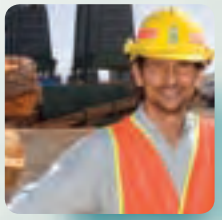
FORESTS NSW

# SEEING REPORT 2007–08




Forests NSW is a public trading enterprise within NSW Department of Primary Industries

# Contents



# Message from the Minister

It has been another impressive year for Forests NSW with record operating profits, a better than expected debt reduction result and a range of new developments in the management of our forests estate.

Forests NSW profit margin was better than anticipated due in part to an improved timber and pulpwood market. This combined with a better than expected reduction in the forecast gross debt of the public trading enterprise provides benefits to the NSW economy in a period of unsettled financial markets.

While most of the state continues to grapple with the continuing drought, I am reassured that higher than average rainfall in some key state forest areas and relatively mild temperatures have provided welcome relief from the regular and intense bushfires which affected so much of our State forests in late 2006.

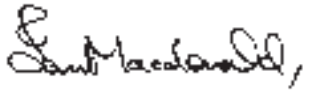
The weather has granted a valuable reprieve for our forests allowing a considerable replanting regime to be undertaken. More than 10 000 hectares of plantations have been replanted around Tumut, Bathurst, Bombala and Walcha. Forests NSW nursery staff have been hard at work producing the ten million or so seedlings required for this significant task.

Forests NSW continues to conduct its business within the targets set by the NSW State Plan, particularly in growing prosperity across NSW, environment for living and delivering better services. In particular Forests NSW has a long history of a commitment to sustainability – the subject of this report. Forests NSW continues to maintain certification to the Australian Forestry Standard and ISO14001, an international standard that recognises its Environmental Management System. These standards demonstrate high levels of sustainable forest management and an ongoing commitment to improvement and refinement of forest management techniques. This certification allows NSW to continue to produce and market the most environmentally friendly building material – timber.

Over the last 12 months Forests NSW has released Ecologically Sustainable Forest Management Plans for its native forests in the Western and Riverina regions and planted forests in the South West Slopes, Monaro, Central West and Northern Tablelands regions. The plans promote nature conservation and forest health, while sustaining timber production and economic and social development and further more demonstrate Forests NSW commitment to sustainability.

Forests NSW continues to make a concerted effort to improve safety in what can be an inherently high risk workplace. I know that for many staff, safety in the forestry industry is the highest priority and this is reflected in Forests NSW goal to be the best and safest forest manager in Australasia.

There are many worthy achievements outlined in this report and I congratulate Forests NSW and NSW Department of Primary Industries for these important contributions to sustainable forest management.



**The Hon Ian Macdonald, MLC**
Minister for Primary Industries
Minister for Energy
Minister for Mineral Resources
Minister for State Development

# Moving forward sustainably

This Social, Environmental and Economic ('Seeing') Report documents our performance over the past year, providing a clear and comprehensive view of Forests NSW's performance as a forest manager.

Forests NSW financially had a better year than anticipated, with operating profit higher than expected and a reduction in gross debt greater than projections. This excellent result was achieved through a concerted effort to control costs and capital expenditure, and a stronger market, particularly for softwood products.

During the year, Forests NSW successfully passed a WorkCover NSW self-insurer's audit, demonstrating the hard work and commitment of all involved. However, with 101 recordable safety incidents (up from 83 last year) Forests NSW is implementing many new initiatives and fostering a stronger safety culture to deliver improved results in the coming years.

Forests play an important role in mitigating climate change. Sustainably harvested forests reduce atmospheric carbon dioxide ($CO_2$) by storing carbon in wood products: the more timber-based products are used, the more $CO_2$ is stored as carbon. As a forest management organisation certified to the *Australian Forestry Standard*, Forests NSW will continue to mitigate the effects of climate change. In addition to this, Forests NSW is continuing to work closely with NSW and Commonwealth Government agencies to ensure that opportunities for the forestry sector to play a positive role in greenhouse gas reduction is maximised.

Forests NSW is a proven leader in managing forests for their long-term social and environmental benefits, as well as their economic value.

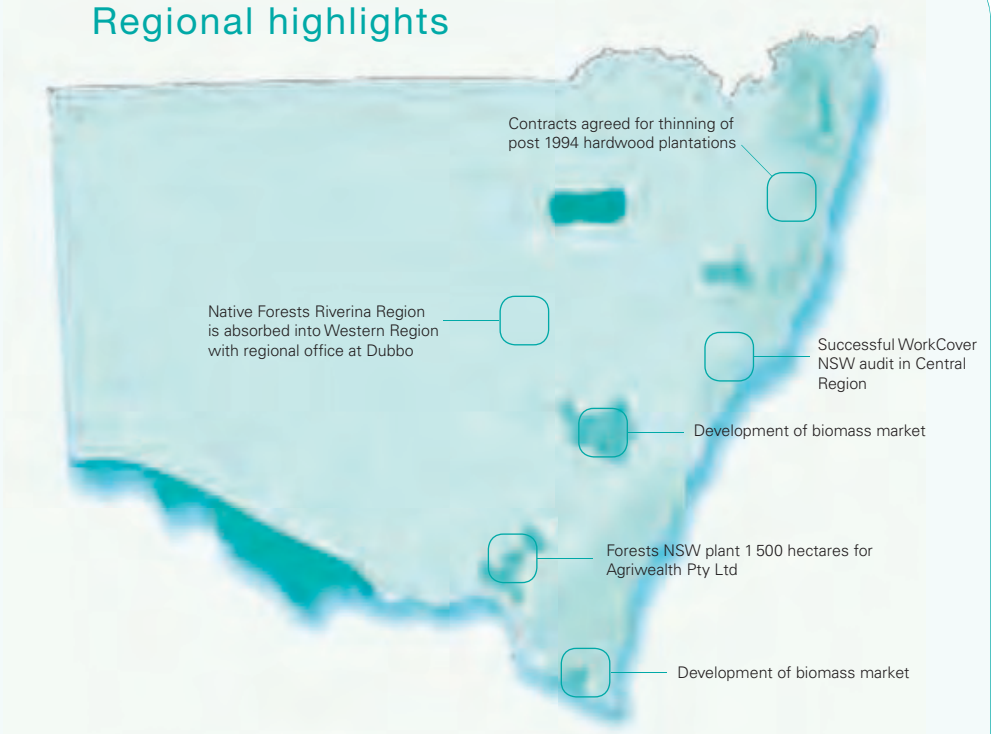
This year we launched a new three-year Corporate Business Strategy. This strategy reaffirms our commitment to social, environmental and economic sustainability and highlights our vision to be the best and safest commercial forest manager in Australasia.

We acknowledge the contribution of Forests NSW staff in working towards the targets of the strategy, and their commitment to a process of continual improvement.

**Richard Sheldrake**
Commissioner for Forests
Director-General
NSW Department of Primary Industries

**Nick Roberts**
Chief Executive Officer
Forests NSW

## Regional highlights



# Communicating our performance

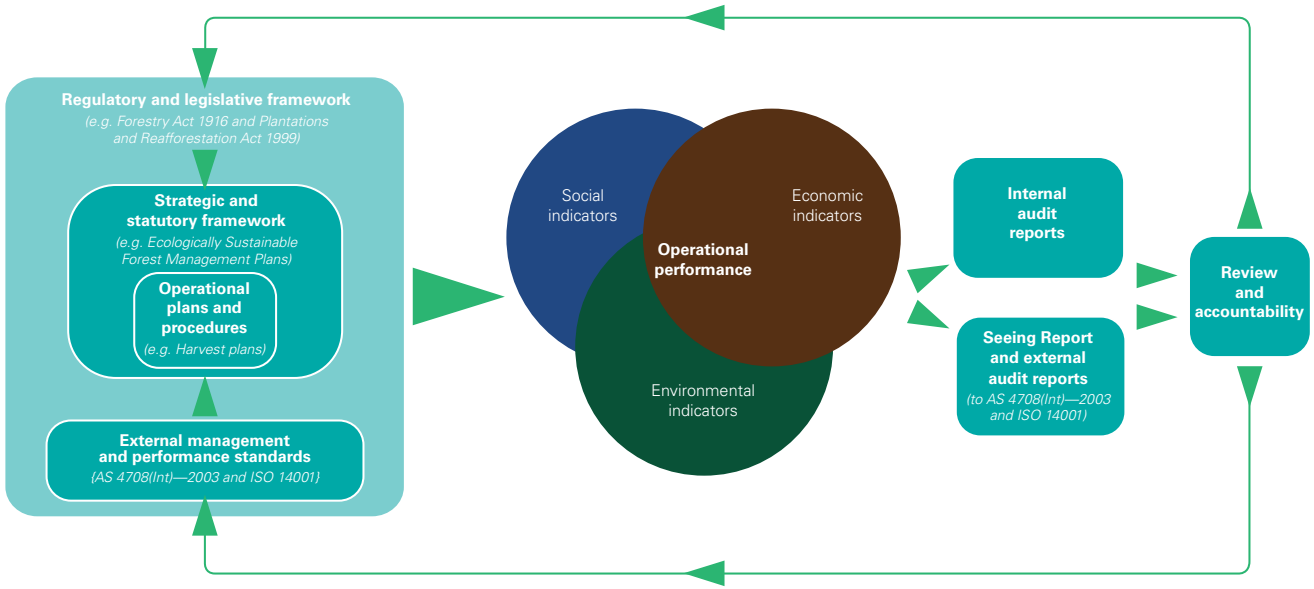
Forests NSW has used nationally and internationally-agreed criteria and indicators since 1997 to measure social, economic and environmental performance. Additional financial indicators are found in our Annual Report.

## Forest policy

Australia's *National Forest Policy* was agreed in 1992 and continues to function as the blueprint for the management of public and private forests. As a result of this policy, 20 year Regional Forest Agreements were signed between the Commonwealth and State Governments for the coastal forests of NSW following extensive consultation with stakeholders. These agreements define how the forests will be sustainably used and protected.

In New South Wales, separate Forest Agreements for the Regional Forest Agreement areas were signed following consultation with a range of stakeholders including Forests NSW and other Government Agencies. The agreements specify the requirements to be implemented to achieve the objectives of sustainable forest management including timber supply, biodiversity, soil and water and cultural heritage and any other issues of importance to stakeholders.

### Sustainability reporting cycle




Forests NSW reports its performance on implementing both Regional Forest Agreements and NSW Forest Agreements by contributing to a range of state level reports:

- Regional Forest Agreement annual reports;
- Forest Agreement annual reports;
- Forest Agreement Criteria and Indicator reports;
- IFOA (Integrated Forestry Operation Approvals) reports;
- ESFM (Ecologically Sustainable Forest Management) Plan annual reports (pending);
- New South Wales State of the Environment report;
- The national State of the Forests report.

These reports are publicly available at the websites of the Australian Government Department of Agriculture, Fisheries and Forestry, or the NSW Department of Environment and Climate Change.

## Ensuring our report is meaningful

Identifying our stakeholders' concerns is a vital step in both meeting their expectations and addressing their concerns. The consultative process undertaken for the Regional Forest Agreements identified values and issues of relevance to those with an interest in Australian forests. Both the Regional Forest agreements and NSW Forest Agreements represent the outcome of this consultative process. A party to these agreements, Forests NSW is committed to a comprehensive range

of operational conditions and milestones, including sustainability outcomes consistent with national and international standards.

As part of the review of the Regional Forest Agreements initiated in June 2008, our indicators will be examined to ensure they are useful in showing how we and National Parks and Wildlife Service (NSW Department of Conservation and Climate Change) are performing in achieving Ecologically Sustainable Forest Management. The outcomes of this review will be open to public feedback.

The *NSW State Plan* also identifies many similar aspects including management of cultural heritage, biodiversity loss, regional employment and climate change. This report acknowledges these issues and describes our performance in relation to these.

Regional issues that have arisen over the year are identified in this report through analysis of sustainability indicators (in the appendices), observation of media reports, feedback from our regional offices and audit reports.

Both the *NSW State Plan* and our own strategies commit us to meeting our customers' expectations. We also have responsibilities towards the broader community, particularly those affected by the management of State forests.

Five year strategic regional plans (Ecologically Sustainable Forest Management Plans) were finalised during the year for all our planted forest regions, and Riverina and Western native forest regions. These plans went through a consultation process, with many changes as a result. Ecologically Sustainable Forest Management Plans are now in place for all operational regions. We will be reporting annually on implementation of these plans, with the Seeing Report giving a state-wide view of many of the indicators that will be used in these future regional reports.

## World-class forest management

Forests NSW contributes to *Australia's State of the Forests Report* and internationally to the *Montreal Process*. This is, in fact, the process from which most forest criteria and indicators used in Australia have originated.

