteria and indicators will be part of the first five-year review of the forest agreements and IFOAs. The review will incorporate those for the Southern region to ensure consistency and compatibility between the forest agreement regions. However, the improvement and development of monitoring and reporting processes for the criteria and indicators by all participating agencies has been ongoing since 1999/2000.

Due date		Region	FA section*	Milestone	Progress
2002	30 September	Sthn	2.11.2	Preparation of an evaluation framework for the criteria and indicators.	<b>Completed</b> Refer to milestone above.
2004	1 April	UNE, LNE, Eden	2.11.2 2.10.2 (E)	Trial and assessment of indicators to ensure they are practical, measurable, cost-effective and capable of being implemented at the regional level.	<b>In progress</b> The ESFM criteria and indicators will be assessed as part of the first five-year review.
2007	30 April	Sthn	2.11.2	Review of indicators.	<b>In progress</b> Refer to milestone above.
<b>Data management</b>					
1999	1 October	UNE, LNE, Eden	6.13	Lodgement of all archival copies of data.	<b>Completed</b> All archival copies of data for the UNE, LNE and Eden regions have been lodged.
2002	30 June	Sthn	6.13	Lodgement of all archival copies of data.	<b>Completed</b> Archival copies of data were lodged in November 2004.
2000	1 April	UNE, LNE, Eden	6.13	Data Management Agreement.	<b>Completed</b> Data management agreement finalised by State members of the CRA Data Management Group and endorsed by RACD of Planning NSW (now DIPNR) in March 2000, applicable to the North East and Eden regions. Agreement attached to North East RFA (Attachment 13), Eden RFA (Attachment 13).
2002	30 June	Sthn	6.13 Att 6(2h)	Preparation of Data Management Agreement.	<b>Completed</b> Refer to milestone above. Data management agreement attached to Southern RFA (Attachment 12).
Ongoing Sthn		UNE, LNE, Eden, Sthn	Att 8 Att 6(2h)	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.	<b>Continuing</b> In March 2001, the NSW Government launched the CANRI website ( <a href="http://www.canri.nsw.gov.au">www.canri.nsw.gov.au</a> ). The site was developed to improve the integration and coordination of data between government departments and increase public awareness of natural resource management. The site aims to integrate existing data and information systems and provide the community with access to a range of natural resource information. Of use to community groups, industry groups, landholders, government agencies and students, it provides 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 CANRI framework provides a central access point to various natural resources data, such as vegetation mapping and data, soil profile information and water quality, storage and river flow. Further developments allowed for access to information on minerals and aquatic and terrestrial wildlife. The development of a biodiversity information system (BioNet) has occurred and allow users to search for records of specific species, or for all species across a specific area of the State.



Due date		Region	FA section*	Milestone	Progress
					Maintenance of the CANRI website ceased in 2004, however, the CANRI group of products is still available through the <a href="http://www.nratlas.nsw.gov.au/wmc/savedapps/nratlas">NSW Natural Resource Atlas</a> portal at <a href="http://www.nratlas.nsw.gov.au/wmc/savedapps/nratlas">www.nratlas.nsw.gov.au/wmc/savedapps/nratlas</a>
<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.	<b>Completed</b> In accordance with requirements of the NSW forest agreements, details of all research projects in former State forests in the UNE, LNE and Eden regions have been identified and details (including location and access requirements) of these studies were provided to the NPWS in 2000/2001. PWD is providing access to these sites where required. Sites identified in the north-east regions included the former Lorne Flora Reserve (now national park) and Yabba State forest (now Toonumbar National Park), and Coolangubra State forest (now part of the South East Forest National Park) in the Eden region.
2002	30 June	Sthn	2.11.3	Continuing projects in former State forest areas to be documented and details provided to NPWS on affected studies, location of sites and access requirements.	<b>Completed</b> Only one research project area, situated in the Murramarang NP, has been identified on PWD tenure (previously State forest) requiring continued access by FNSW. Details of the location of the area where field plots are located have been provided by FNSW to PWD. Periodic access is being permitted by PWD.
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.	<b>In progress</b> No further progress to report.
2003	30 June	Sthn	2.11.3 Att 7	A strategy for important research and monitoring (including ESFM indicators) must be prepared jointly by SFNSW and NPWS.	<b>In progress</b> No further progress to report. However, some joint research occurs, e.g. on pests and weeds, threatened species and the Australian Research Committee project.
Ongoing		Sthn	Att 6(2f)	Improving the coordination and effective use of resources allocated to research for ESFM in New South Wales.	<b>Continuing</b>
2004	1 March	UNE, LNE, Eden	2.11.3 2.10.3 (E)	Preparation of a compendium of forest research.	<b>In progress</b> A compendium of forest research is being compiled.
2007	30 April	Sthn	2.11.3	A compendium of New South Wales forest research must be prepared.	<b>In progress</b> Refer to milestone above.
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.	<b>Continuing</b> No progress occurred on this milestone.