In addition to this regulatory reporting framework, Forests NSW complies with the *Australian Forestry Standard*. This standard provides independent assurance that we are performing well and improving against internationally recognised criteria and requirements. Every nine months, Forests NSW is externally audited for compliance to the standard, with a summary of these audits available by contacting Forests NSW. The main issues raised in the two audits carried out during this reporting cycle are detailed on page 36 (indicator 30).


## Symbol Interpretation

Symbols are used to reflect progress towards meeting the stated objective and performance in meeting that objective in relation to the last reporting period. The objectives can be found in the appendices for each of the indicators. The key for abbreviations is on page 30.

- **Objective achieved**
- **On track to meeting objective**
- **Objective not achieved - action required**
- n/a **Not applicable**
- n/d **No data available in that year**
- n/r **Not reported as an indicator in that year**

| Aspect | Forest Value | Goal | DPI* KRA | Indicator** | | Results | Performance |
|---|---|---|---|---|---|---|---|
| Social | Community benefits | Provide a wide range of benefits that meet community needs and expectations | 5 | 1 | Social responsibility | $122 375 in corporate sponsorship and other community services | ● |
| | | | 5 | 2 | Public participation | 786 regional community forums attended | ● |
| | | | | | Community liaison | Estimated 31 600 public enquiries handled. 308 complaints received and 307 resolved within the period reported | ● |
| | | | 2 | 3 | Recreation and tourism | 219 recreational facilities, 141 km of mountainbike tracks and 518 organised recreational activities | ● |
| | | | 2&5 | 4 | Research and education | $7.58 million spent on research | ● |
| | | | 5 | | | Number of people participating in programs held at Cumberland State Forest was 4 171 | |
| | | | 1 | 5 | Regional employment | Over 6 000 people estimated to be employed by directly dependant forest industry | ● |
| | | | | | | estimated 14 000 jobs generated in NSW through indirect employment | |
| | | | 1 | 6 | Other forest products | Provision of forest products to regional economy; including grazing and beekeeping, seed and plants sold to the public, firewood and much more with a total value of over $6.2 million | ● |
| | Staff | Maintain credible safety management system and continuously improve it, with management that meets staff expectations | 5 | 7 | Quality of management | 947 people directly employed by Forests NSW | ○ |
| | | | | | | Aboriginal/Torres Strait Islander employees represented by 2.1% of total staff | |
| | | | 2 & 3 | 8 | Management and training | $2.24 million spent on training | ○ |
| | | | 3 | 9 | Health and safety | 104 OHS meetings held | ● |
| | | | | | | Lost time frequency rate of 4.5 | |
| | | | | | | 161 voluntary safety audits | |
| | | | | | | 392 risk assessments carried out | |
| | Cultural heritage | Conserve and protect cultural heritage | 2 | 10 | Management of cultural heritage | Additional 52 Forests NSW and contractors trained in cultural heritage awareness | ○ |

| Aspect | Forest Value | Goal | DPI KRA | Indicator | | Results | Performance |
|---|---|---|---|---|---|---|---|
| Environmental | Biodiversity | Increase native vegetation extent and condition<br>Increase the number of sustainable populations of a range of fauna species. | 2 | 11 | Extent of native forest type | Total forest estate 2.49 million hectares | ● |
| | | | | | | Total native forest estate 1.99 million hectares | |
| | | | | | Extent of planted forest type | Over 502 000 hectares managed for establishment, management and protection within planted forests estate | ● |
| | | | | | | Within the planted forest estate 272 866 hectares is established plantations; some of the increase on last year's figures is attributed to corrected hardwood plantations figures | |
| | | | | 12 | Native forest structure | No significant change in forest structure recorded | ○ |
| | | Increase in the recovery of threatened species, populations and ecological communities | | 13 | Surveyed species | 34 targeted species found in 2 754 fauna surveys prior to harvesting operations, with 2 053 sightings in total | ○ |
| | Forest health | Reduced the impact of invasive species, while managing healthy forests | 2 & 3 | 14 | Pest animals and weeds | $1.14 million spent on feral animal and weed control | ● |
| | | | | 15 | Plantation health | 10% of hardwood plantations affected by pathogenic agents | ○ |
| | | | | | | 85% of softwood plantations affected by pathogenic agents | |
| | | | | 16 | Firefighting and prevention | 22% of estate treated by fuel management strategies | ○ |
| | | | | | | $9.8 million spent on fire prevention and control; the drop of $1.4 million on last year is mainly accounted for by a reduced fire fighting expenditure | |
| | | | | | | 197 staff and contractors received fire management related training | |

● Objective achieved ○ On track to meeting objective ● Objective not achieved - action required n/a Not applicable n/d No data available in that year n/r Not reported as an indicator in that year

| Aspect | Forest Value | Goal | DPI KRA | | Indicator | Results | Performance |
|---|---|---|---|---|---|---|---|
| Environmental | Soil and water quality | Maintain clean, healthy streams and stable soils | 2 | 17 | Protection of soil and water | 131 857 hectares of forest assessed for soil erosion hazard, which represents 100% of the area where forest management operations are planned | |
| | Compliance | Compliance through effective harvesting planning and operations | 2 | 18 | Regulatory compliance | Over 4000 internal compliance sheets completed with almost 350 000 potential items checked | |
| | | | | | | 4 penalty infringement notices issued, no prosecutions by regulators | |
| | | | | | | 2 754 fauna surveys and 215 soil and water surveys undertaken in native forests | |
| | | | | | | $5.16 million spent on harvesting supervision and environmental compliance in native forests; down by just over $1 million | |
| | | | | | | 68 additional staff and contractors received environmental related training | |
| | Environmental services | Expand our contribution to reducing the greenhouse effect Reduce our ecological footprint | 2 | 19 | Carbon sequestration | Just over 8 million tonnes of $CO_2$ equivalent sequestered by State forests | |
| | | | 2 | 20 | Energy consumption | Over 94 000 tonnes of $CO_2$ equivalent emitted through electricity and fuel consumption | |
| | | | | | | 2.3% of electricity sourced from green power | |
| | | | 2 | 21 | Material consumption and recycling | 16 640 kgs of pre-cut office paper recycled in all offices. Implementation of e-document system | |

| Aspect | Forest Value | Goal | DPI KRA | | Indicator | Results | Performance |
|---|---|---|---|---|---|---|---|
| Economic | Marketing and sales | Increase revenue, while reducing costs | 1 | 22 | Volume of timber harvested | 2.9 million $m^3$ of sawlog, including veneer | |
| | | | 1 | 23 | Product mix of timber harvested | 1.8 million tonnes of pulpwood harvested | |
| | | | 1 | 24 | NSW Greenhouse Abatement Certificates | Over 690 000 NSW Greenhouse Abatement Certificates created | |
| | | | | | | 100% (26 864 hectares) of eligible plantations accredited for carbon trading | |

| Aspect | Forest Value | Goal | DPI KRA | | Indicator | Results | Performance |
|---|---|---|---|---|---|---|---|
| Sustainability | Productivity | Manage State forests for the long term | 2 | 25 | Forest management | 1.4 million hectares available for timber production on State forests | |
| | | | | | | Just under 480 000 hectares in dedicated and informal reserves on State forests | |
| | | | | | | Just over 610 000 hectares of forest managed for ecological functions | |
| | | | 2 | 26 | Plantation establishment | Over 7 700 hectares of new softwood plantation established | |
| | | | | | | 26% of softwood plantation area required restocking after one year | |
| | | | 2 | 27 | Mean annual growth of planted softwood forest | Mean annual growth increment for softwood plantations of 16.3 $m^3$/ha/yr | |
| | | | 2 | 28 | Native forest regeneration | 94% of surveyed harvested native forest area successfully regenerated with suitable species, based on 14 regeneration surveys | |
| | Maintainability | Meet our stakeholder commitments | 2 | 29 | Harvesting within agreed targets | Actual annual yield of high quality sawlogs as a percentage of allowable volume:<br>94% from native hardwood forests<br>98% from all softwood plantations | |
| | | | 2 & 5 | 30 | Forest certification | Two Australia Forestry Standard external audits {AS 4708 (int)-2003} passed | |
| | | | | | | Two Environmental Managements Systems audits (ISO 14001) passed | |
| | | | 1 | 31 | Trading profit | $42.6 million trading profit generated | |

** Department of Primary Industries Key Result Area*

*** Objectives are found in the appendices, associated with the respective indicators and additional measure of performance compared to last year.*

# Introducing Forests NSW

## Our vision

To be the best and safest commercial forest manager in Australasia.

## Our business

Forests NSW manages 2.49 million hectares of public native forest and plantations for timber production, as well as offering services in private forest harvest planning, plantation establishment and management. We also provide non-timber commercial services such as carbon emissions trading, combating dryland salinity, land repair, renewable forest-based energy, recreation and biodiversity.

Our mission is to provide safe and cost-effective forest management services to the Government and people of NSW and independent investors, while increasing the value of their investment.

The Forestry Commission was created in 1916 to manage New South Wales State forests and pays a dividend to NSW Treasury. Currently, it delivers its services under the trading name Forests NSW. Forests NSW operates as a public trading enterprise within NSW Department of Primary Industry (NSW DPI).

## Our structure

Forests NSW is made up of six branches:

- Native Forests Operations managing Central, North Eastern, Southern, Western Regions
- Planted Forests Operations managing Hume, Macquarie, Monaro and Northern Regions
- Commercial Services: responsible for legal agreements associated with timber supply, as well as for log accounting processes
- Human Resources
- Land Management and Forestry Services
- Finance and Operation Business Services - responsible for corporate finance, information technology, records services and legal services

The map on page 37 shows the boundaries of both planted and native forest regions, as well as Forests NSW business centre locations. For more information on governance see our Annual Report.

### Forests NSW timber product

| Forests NSW main timber products are: | |
|---|---|
| Hardwood | 17 000 $m^3$/pa veneer |
| | 805 000 $m^3$/pa sawlogs |
| | 606 000 tonnes/pa pulpwood |
| Softwood | 2 100 000 $m^3$/pa sawlogs |
| | 1 164 000 tonnes/pa pulpwood |

*"I'm passionate about forestry, I always have been."*

Peter Tarjanyi
Central Region
Native Forest Operations Branch - Operations Forester

## Our strategic directions

### Focus

Safety, inventory and resource modelling and sustainable forest management remain a focus: Forests NSW has also identified key challenges detailed in our corporate strategy to ensure we excel as a profitable and sustainable forest manager.

### Organisational efficiency

Making optimal use of our assets, in particular our people, through training, development and motivation; ensuring staff have clearly defined roles; performance management and benchmarking; also systems that deliver results.

### Revenue growth

Increasing revenue by focusing on market pricing; value recovery and increasing long term value; new business, product diversity and forest management services.

### Cost reduction

Reducing costs through continued re-evaluation of our business and operational practices; planning and process improvement; benchmarking and adoption of best practice.

### Simplification

Simplifying management systems; organisational structure and functions; integration of systems; sales and pricing; regulation and compliance; reduction in overheads; better procurement and operational improvement.

## Forests in NSW & Australia

There are 149 million hectares of forest in Australia, covering 19.4% of the continent. Although the total cover is not the highest in the world, Australia has one of the highest areas per capita in the world with 6.9 hectares of forest per person, with the world average at 0.6 hectares per capita. Of Australia's total forest area, 1.8 million hectares is plantation forests.

All NSW State forests are managed as multiple use forests, which means that these public forests simultaneously provide more than one, and usually most, of the following resource objectives: biodiversity management, timber production, recreation, aesthetics, grazing, water catchment protection, carbon sequestration, cultural and scientific values.

Forests NSW manages just under 2 million hectares of native forests. NSW State forests are predominantly coastal eucalypt forest and smaller areas of red gum in the state's south-west and cypress pine in the state's central west. 1.1 million hectares of this area is available for timber production, while 0.9 million hectares of land is unavailable for timber harvesting. Of the total area, approximately 2.3% is harvested annually.

In addition to native forests, Forests NSW manages approximately 209 000 hectares of softwood plantations, making our organisation one of the largest managers of softwood forests in Australia. We manage 63 000 hectares of hardwood plantations, half of which is managed in the same manner as native forests.

**Report scope:** This report covers Forests NSW sustainable forest management. Indirect emissions, such as those produced by contractors are not included, however, training undertaken by contractors as a result of Forests NSW requirements is included.

In addition to the plantation areas, planted forest estate manages retained vegetation and areas for other purposes, such as infrastructure amounting to over 229 000 hectares.

The majority of Forests NSW softwood plantation estate is comprised of radiata pine, from the Highlands to the west of the Great Dividing Range. The hardwood plantations consist mainly of blue gum eucalypts and are predominantly located on the NSW north coast.

Since 1990, 14 million hectares of native forest has been added to the forest conservation reserve network in Australia. The area of public native forests available for timber production has been reduced from 13.4 million hectares in 1998 to 9.0 million hectares, representing a decline of a third. This has contributed to a decline in log volumes harvested from 11 million $m^3$/pa down to 8.5 million $m^3$/pa by 2002; a decline of 66% in NSW. In 2005 another 352 000 hectares of cypress forest was added to nature conservation reserves in the west of NSW.

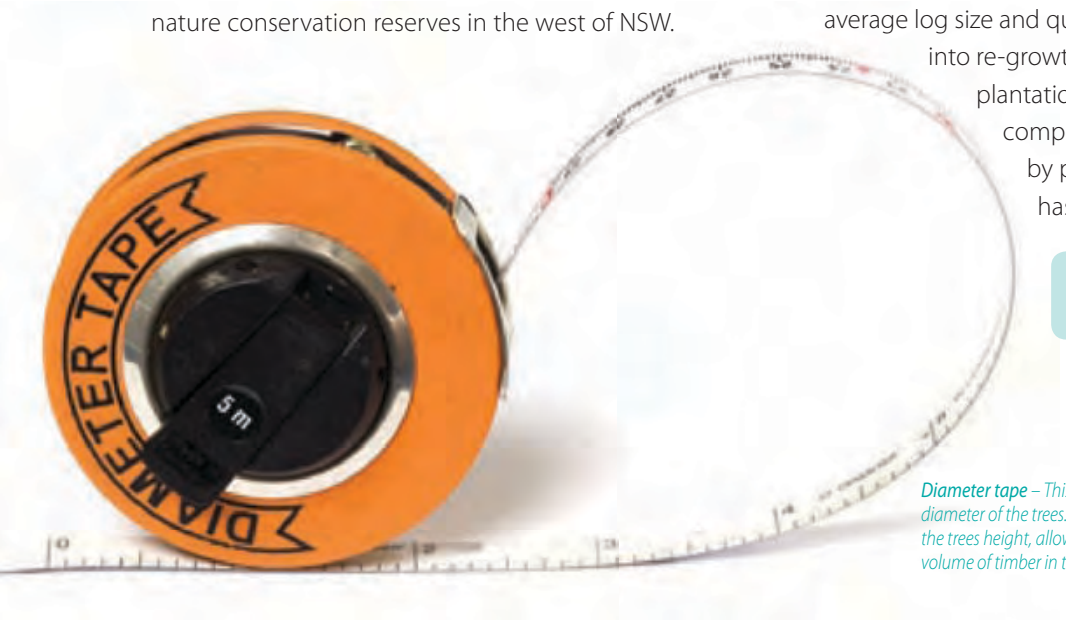
## Forests NSW finances

| | 2004 $'000 | 2005 $'000 | 2006 $'000 | 2007 $'000 | 2008 $'000 |
|---|---|---|---|---|---|
| Revenue | 240 634 | 247 546 | 259 747 | 270 550 | 293 795 |
| **Profit** | | | | | |
| Operating profit | 37 860 | 36 819 | 31 116 | 28 037 | 42 646 |
| Significant items and biological assets revaluation | 17 392 | -29 163 | -19 696 | -166 357 | 75 005 |
| Operating profit (before tax) | 55 252 | 7 656 | 11 420 | -138 320 | 117 651 |
| Distribution to Government | | | | | |
| Dividend payable | 13 096 | 32 544 | 26 322 | 16 000 | 1 000 |
| Capital expenditure | 36 315 | 31 531 | 31 451 | 45 039 | 34 904 |
| **Forests NSW productivity measures** | **2004** | **2005** | **2006** | **2007** | **2008** |
| Indicator | | | | | |
| Employee numbers (30 June) | 1 112 | 1 039 | 1 069 | 1 045 | 943 |
| Timber sales by volume ($m^3$) | 4 489 397 | 4 338 255 | 4 414 591 | 4 659 225 | 4 797 875 |
| Timber sales per employee ($m^3$) | 4 037 | 4 175 | 4 130 | 4 458 | 5 088 |
| Timber sales/employee ($'000) | 118 | 123 | 126 | 123 | 147 |

The reductions in volume are not only due to less forest available for harvest, but also due to a change in average log size and quality, as production has moved into re-growth native forest and hardwood plantations. Additionally, increasing competition from and substitution by plantation softwoods products has furthered this trend.

Currently, about 9% of total forests in NSW are managed by Forests NSW as multiple use forests, with more than 16% being managed as nature conservation reserves. The remaining forests are managed as leasehold and private tenures.

Check out www.australianforests.org.au where you will have access to the 'big picture' information about Australian forest ecology, forest management and career options.




***Diameter tape*** *– This tape is used to measure the diameter of the trees. This measurement, along with the trees height, allows foresters to estimate the volume of timber in trees. Photo by David Barnes*

# Social

Building partnerships and generating economic and social benefits within the community, particularly for rural and regional communities. Developing and valuing our staff.

| Forest Value | No. | Indicator | Results | Performance* |
|---|---|---|---|---|
| Community benefits | 1 | Social responsibility | 16 volunteer programs with 267 participants | ● |
| | 2 | Public participation | 786 regional community forums attended | ● |
| | | | 99% of complaints resolved | |
| | 3 | Recreation and tourism | 219 recreational facilities, as well as 141km of mountain bike tracks maintained | ● |
| | | | 518 formal events; 35 agreements with groups | |
| | 4 | Research and education | $ 7.58 million spent on research | ● |
| | | | $ 2.86 million spent on education; over 4 000 participants in education | |
| | 5 | Regional employment | Estimated 6 500 people employed through dependant businesses, with over 14 000 indirect jobs generated | ● |
| | 6 | Other forest products | Access maintained to State forests for apiary, grazing and other products appropriate to forestry | ● |
| Staff | 7 | Quality of management | 943 people directly employed by Forests NSW; over $1.74 million on staff management | ○ |
| | 8 | Management and training | Sum of attendance at training courses for staff and contractors was 4 323 | ○ |
| | | | $2.24 million spent on training | |
| | 9 | Health and safety | Lost Time Incident rate was 4.4, with the number of lost time incidents & medical treatments only 103 combined | ● |
| Cultural heritage | 10A | Protection of cultural heritage | 184 cultural heritage surveys undertaken | ○ |
| | 10B | Cultural heritage training | 52 Forests NSW employees and forest workers trained in cultural heritage awareness | |

** Performance keys are shown on page 3*

# Safety: a matter of involvement, leadership and behaviour

An increased focus on Occupational Health and Safety has occurred over the past twelve months. In the safety area there has been a strong emphasis on the full implementation of the Safety Management System, which saw Forests NSW pass a WorkCover NSW Audit in March 2008. You can read more on this achievement on page 12.

## Involvement

In the area of workers compensation, a particular emphasis was improving the case management of injured employees. During the year, 31 staff were undergoing the updated return to work co-ordinator training, promoting more effective on-site management of injured employees and as a result, improved communication with their managers has occurred. Another beneficial outcome is better workplace care for employees from the time of injury and associated rehabilitation. Communication on leave entitlements and duties during this period has improved.

## Leadership

Encouraging the development of leadership and management skills has also been a focus over the past year. Forests NSW launched its 'Leader Within' program aiming to enhance employees' knowledge of their personal leadership style and that of others, plus how to utilise this knowledge to increase their own personal effectiveness. In addition, 84 people have been trained in incident investigation. All incidents are now reviewed personally by the chief executive. More information on training is available on page 34, indicator 8.

## Behaviour

Building on leadership, a course to promote a safety culture is also underway, focused on behaviours that underpin best practice. Additionally, training in accident investigation, emphasising the importance of understanding the root cause of incidents, has been conducted. Manager/supervisor training on the Safety Management System and maximising employee safety is another focus of our training program.

In 2006–07, Forests NSW had 86 LTIs and MTOs combined[1], while during the last 12 months this increased to 101 LTIs and MTOs combined (further safety data is on page 32 - indicator 8, as well as in the graph on page 11). This increase may be partly due to better reporting, with staff more attuned to the need to work safely or instances that may previously have gone unreported now being reported. While the result is disappointing for Forests NSW, we believe significant progress has been made to build the foundations for better performance.

[1] Refer to Indicator 9 page 32 for an explantation of LTIs. MTO refers to a medical treatment injury where a doctor is required to treat an injury with his/her specialist knowledge and skill which would be more than first aid or a precautionary check

*Hardhat and goggles – Part of every forester's Personal Protection Equipment. This one is for firefighting. Photo by David Barnes*

In October 2007, the NSW Coronor released findings on a series of forest industry fatalities in 2000 and 2001. Continuing implementation of improvements in supervision of contractor safety and increased mechanisation of harvesting equipment were two recommendations. Forests NSW safety systems are subject to continuous improvement and many key forest industry safety initiatives have been introduced by the organisation over the last seven years. A copy of the Coroner's report will soon be distributed to all staff managing harvesting operations and to all contractors to maximise learning from these accidents.

Looking to the year ahead, we are benchmarking our safety system against companies that have excellent performance in this area. Out of this process we will be reviewing our safety operational plan to create a 3 year strategic plan to guide our activities to achieve a significant improvement in our safety performance.

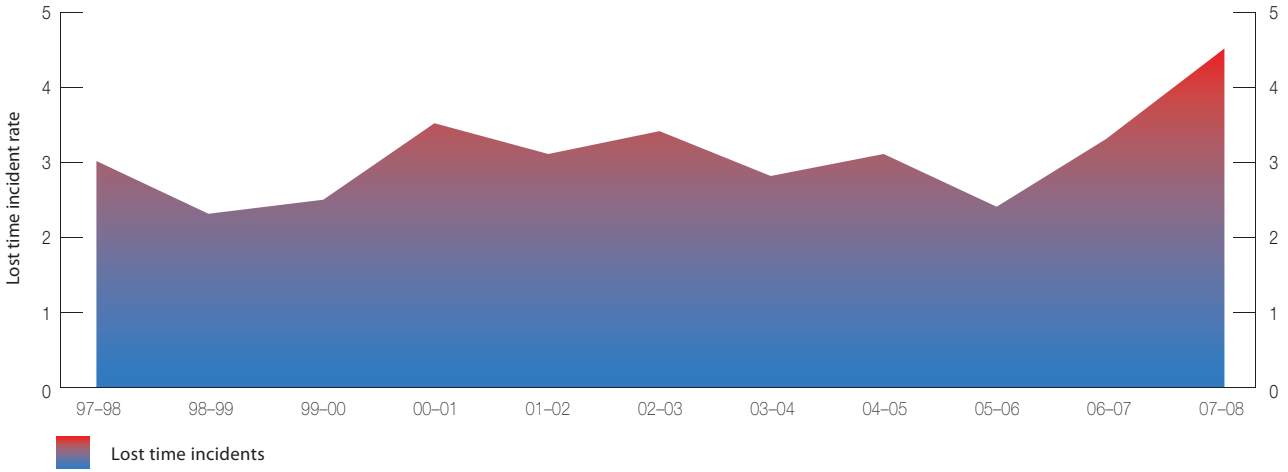
## Our People and Stakeholders

In our corporate strategy, we acknowledge communities in which we operate and how our broader stakeholders have an important role to play in our business. Recognising this, we reaffirmed our commitment to consulting with them and taking their views into consideration for the long term good of the business. The consultative process undertaken during the drafting of new Ecologically Sustainable Management Plans for a number of our operational regions is an example of this commitment, as is the high number of community forums attended by Forests NSW staff (indicator 2 on page 30).

As at end June 2008, Forests NSW had a total of 943 employees. 470 of these are public servants involved in management, administration and technical roles, and 473 Forestry Commission Division employees primarily engaged in timber marketing, mechanical trades, road construction and maintenance, tree planting and pruning, nursery work, forest conservation and fire protection.

There were no major industrial disputes during the year, although extensive negotiations have been underway with the Australian Workers Union and Australian Manufacturing Workers Union to negotiate a new Award for Forestry Commission Division employees.