Due date		Region	FA section*	Milestone	Progress
2010	31 December	Sthn	Att 6(6a)	Continue to develop a suite of computational tools to help manage NSW forests at operational scales for a range of values including wood yield, growth stage, water quality and quantity, natural and cultural heritage and wildlife habitat.	<b>No reporting required</b> The spatial forest event management system <i>GeoMaster</i> (NZ Forest Research) has been set up for evaluation and testing with native forest operations. <i>GeoMaster</i> is primarily an operational tool which is used to plan, manage, and report on activity (such as changes in forest structure) within a forest over time.
2010	31 December	Sthn	Att 6 (6b)	Develop by the end of 2010, a model to predict recruitment and maintenance of habitat trees over time.	<b>No reporting required</b> No further work on this model occurred during 2004/2005.
2007	30 April	Sthn	Att 6 (6c)	Determine, based on review, field based sampling and principles of sustainability to determine the range of silvicultural regimes and prescriptions that can be appropriately applied to each strata of forest type.	<b>In progress</b> No progress to report.
<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.	<b>Continuing</b> 2004/2005 is the sixth year that progress reports have been prepared for the NSW forest agreements and IFOAs for the UNE, LNE and Eden regions. Progress reporting is provided for each financial year for: the achievement of milestones in the forest agreements; monitoring data collected for the ESFM criteria and indicators; and compliance with the IFOAs.
Annually		Sthn	6.9	The Minister administering the <i>Environmental Planning and Assessment Act 1979</i> must prepare an annual report on this agreement which will include ESFM and compliance with any IFOA for the region.	<b>Continuing</b> 2004/2005 is the third year that an annual report covering implementation of the forest agreements for the Southern region has been prepared. Progress reporting is provided for: the achievement of milestones in the forest agreement; monitoring data collected for the ESFM criteria; and indicators and compliance with the IFOA.
Annually Sthn	As soon as practical after it is prepared	UNE, LNE, Eden, Sthn	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.	<b>Continuing</b> 1999/2000 Forest Agreement Annual Report – UNE, LNE and Eden regions was tabled in Parliament in February 2002. 2000/2001 Forest Agreement Annual Report – UNE, LNE and Eden regions was tabled in Parliament in November 2006. Forest Agreement Implementation Report 2001/2002 – UNE, LNE and Eden regions was tabled in Parliament in November 2006. Forest Agreement Implementation Report 2002/2003 – UNE, LNE, Eden and Southern regions submitted for tabling (date of tabling to be advised). Forest Agreement Implementation Report 2003/2004 – UNE, LNE, Eden and Southern regions submitted for tabling (date of tabling to be advised).

Due date		Region	FA section*	Milestone	Progress
<b>Review</b>					
Ongoing	Every five-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.	<b>Continuing</b> Part of first five-year review.
2007	30 April 2007 and every five years	Sthn	6.8	Every five years after the agreement is signed, a review of the performance of the agreement must be undertaken by the Ministers to assess the effectiveness and efficiency of the agreement (and approval) in meeting the Government goals and policies.	<b>Continuing</b> Refer to milestone above.
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).	<b>No reporting required</b> Refer to milestone above.
2005	31 December and every five years	Sthn	6.8	The public is to be given an opportunity to participate in the review of the agreement.	<b>No reporting required</b> Refer to milestone above.
Ongoing	12 months after each five-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.	<b>No reporting required</b> Not required until 12 months after the completion of the review.
2007	31 July and every five years	Sthn	6.8	A report on the outcome of each review must be tabled in each House of Parliament within 12 months after the end of the relevant reporting period.	<b>No reporting required</b> Refer to milestone above.

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

(S) – Reference in Southern Region Forest Agreement