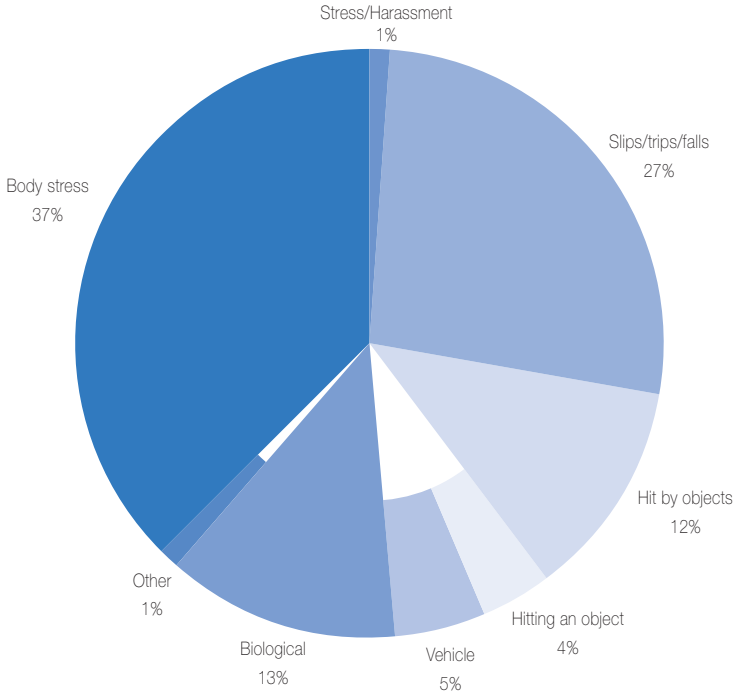
### Lost time incident rate



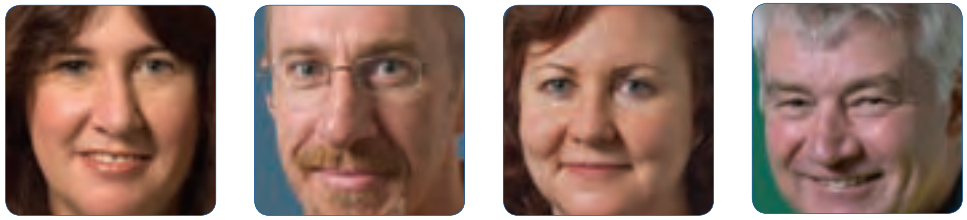

Forests NSW has continued its structural adjustment after negotiations with the Public Service Association (PSA) regarding the structuring of the organisation to improve business support services and efficiencies. Changes to the public service workforce progressed through its final stages in 2007-2008. The major area of the restructure was to centralise transactional and processing services functions in business service centres located in Coffs Harbour, Albury and West Pennant Hills.

*Forests NSW – a leader in safe, ecologically sustainable forest management.*

### Causes of injury



# WorkCover audit success



*Staff from Native Forest Operations in Central Region participated in the WorkCover NSW self insurance audit.*

During the year, Forests NSW joined an elite group of companies in NSW by passing the WorkCover NSW self insurance audit. As a self-insured employer, Forests NSW is recognised as excelling in Occupational Health and Safety (OHS) and in the management of their own claims. This status provides Forests NSW with greater flexibility to integrate OHS with other areas of management and an opportunity to minimise overall costs.

The latest WorkCover audit was carried out in Forests NSW Central Region, based in Wauchope. One of the audit's main focuses was checking whether local health and safety committees had an active role in holding managers accountable. The 'WorkCover Occupational Health and Safety Model for Self Insurers' is the benchmark against which Forests NSW has been assessed at regular intervals since 1999; this was the first year the benchmark has been met.

Important steps in satisfying the WorkCover audits and more importantly ensuring a safe workplace included local health and safety committees reviewing all incidents relating to safety; identifying hazards and undertaking risk assessments; implementation of corrective actions; also overseeing their health and safety plan. Managers have also been instructed that health and safety is an area which requires strong leadership and constant reinforcement of safety measures.

A structured, well-managed safety management system is fundamental to the strength and viability of Forests NSW and is strongly supported by senior management.

## Truck Safety Project

Over the past year, two people died while hauling logs on behalf of Forests NSW. During the same period, the total of log haulage related safety incidents was 34. These events prompted Forests NSW CEO, Nick Roberts, to initiate and support the Truck Safety Project to improve safety in timber truck haulage, nationally.

Forests NSW examined the circumstances surrounding the log truck incidents relating to its operations and Andrew Nicholls, a forester and formerly a road manager and safety officer, is coordinating and implementing the truck safety project and its recommendations.

As part of this implementation, a series of forums have been held, starting in June 2008, with the forums expected to attract a total of over 300 truck drivers. Seminars are a way of improving safety in log truck operation by reminding drivers of their obligation to be professional road users, continuously improving their skills and knowledge and overall driving behaviour. A large part of these seminars is dedicated to informing drivers of the margin for error and potential risks of piloting heavy vehicles on forest roads. This will help drivers make better decisions in the operation of their trucks.

There can be no compromise to driving safely, whether transporting timber or travelling to a meeting, for work or outside of work. Road crashes are the most common form of work-related death in Australia. As Forests NSW has structured its business, staff are travelling further and more often. In addition to this, Forests NSW fleet varies considerably from hybrid car through to heavy diesel dozers. These factors highlight the importance of providing staff with the appropriate training and fleet.

During the year, over 350 staff viewed the NRMA safer driving DVD, while other training included advanced 4x4 driving, various plant operators' permits and traffic control training. In total, over 500 staff recorded achieving additional training in driving and vehicle-related tasks.

# Environmental

Ecologically sustainable management of native and planted forests to protect and enhance environmental functions and conservation values. Expanding the plantation estate to help meet future market needs.

| Forest Value | No. | Indicator | Results | Performance* |
|---|---|---|---|---|
| Biodiversity | 11 | Extent of forest type | Total forest estate managed 2 490 346 hectares | |
| | 11A | Native forests | 1 991 693 hectares of native forest estate | |
| | 11B | Planted forests | 272 866 hectares of established plantations | |
| | | | 229 671 hectares of future plantations & retained vegetation and infrastructure | |
| | | | 7 702 hectares of new softwood plantation established | |
| | 12 | Native forest structure | 22.3% regrowth, 32.3% mature, 4.6% high conservation value old growth, 4.7% rainforest and 36% unassigned | |
| | 13 | Surveyed species | 35 targeted species found with 2 754 fauna surveys | |
| Forest health | 14 | Pests and weeds | $1.14 million spent on feral animal and weed control | |
| | 15 | Plantation health | Estimated 13.2 % of hardwood plantation and 84 % of softwood plantation affected by significant health issues | |
| | 16 | Fire fighting and prevention | Less than 0.29 % of State forests burnt by wildfire | |
| | | | 22.4 % of State forests treated by fuel management strategies | |
| | | | $9.8 million spent on fire prevention and control | |
| Soil and water quality | 17 | Protection of soil and water | 5 % (131 857 hectares) of forest assessed for soil erosion hazard | |
| | | | 9.8 % of State forests primarily managed to protect water catchments | |
| Compliance | 18 | Regulatory compliance | Over 99 % internal compliance rate; 3 fines issued; 0 prosecutions | |
| Environmental services | 19 | Carbon sequestration | Over 8 million tonnes of $CO_2$ sequestered by State forests | |
| | | | Estimated 9 153 tonnes of $CO_2$ emitted (1.8%) | |
| | 20 | Energy consumption | 2.3 % of electricity sourced from green power | |
| | | | Reduced fleet size by 19.7% | |
| | | | Increased fuel energy usage by 4.5% | |
| | 21 | Material consumption and recycling | 16 640 kgs of pre-cut office paper recycled in all offices | |

** Performance keys are shown on page 3*

# Understanding the forests

## NSW State Government plans and initiatives

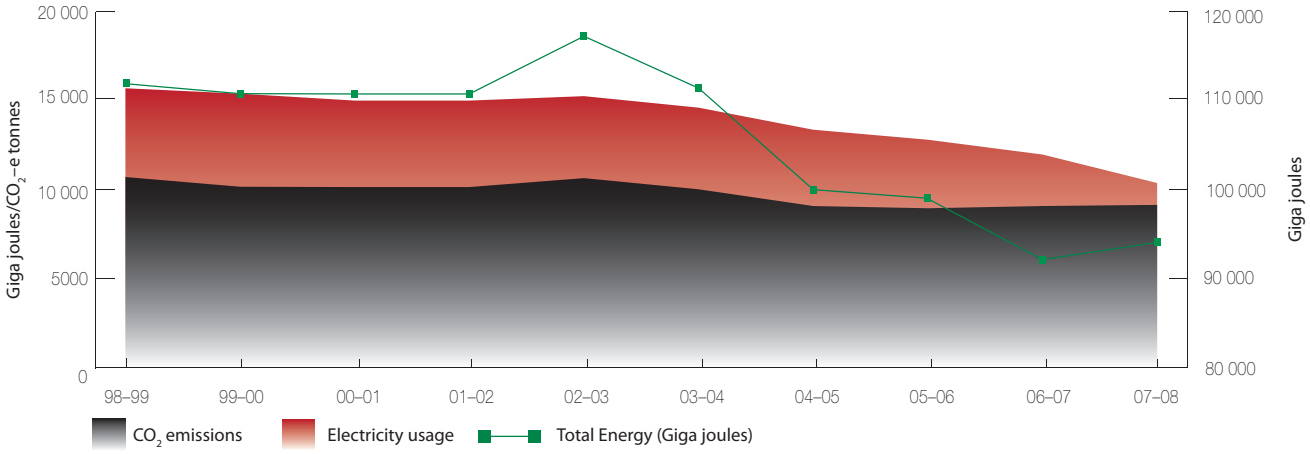
The *NSW State Plan* identifies two broad areas for progress in the area of environmental land management. Better outcomes for various ecosystems is a main goal of the plan, with a more specific goal of achieving cleaner air and reducing greenhouse gas emissions.

The NSW Biodiversity and Climate Change Adaptation Framework was compiled with significant input from NSW Department of Primary Industries, including Forests. The actions outlined in the framework will complement NSW's strong commitment to reducing greenhouse gas emissions. The framework is the starting point for raising awareness of the potential impacts of climate change on forest biodiversity, undertaking vital research and monitoring projects and implementing strategies to maintain biodiversity and protect threatened plants and animals.

Forests NSW subscribes to the *NSW Government Energy Management Policy* (GEMP) objectives and the *Australian Government Greenhouse Energy Program* as an integral part of our business practice. We have reduced our electricity consumption by 35% since 1995, while GEMP prescribed a 25% reduction in statewide energy consumption of government buildings.

Further examples of mitigation/adaption responses to climate change are documented in *NSW Biodiversity Management Plans* and the discussion paper *Climate change research priorities for primary industries*. Focus areas include carbon emissions trading, reforestation, the role of forest products, bio energy, and the mitigation of non $CO_2$ greenhouse gas emissions.

### Energy and carbon emission trends




***Compass*** *– While increasingly being overtaken by GPS units, a handheld compass is still vital equipment for forest workers. Photo by David Barnes*

## Trees for future plantations and gardens

Forests NSW eucalypt breeding program focuses on developing stock for economically viable plantations in low rainfall areas of Australia. The program received a boost with the completion of the state-of-the-art nursery and breeding arboretum at the Grafton Forest Technology Centre.

Forests NSW completed installation and commissioning of a full water recycling system at the Dubbo retail nursery. This completes the visionary subterranean collection systems, initiated at the time of the nursery's construction, into a fully operational and complete recycling system. Over a period of six months, water usage has been reduced by over 67% (the equivalent of 400 Olympic swimming pools), compared with the same period last year.

| | 1999-00 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|---|---|---|---|---|
| Potential compliance checks covered by check sheets * | 220 470 | 129 085 | 134 702 | 148 613 | 124 787 | 139 528 | 134 137 | 295 452 | 410 640 |
| Number of non-compliance incidents (NCI) recorded by Forests NSW supervision for corrective action | 2 039 | 1 538 | 2 242 | 1 810 | 1 668 | 1 615 | 1 142 | 997 | 1 096 |
| Number of fines issued to Forests NSW by regulators | 3 | 5 | 3 | 1 | 1 | 1 | 4 | 3 | 4 |

** relates to Forest NSW Tier 1 audits only*

## Carbon capture plantings on mines

Forests NSW largest minesite buffer planting has been completed for Rio Tinto Coal Australia, with the planting of 80 hectares of spotted gum plantation in the upper Hunter Valley. The plantation will sequester around 20 000 tonnes of carbon dioxide over the next 40 years and provide ecosystem diversity on what was previously grazing land. It builds on Forests NSW experience managing reforestation of recently mined sites and cleared buffer land and is about 50km west of traditional plantation areas, in a lower rainfall (600mm to 700mm) zone.

## Legal challenge to red gum harvesting

The legality of Forests NSW operations in red gum forests of the Riverina was challenged by an environmental non-government organisation, the National Parks Association. Forests NSW and the National Parks Association negotiated a process to permit harvesting during the completion of an Environmental Impact Statement for the red gum forests. This Environmental Impact Statement will be on public display by 1 June 2009. This will remove the uncertainty for the red gum timber industry that would have occurred had the National Parks Association court action proceeded.

## Monitoring risk to supply

Actively managing the health of plantation trees is vital for any forest grower – both environmentally and economically.

Forests NSW softwood plantations were surveyed for health issues from May to August 2007. Sixty State forests were surveyed by helicopter, with the majority followed up with on-ground surveys. The extent and severity of pests, diseases, vertebrate pests, climatic disorders, nutritional imbalances and weeds limiting growth or affecting survival were mapped and reported.

The main issue in softwood plantations was significant and widespread tree mortality in softwood plantations near Tumut, associated with drought and *Ips grandicollis* (bark beetle) attack.

*Ips* numbers have generally increased over recent years and are now threatening the effectiveness of the biological control program for another pest, *Sirex* woodwasp, as *Ips* beetles attack trees that are used to deliver the *Sirex* biological control agent. Research is underway, funded by the National Sirex Coordination Committee and undertaken by NSW DPI in collaboration with Forests NSW, to investigate methods to reduce the impact of *Ips* beetles on the *Sirex* biological control program.

*Sirex* woodwasp continues to cause tree mortality in several softwood plantations in NSW. Reducing the impact and spread of this pest is being managed by annual surveys and a biological control program. Current research, again funded by the National Sirex Coordination Committee and undertaken by NSW DPI in collaboration with Forests NSW, is continuing to enhance and improve the biological control program for *Sirex*.

The Monterey pine aphid (*Essigella californica*) continues to cause widespread defoliation in pine plantations. Forests NSW is part of a national collaborative project to develop a biological control program for *Essigella*, with release of the biological control agent planned for late 2008. Previous research has indicated this is one of the most environmentally sustainable control methods.

Possums ring-barking pine trees continues to be a problem in plantations in south-eastern NSW. *Dothistroma* needle blight is restricted to pine plantations on the Northern Tablelands. There was little change in damage from either since last year.

In hardwood plantations, the main issue continues to be the severe damage from the psyllid *Creiis lituratus*. This insect caused widespread damage to *Eucalyptus dunnii* plantations in northern NSW. In collaboration with Forests NSW and private growers, NSW DPI is investigating environmentally acceptable management options to control *Creiis*.

Bell-miner associated dieback has been reported in young hardwood plantations for the first time. This form of dieback is a significant forest health issue in native forests in NSW and was only identified in young plantations in 2006. Fortunately, only a small area representing 0.5% of hardwood plantations is affected. For more information on bell-miner associated dieback visit www.bmad.com.au

# Monitoring biodiversity for maximum benefit

Forests NSW is committed to maintaining biodiversity across the landscape. Detecting change and applying suitable management responses is vital to achieving this goal. Forests NSW staff invest significant time, resources and expertise in monitoring biodiversity and are keen to ensure the maximum benefits flow from the effort.

Wildlife surveys are undertaken by trained staff to meet regulatory conditions for harvesting in State forests. The typical outcome is establishment of harvesting exclusion zones around threatened species sightings or habitat. Unfortunately, while protecting local populations, such one-off surveys for individual wildlife species in areas scheduled for harvesting does not allow for monitoring population changes across the entire landscape over time, nor investigate the role of forest management in any changes observed.

Forests NSW staff are working toward a regime that will enable efficient and effective collection of data to see maximum benefits. In 2003, Forests NSW Western Region ecologist Dr Patrick Tap implemented a trial wildlife monitoring model consisting of a blend of "threatened" species surveys, targeted research and importantly, 72 two hectare permanent plots in harvestable forest types. Surveying in these plots was significantly less expensive than previous methods, yet generated thousands of wildlife records.

Pat's work provided valuable insights for future monitoring. The relatively low cost per plot demonstrated this type of monitoring is affordable and so can be sustained through time - an essential feature of any system to monitor change.

Based on this experience, staff are trialling a revised program of monitoring plots developed with Dr Rod Kavanagh of NSW DPI's Science and Research Division. These plots will sample a wide variety of areas, not just those subject to harvesting and will include flora as well as fauna. Baseline data will be finalised by early 2009.

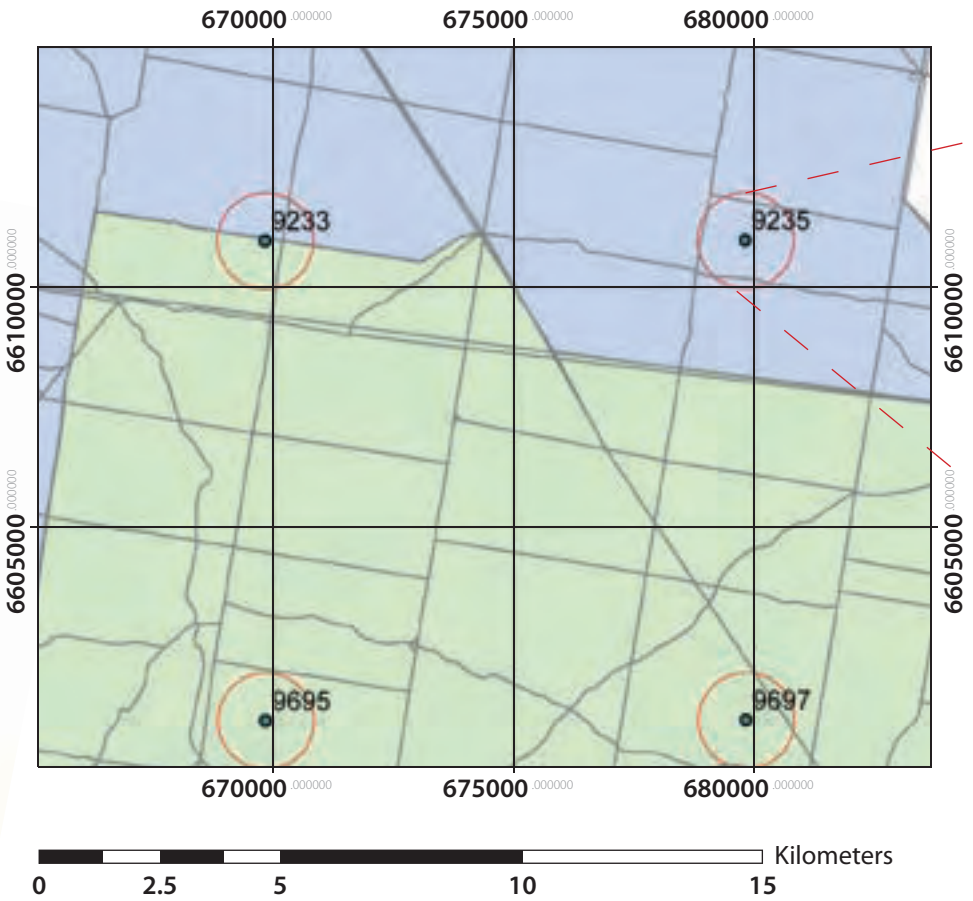
An important aspect of this project has been to prove the concept works, ensuring applicability and cost effectiveness so that Forests NSW can confidently meet regulatory biodiversity monitoring needs and also provide workable and effective procedures to other public land managers.

The monitoring program will collect empirical data to serve as a baseline for ongoing assessments. From there, biodiversity data will be analysed as it becomes available and, in co-operation with other land managers, useful reporting frameworks will be developed. Additionally, robust feedback loops to managers will be established to ensure management continues to be responsive to environmental needs.

The next stage of the program will be extending it to another region - to consider a different range of environment conditions such as vegetation types and species mixes.

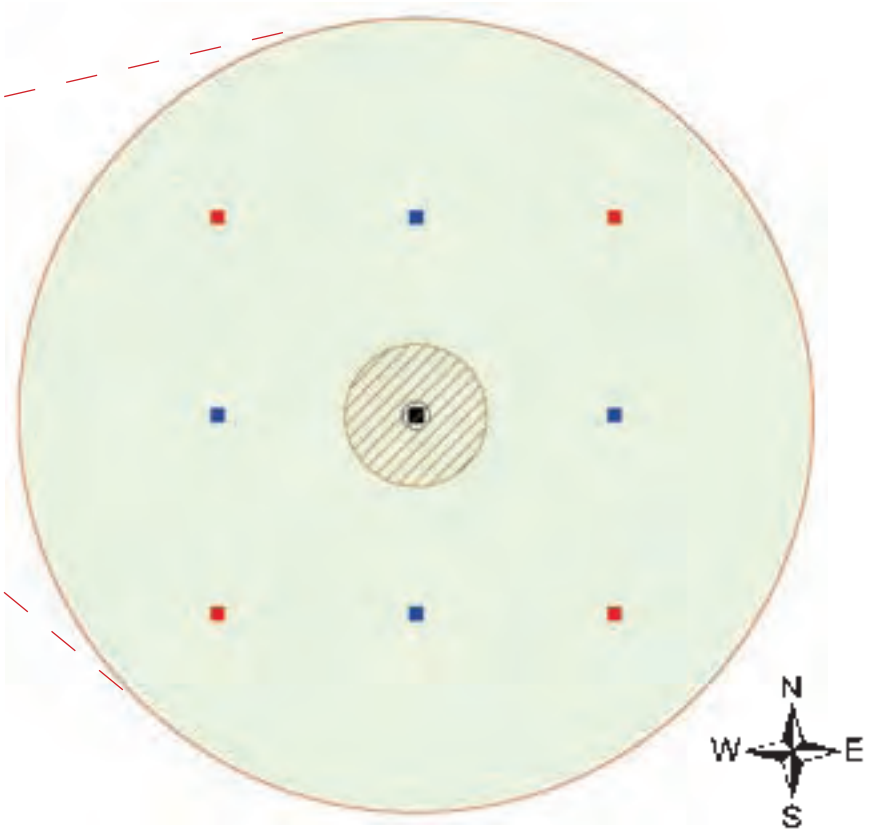

***Handheld GPS*** *– Handheld GPS devices allow foresters to confirm the location of positions and boundaries. Photo by David Barnes*

# Illustration of Pilliga West monitoring study




Spring monitoring 2008
1km radius/subplot
National Park
Forests NSW
Roads
Gridpoint
Birds only
Birds, reptiles, plants, bats
Birds, reptiles, plants
Call playback/spotlight search

**Subplot dimensions (not to scale)**




## Survey effort

1. Plants - 5 x 0.1ha subplots - 1 visit each
2. Morning bird survey - 9 x 2ha subplots - 4 x 20min visits each
3. Reptile search - 5 x 2ha subplots - 1x 60min visit each
4. Digital (Anabat) bat recording - 4 points (plus two additional flyway locations where present) - 2 full nights of recording each
5. Nocturnal call playback and spotlight search - 1 x 10ha subplot - 3 x 90 min visits each

# Think Safe, Act Safe – Keep Safe


***Securing logs for haulage:*** *Before undertaking a task, the safe work procedure for the task is consulted and followed. For a new task a Risk and Hazard Assessment is used to identify the risks and guides staff in developing a safe work procedure*

*Contractors, such as harvester operators, must have appropriate Forest Operator Licences which can be gained at regional educational facilities such as Riverina TAFE. See Indicator 8 on page 31*

***Exclusion zones:*** *When carrying out operations, such as those depicted here, signs are used to keep unauthorized persons at a safe distance from operations. All visitors, contractors and employees must be fully inducted onto the work site by the workplace supervisor*

***Contracts:*** *All operational contractors working for Forests NSW, must have a safety management system in place. Requirements include work site safety plans, licences for operators and emergency plans*

***Evacuation point:*** *Each operational plan shows the location where everyone will meet in the case of an emergency*

*Monitoring and inspection of all operations is an important way in which we check on how we are implementing our safety and environmental systems. See Indicators 17A and 18 for details of our compliance performance on page 33*


Forests NSW utilises a network of fire towers during periods of high fire danger to detect fires in softwood plantations. They are one part of our early warning system, while the satellite lightning strike detection system is another
Forests NSW manufactures its own specialised fire tankers
SF 5304
FORESTS NSW
Good communication, whether written, spoken or visual, is vital to let everyone know how to act and stay safe
Forests NSW undertakes prescribed burns to reduce the risk and impact of wildfires, which pose a major threat to people, assets and forests
As a last line of defence and part of our Safety Management System personal protective equipment (PPE), such as fire retardant clothing, safety caps, goggles, gloves and boots is used by operational staff. When purchasing equipment such as PPE Forests NSW ensures that it meets relevant Australian safety standards
Each operation carried out by Forests NSW is carefully planned and implemented by trained personnel. These plans document safety and environmental considerations as well the community consultation undertaken. See indicator 2 on page 30

# Economic

Ensuring an adequate return from the marketing of wood products from the State's native forest and plantations, while also developing innovative commercial products and services to facilitate private investment in new planted forests.

| Forest Value | No. | Indicator | Results | Performance* |
|---|---|---|---|---|
| Marketing and Sales | 22 | Volume of timber harvested | 2.95 million $m^3$ of logs and 1.77 million tonnes of pulpwood harvested | |
| | 23 | Product mix of timber harvested | Increased proportion of timber used for decking and panelling | |
| | 24 | National Greenhouse Abatement Certificates created | 100% (26 864 hectares) of eligible plantation accredited for carbon trading | |

** Performance keys are shown on page 3*

# Our business

## Financial performance

Forests NSW achieved a strong financial result, delivering a trading profit of $25.1 million, 26% above budget forecasts. As an organisation, we continued our focus on reducing expenditure. This, along with higher timber demand, particularly for softwoods, contributed to our positive financial performance.

This performance was partially offset, however, by the fall in revenue from NSW Greenhouse Abatement Certificates (NGACs) due to a strategic decision to retain certificates in the current uncertain market, and difficulty in accessing material in native forests, particularly due to wet weather conditions.

Apart from creating challenges for supply, the wet weather during the year had an upside, not only in relieving drought conditions across much of the forest estate, but also resulting in a quiet fire season with significant savings in associated expenditure.

## Supply

### Price review for hardwood Logs

Forests NSW initiated a review of pricing for our hardwood log products during 2006 to address industry pricing concerns. A number of findings and key recommendations have been incorporated into a draft pricing plan, which will be finalised in 2008-09. Consultation with industry will be essential for implementation of key review outcomes, which need to be consistent with the existing provisions of customer wood supply agreements.

### Mill door delivery in south coast forests

Until recently timber was sold as it stood in the forests, with the mills responsible for harvesting and transport. In order to exercise greater control over operations, Forests NSW increasingly sells timber delivered to the mill door. Progress was made in implementing this change in south coast and tableland forest areas during the year.

### Planting and replanting

Preparations were made to plant 10 500 hectares across Forests NSW plantations centred around Tumut, Bathurst, Bombala and Walcha during 2008. To supply this ambitious program, Forests NSW Nurseries produced ten million seedlings for internal use, plus an additional two million for private companies. Within the reported period, over 7 million seedlings were planted on 7 700 ha of forest during the year, completing one of Forests NSW biggest ever planting and replanting programs.

A significant component of this demand relates to areas being re-established as a consequence of the Billo Road fire near Tumut in December 2006. The Billo Road fire damaged 8 500 hectares of plantation pine – representing about seven per cent of plantation resource in Hume Region.

In another development Forests NSW is expanding the use of containerised seedlings following their successful evaluation during past years.

Stage One of Tumut nursery's new containerised facility is now up and running, with 1.4 million seedlings in stock. In addition, 2.2 million containerised pines are being grown at Grafton and Inverell, while Narrandera nursery is producing just under a million containerised pines. Containerised stock has the advantage over bare-rooted stock in that it can be held until the optimum time to plant.

Last year, due to dry conditions, 400 000 containerised pines were kept at the nursery and if all goes to plan they will be planted this year.

***Caliper*** *– these are used to measure the diameter of trees, usually at 1.3 meters from the ground (diameter at breast height). Photo by David Barnes*

Another advantage of containerised stock is that it uses on average 50 to 60 per cent less water than seedlings grown bare-rooted.

### Carbon stock

Under the NSW Greenhouse Abatement Certificate Scheme, Forests NSW creates, registers and trades NSW Greenhouse Abatement Certificates, known as NGACs. 5.6 million certificates, each representing one tonne of sequestered carbon. Forests NSW is proud to be the world's first independently audited and scheme-approved supplier of forest sequestration credits within a fully developed and mandatory scheme.

During 2007-2008, approximately 690 000 NGACs were registered under the scheme. This included approximately 100 000 NGACs created as a result of a review of the eligibility criteria for plantations planted since 1990.

## Diversification

### Private sector investment in NSW plantations

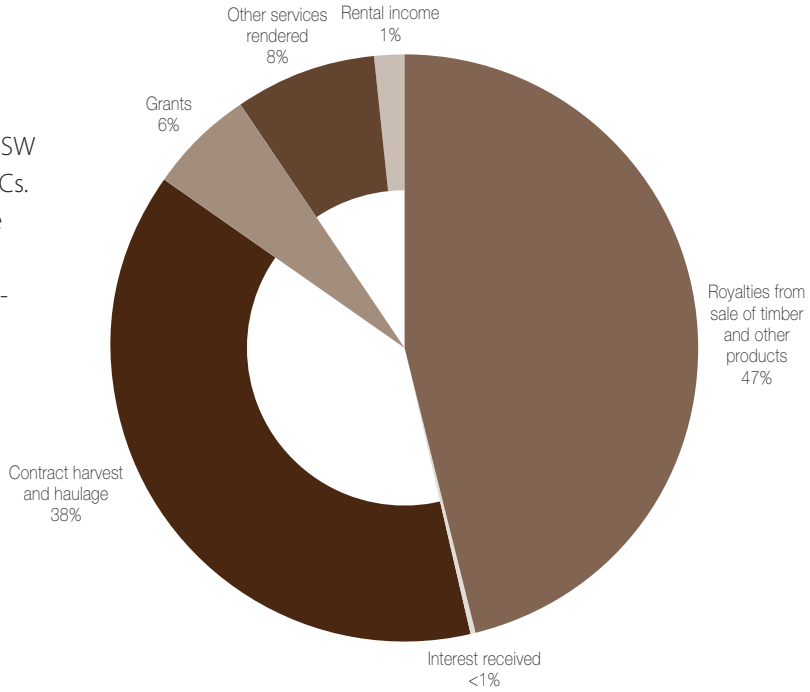
Forests NSW issued a call for Expressions Of Interest for companies to submit firm proposals to invest in re-establishing forestry plantations upon Forests NSW managed land. This represents a new business model for Forests NSW. The aim is to have projects approved and underway by December 2008. This model will reduce the substantial financial burden on Forests NSW of re-establishing plantations.

### Development of biomass marketing strategies

Forests NSW completed a public Expression Of Interest for the opportunity to complete a joint feasibility study into the collection and processing of biomass residue from the harvesting of softwood plantations in Monaro Region (up to 70 000 tonnes per annum). Should the feasibility study demonstrate that the proposed business is viable, Willmott Timbers; who prepared the successful Expression Of Interest; will then be invited to submit a business plan.

In Macquarie Region, Forests NSW commenced a separate Expression Of Interest for a study into the collection and processing of biomass residue from the harvesting of state forest softwood plantations in that area. Again, if the study shows the proposed business is feasible, the successful proponent will be considered.

### Revenue sources

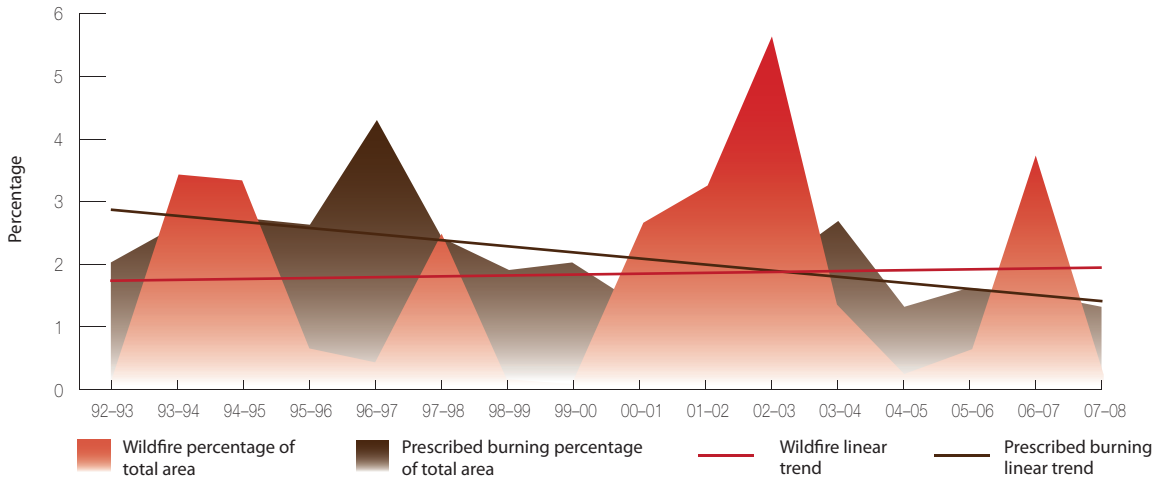


For Forests NSW, biomass residue is the timber that traditionally has been left on site after harvesting. Biomass residue will be used in conjunction with fossil fuels such as coal in power stations to produce electricity. The use of sustainably harvested forest biomass to generate renewable energy permanently eliminates atmospheric emissions that would otherwise have resulted from use of fossil fuels.

## First commercial operations in post–1994 hardwood plantations

In NSW, Regional Forest Agreements finalised in 1999 and 2000 between the State and Commonwealth Governments led to a reduction in the area of native forest available for harvest. Forests NSW reintroduced a hardwood plantation program in 1994. These hardwood plantations will play an important role in supplementing the wood supply from native forests.

Trends of wildfires and prescribed burns as a percentage of Forests NSW estate




Currently, Forest NSW manages over 50 000 ha of eucalypt plantations, with approximately 26 000 ha in the post–1994 estate. Agreement was reached during the year for the sale of 150 000 tonnes of pulpwood to be harvested in late 2008 from these post 1994 plantations in the Dorrigo area. This is the first commercial thinning operation in the post 1994 plantations and represents a vital component of Forests NSW strategy for maintaining a sustainable hardwood timber supply.

## Forest management services

Forests NSW expanded its forestry service business. Agriwealth Pty Ltd., a company that provides opportunities for investors to grow a commercial softwood plantation in NSW, contracted Forests NSW to establish over 1 500 hectares of new radiata pine plantation during the winter of 2008 within the Hume region. It is hoped this model of forestry management services will provide increasing revenue for Forests NSW.

***Boots –*** *During internal audits, one of the many checks is to ensure all staff and contractors are wearing appropriate Personal Protection Equipment, such as steel capped boots. Photo by David Barnes*

# Making the most of our product

A primary benefit derived from our management of State forests is the long term provision of the raw material for the sawmills, fibre board manufacturers and others in the timber processing industry.

Forests NSW has wood supply agreements with such businesses. These agreements detail the amount and type of timber that will be supplied over a set period, usually 20 years. The wood supply agreement provides the security to enable the timber industry to make the large investments in timber processing facilities required.

During the year, Forests NSW entered into additional agreements with industry partners after a competitive timber allocation process. Assessment criteria in a competitive timber allocation include financial return, marketing issues, value-adding and regional development.

As a result of the competitive timber allocation process run by Forests NSW, three new softwood sawmills have reached advanced stages of completion. These are the Allied Timber Products sawmill at Raglan, the McVicars sawmill at Quirindi and the Willmotts sawmill planned for Bombala. These sawmills shall supply various products including fencing, landscaping, pallets, packaging and construction framing.

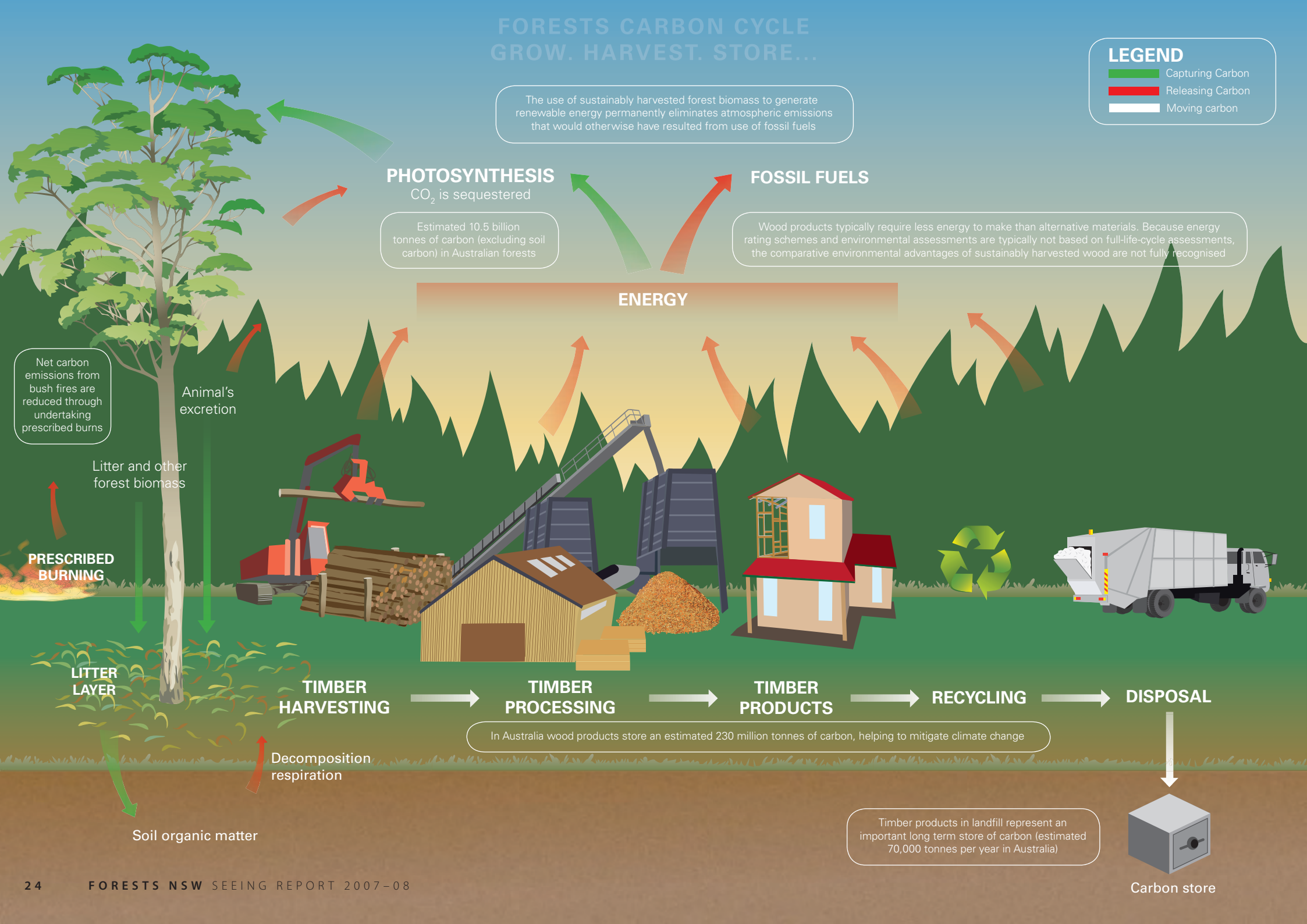
In another boost for regional NSW, the NSW Government approved a $450 million expansion to the Visy paper manufacturing mill at Tumut. The mill was opened in 2001 and is testimony to the successful business relationship between Visy and Forests NSW. This expansion is expected to create around 900 jobs in the Snowy Mountains region. During the year, Forests NSW continued to work closely with the company to identify the most cost efficient ways of maximising the available supply of timber to underpin the expansion.

State forests provide the basis for almost 4 500 jobs in the processing industry throughout regional NSW. Although timber is a renewable raw material, it is very important that the resource is managed sustainably to maintain these jobs now and into the future. This sustainable management is assured through Forests NSW commitment to Ecologically Sustainable Forest Management and further assured by regular independent audits, checking for our compliance to the *Australian Forestry Standard*.

## *Local timber – the better choice*

*Forests NSW staff work closely with sawmills to ensure long term provision of raw materials. Photo by Alf Manciagli*

# FORESTS CARBON CYCLE
## GROW. HARVEST. STORE...



# SUSTAINABILITY

Managing State Forests for the long term and retaining opportunities for future generations to meet their needs and expectations, while providing for the present.

| Forest Value | No. | Indicator | Results | Performance* |
|---|---|---|---|---|
| Productivity | 25 | Forest management | 1.4 million hectares available for timber production | ○ |
| | | | Over 478 000 hectares in State forest reserves | |
| | | | 610 000 hectares of other forest managed for ecological functions | |
| | 26 | Plantation establishment and survival | 7 702 hectares of new softwood plantation | ○ |
| | | | 26% of new softwood plantation established requiring restocking after 1 year | |
| | 27 | Mean annual growth of planted softwood forest | Mean annual increment for softwood plantations of 16.3 $m^3$/ha/yr and 13.6 $m^3$/ha/yr for hardwood plantations | ● |
| | 28 | Native forest regeneration | 14 surveys and 94 % of surveyed harvested area successfully regenerated | ● |
| Maintainability | 29 | Allowable cut | Actual annual yield of high quality sawlogs as percentage of allowable volume | ● |
| | | | 94% from native hardwood forests | |
| | | | 96% from cypress | |
| | | | 98% from all softwood plantations | |
| | 30 | Forest certification | Certification to the *Australian Forestry Standard* {AS 4708 (int)—2003} and ISO 14001 Environmental Management System Standard maintained | ● |
| | 32 | Trading profit | $24 400 profit per employee generated | ● |

** Performance keys are shown on page 3*

*Forests in NSW – growing habitat for wildlife and people.*

# Forest sustainability

Although humankind has a long history of adapting native forests to gain benefits, many people have become uncomfortable with the idea that these forests can be managed for commercial objectives. A common belief has been that to use timber is to harm the forest. For the sustainable forest manager, to harm the forest is like harming the very means by which you produce your primary product – timber. In sustainable native forest management the more intact and robust the forest ecosystem is, the less cost is associated with achieving the main economic benefit, timber. In fact all the social, environmental and economic benefits are interwoven and dependant on each other.


*Spiegel Relaskop – The Relaskop, invented by Dr. Walter Bitterlich, allows foresters to measure stand basal area, tree height and diameter. These are the basis for forest inventory modelling, for example in FRAMES. Photo by David Barnes*

As a public trading enterprise, Forests NSW must balance its objectives of commercial performance, where the benefit has a value in money, with the environmental, social and indirect economic benefits. These other benefits also have a value, however they are not paid for in the same way as timber.

As the expectations of the community change and some benefits become more important in the community than others, Forests NSW has the responsibility to adapt. Sometimes such changes are factored into our economy, for example through carbon trading, while other times Forests NSW relies on payment from government to ensure specific benefits can be provided.

By purchasing timber from forests that are certified to a sustainable forest management standard, the consumer invests in the product, timber, but they also invest in maintaining for the long term a range of benefits associated with the forest in which the timber grew.

## Strategic plans guide local decisions

Strategic plans with a five year timeframe are used by Forests NSW to publicly articulate the range of benefits derived from forests, and set out how NSW State forests will be managed to make the most of these benefits. These Ecologically Sustainable Forest Management (ESFM) Plans complement the *National Forest Policy Statement*, which outlines objectives and policies for the future of Australia's public and private forests.

Each ESFM Plan sets out the broad strategies, performance indicators and measurable outcomes for forest management in the relevant region and relates to the range of benefits associated with forests and forest management. These include natural heritage, Aboriginal and non-Aboriginal cultural heritage, nature conservation, forest health, sustainable timber supply, economic development, social development, forestry operations and consultation, monitoring and reporting.

ESFM plans are the product of consultation with people and organisations with a stake in the various benefits derived from forests. ESFM Plans for the native forest regions of Eden, South Coast, Tumut, Upper North East and Lower North East were published in 2005, while plans for the Planted Forest regions of Hume, Macquarie, Monaro and Northern, and the Native Forest regions of Western and Riverina were published in early 2008.

All Forests NSW Regions now have ESFM Plans in place, resulting in comprehensive and consistent forest management across all NSW State forests. These are among our most significant public documents and can be obtained by contacting Forests NSW or downloaded from our website. Annual updates will be available on regional performance from 2009, complementing the whole-of-estate view given in this Seeing Report.

## Independent assurance

In December 2006, Forests NSW was certified as compliant with the *Australian Forestry Standard* {AS 4708(Int)–2003} by NCS International, which is accredited by JAS-ANZ to audit against this internationally recognised forest management standard.

The standard is based on criteria for sustainable forest management agreed on by the PEFC Council (Programme for the Endorsement of Forest Certification Schemes), which is an independent, non-profit, non-governmental organisation, that promotes sustainably managed forests through independent third party certification. PEFC is a global umbrella organisation for the assessment and mutual recognition of national forest certification schemes, such as the *Australian Forestry Standard*.

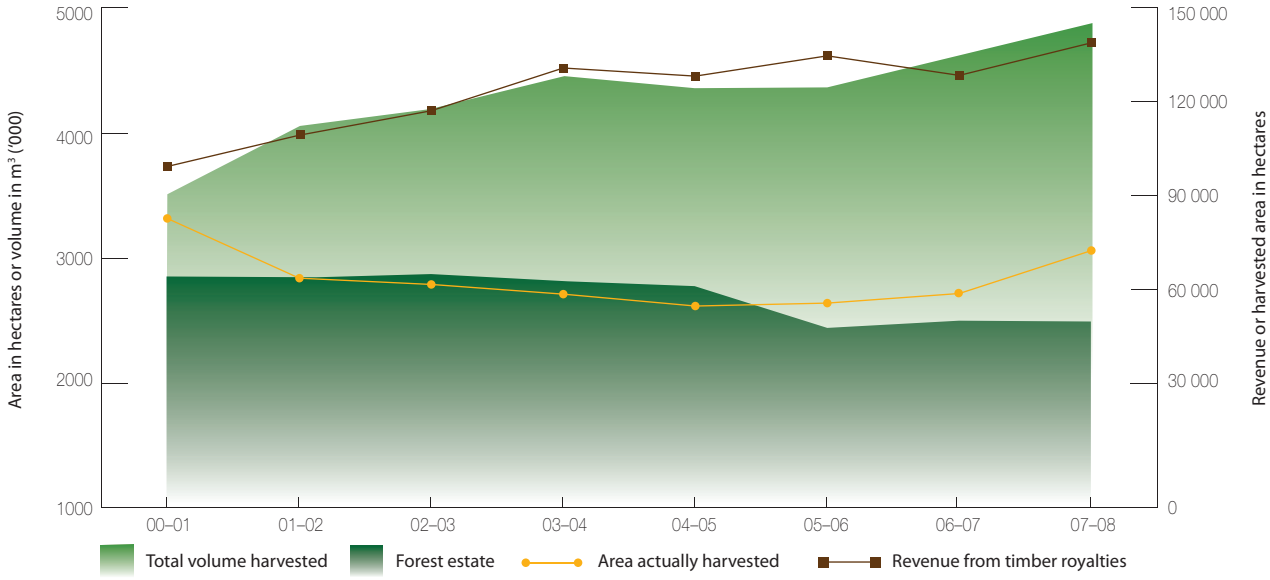
The external auditor's summary reports for each of the previous audits are available from Forests NSW on request.

AUSTRALIAN FORESTRY STANDARD
AFS/01-21-05

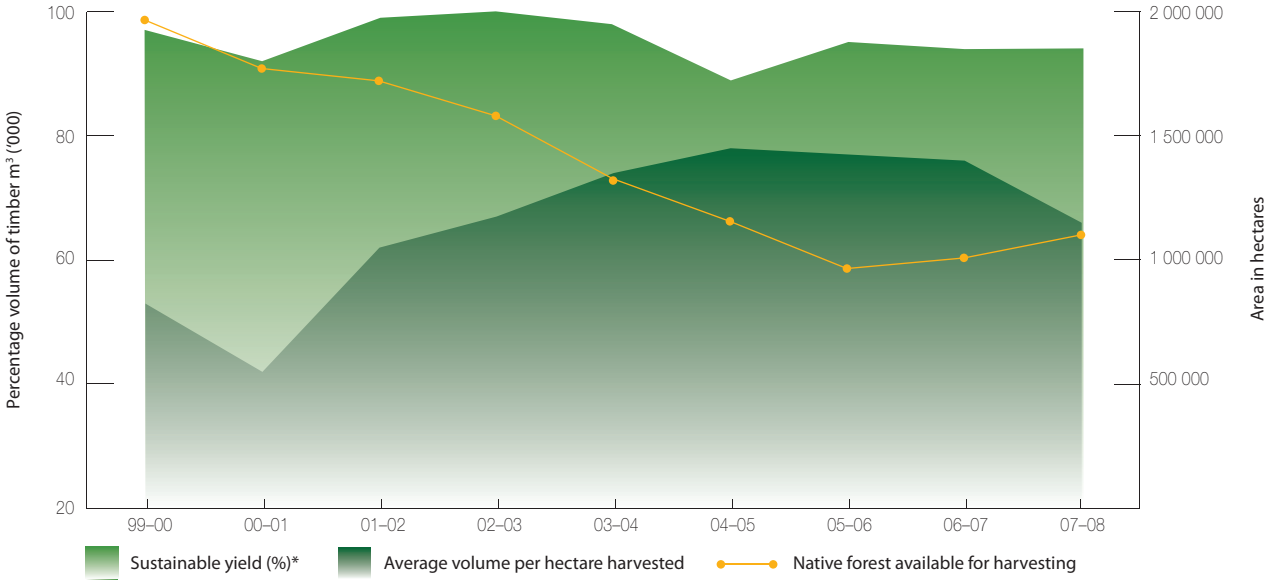
PEFC
PEFC/21-23-05

*The logos which indicate that our sustainable forest management is certified to national and international standards*

## Forest productivity




## Forest sustainability




** Refer to Indicator 29 (page 36) for more details.*

## Number of commercial nursery seedlings and cuttings produced in millions

| Product type | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| Forest NSW seedlings | 4.2 | 5.3 | 4.8 | 6.6 | 5.3 | 6.2 |
| Forest NSW cuttings | 0.8 | 0.5 | 1.3 | 0.9 | 1.3 | 0.8 |
| Private seedlings | 1.4 | 0.8 | 0.5 | 2.1 | 2.4 | 2.2 |
| Private cuttings | 0.2 | 0.1 | 0.04 | 0.0 | 0.03 | 0.0 |
| Total | 6.6 | 6.7 | 6.6 | 9.6 | 9.0 | 9.2 |

## Forest Management*

| | 1999-00 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|---|
| Available for harvesting ('000ha) | 1 965 720 | 1 442 120 | 1 251 290 | 1 299 042 | 1 400 958 |
| State forest reserves (ha) | 555 000 | 571 427 | 527 856 | 503 107 | 478 634 |
| Forests in protection zones for ecological functions (ha) | 552 600 | 778 573 | 655 289 | 690 502 | 610 457 |

** Refer to Indicator 25 (page 35) for more details.*

## Climate change

As a NSW Government agency, we are committed to a significant effort to minimise the impacts of climate change under the *NSW Greenhouse Plan, The State Plan*, and the *National Biodiversity and Climate Change Action Plan*.

*The NSW Biodiversity and Climate Change Adaptation Framework* was compiled with significant input from NSW DPI. This document is the starting point for raising awareness, undertaking vital research and monitoring projects as well as implementing strategies to maintain biodiversity and protect threatened plants and animals.

As the illustration on page 24 shows, Forests NSW and the forest industry play a positive role in reducing climate change. Forests NSW has estimated that native State forests sequestered over 8 megatonnes of carbon equivalents ($CO_2$-e) during 2007–08 along with half a megatonne of carbon sequestered in hardwood products (excludes pulp, firewood and waste) during the same period.

At a national level, plantations established since 1990 contribute a 4% sink in net national $CO_2$-e emissions. Our contribution is further recognised through our participation in the NSW Greenhouse Abatement Scheme. The NSW scheme will be absorbed into the Australian Carbon Pollution Reduction Scheme to commence in 2010.

Further details and plans for the future can be found in the NSW DPI discussion paper 'Climate change research priorities for primary industries', which outlines the causes and effects of climate change, the impacts on primary industries, actions currently being undertaken by NSW DPI and identifies future research priorities.

< Left: ***Gloves*** *– An essential part of operations staff's Personal Protection Equipment, for instance when using a chainsaw. Photo by David Barnes*

# 40 000 trees and 5 000 plots

## Timber for the long term

Calculating the correct volume of timber to be harvested is fundamental to sustainable forest management. Forests NSW uses complex mathematical equations and scientific research, coupled with field measurements, in order to forecast future availability.

To do this Forests NSW uses a system called FRAMES (Forest Resource and Management Evaluation System) to predict growth and potential harvest volumes. One of the main inputs is based on data and descriptions taken from 5000 inventory plots examined for tree sizes, species and quality, along with local site characteristics, such as slope, aspect and site productivity.

Predicting how fast trees grow has seen 40 000 individual trees repeatedly measured in permanent growth plots. This program started in the 1960s and provides an extensive database of growth trends, including rates of change in size, natural tree mortality and regeneration. Recently, the program has been extended with an additional 270 new plots.

FRAMES draws on information from the inventory and permanent growth plots to predict timber availability over time. By drawing together the information produced by FRAMES and relating it to areas actually harvested, it is possible to predict the total harvestable volume over time.

In the same way climate change models are used to assess the impact of different scenarios, FRAMES models also allow Forests NSW to predict the maximum volume that can be harvested each year from a given total area, subject to silvicultural prescriptions and conservation rules.

**Silviculture** / *noun* the study, cultivation and management of forest trees

In keeping with Forest Agreement expectations, Forests NSW monitors timber availability and wood supply agreements using FRAMES. For example, on the north coast, recent work has identified that the supply of sawlogs can be sustainably maintained over 100 years at about half a million cubic metres a year. However, the demand for large high quality sawlogs is particularly strong, so supply is being supplemented with timber from hardwood plantations and private property. Plantation timber will become more important in this region, particularly in15 years when the supply of native sawlogs will reduce and plantation product will constitute nearly half the available yield.

FRAMES was initially designed as a strategic planning tool. Forests NSW is working towards improving the system to allow for more localised planning. This, along with a number of other planned improvements, will ensure a reliable and useful tool for predicting timber availability 200 years into the future.

*Handheld Computer – Information is often recorded on these handheld computers, whilst in the forest itself. Photo by David Barnes*

# APPENDICES

## Abbreviations and symbols used in Appendices

| | |
|---|---|
| $CO_2$-e | 'Carbon dioxide equivalent', the internationally recognised measure of greenhouse emissions |
| EPA | Environment Protection Agency, part of NSW DECC |
| FMZ | Forest Management Zone |
| ha | Hectares |
| IFOA | Integrated Forestry Operations Approval |
| kg | Kilograms |
| km | Kilometres |
| LPG | Light Petroleum Gas |
| M | Million |
| n/a | Not applicable |
| n/d | Not determined |
| n/r | Not reported as an indicator |
| No. | Number |
| NPWS | National Parks and Wildlife Service, part of NSW DECC |
| NSW | Australian State of New South Wales |
| NSW DECC | Department of Environment and Climate Change NSW |
| OHS | Operational Health and Safety |
| REERM | Racial, Ethnic and Ethno/Religious Minority Groups |
| ● | Objective achieved |
| ○ | On track to meeting objective |
| ● | Objective not achieved - action required |
| ▲ | Performance improved since last reporting period |
| ▼ | Performance declined since last reporting period |
| ◀▶ | No change in performance since last reporting period |

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Increase voluntary activities in non-operational business areas
**Indicator Name:** Social responsibility

**Indicator 1**

| Corporate sponsorships, donations and waived fees | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Number | 424 | 394 | 381 | 541 |
| Amount | $ 174 053 | $ 115 510 | $ 126 918 | $122 375 |
| **Volunteering programs** | | | | |
| Number of programs | 27 | 19 | 18 | 16 |
| Number of participants | 239 | 192 | 138 | 267 |

*The increase in participants is due to better reporting, in which site safety induction records were used.*

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Increase opportunities for stakeholder participation in planning. Actively engage and involve our neighbours in management of the community's forests
**Indicator Name:** Public participation

**Indicator 2**

| Community forum categories | 1998-99 | 2006-07 | 2007-08 |
|---|---|---|---|
| Catchment management | 47 | 26 | 25 |
| Community bushfire management | 14 | 198 | 202 |
| Community/school/education | 29 | 76 | 44 |
| Conservation/environmental | 46 | 37 | 21 |
| Cultural management | n/a | 177 | 180 |
| Feral animals/noxious weed control | 79 | 61 | 70 |
| Flora and fauna management | 17 | 12 | 16 |
| Forestry/forest practices | 40 | 23 | 22 |
| Industry/stakeholders | 213 | 119 | 98 |
| Local emergency management | 63 | 18 | 12 |
| Local government | 44 | 24 | 24 |
| Other | 116 | 29 | 23 |
| Recreation/tourism | 252 | 48 | 27 |
| Regional planning/Regional Forest Agreement | 67 | 57 | 22 |
| Total | 1 027 | 905 | 786 |

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Maintain well managed facilities
**Indicator Name:** Recreation and tourism

**Indicator 3A**

| Recreational facilities provided | 1999-00 | 2006-07 | 2007-08 |
|---|---|---|---|
| Beach facilities | n/r | 25 | 20 |
| Roadside rest areas/picnic areas | 119 | 63 | 63 |
| Forest drives (marked) | 31 | 15 | 10 |
| Forest walks (marked) | 61 | 34 | 43 |
| Forest walks (un-marked) | n/r | 2 | 2 |
| Lookouts | 49 | 16 | 13 |
| Camping areas | 266 | 61 | 57 |
| Camps/huts /cottages | 25 | 16 | 11 |
| Mountain bike tracks (km) | n/a | 108 | 141 |

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Maintain opportunities for events and partnerships
**Indicator Name:** Recreation and tourism

**Indicator 3B**

| Permits for organised recreational activities | 1998-99 | 2006-07 | 2007-08 |
|---|---|---|---|
| Eco tourism/4x4 tours | 54 | 21 | 5 |
| Horse, trail and endurance rides | 32 | 29 | 25 |

**Indicator 3B cont.**

| Permits for organised recreational activities | 1998-99 | 2006-07 | 2007-08 |
|---|---|---|---|
| Car rallies /go carts | 38 | 28 | 36 |
| Motor bike rallies | 6 | 21 | 18 |
| Mountain bike rallies | 30 | 35 | 46 |
| Orienteering/mountain runs/triathlon | 37 | 22 | 29 |
| Bush walking | 23 | 8 | 6 |
| Bowhunting/archery | 60 | 2 | 2 |
| Fossicking | n/r | 44 | 22 |
| Other | 22 | 125 | 288 |
| Education/outdoor education schools | 27 | 49 | 46 |
| Training/exercises | 152 | 29 | 17 |
| Total activities | 481 | 413 | 518 |
| Area zoned primarily for recreation (ha) | n/d | 4 490 | 4 749 |
| Expenditure on recreation ($'000) | n/r | 2 721 | 2 092 |
| Recreation Agreements | n/r | 63 | 35 |

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Cost-effective research services from DPI and within Forests NSW
**Indicator Name:** Research and education

**Indicator 4A**

| | Research ($M) | Education ($M) |
|---|---|---|
| 1998-99 | 7.2 | n/d |
| 2005-06 | 6.9 | 4.2 |
| 2006-07 | 7.0 | 4.2 |
| 2007-08 | 7.6 | 2.9 |

*NSW DPI's Annual Research Report documents significant projects during the year and can be obtained through the NSW DPI website*

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Provide strategic education program
**Indicator Name:** Number of people participating in programs and receiving information through Cumberland State Forest

**Indicator 4B**

| Activity | 1998-99 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| School – lower primary | 1 197 | 735 | 482 | 685 |
| School – upper primary | 1 585 | 3 791 | 4 792 | 2 757 |
| School – secondary | 753 | 263 | 150 | 437 |
| School holiday activities | 1 008 | 784 | 429 | 292 |
| Information services – by phone | n/r | 3 862 | 3 924 | 3 914 |
| Information services – by email | n/r | 5 347 | 6 454 | 6 772 |

*The estimates of number of inquiries handled has been revised down for the previous three years based on records of inquiries kept during this reporting period.*

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Provide opportunities for employment in forest-dependant industries
**Indicator Name:** Regional employment

**Indicator 5**

| Forest sector | 1997-98 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Harvesting & Haulage | 1 132 | 1 292 | 1 245 | 1 087 |
| Primary processing* | 4 328 | 5 306 | 4 835 | 4 483 |
| Apiary | 302 | 294 | 419 | 352 |
| Grazing | 165 | 552 | 553 | 530 |
| Eco-tourism | 88 | 37 | 37 | 10 |
| Other** | 136 | 228 | 62 | 52 |
| Total | 6 150 | 7 709 | 7 151 | 6 514 |

** Processing undertaken at a site where the input is raw material supplied by Forests NSW.*
*** Includes plantation establishment contractors, gravel extraction and other forest product removal.*

**Strategic Area:** Social **Forest Value:** Community
**Objective:** Access maintained to State forests for apiary, grazing and other products appropriate to forests
**Indicator Name:** Other forest products

**Indicator 6**

| Forest product | 1997-98 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Grazing (hectares) | 768 946 | 652 699 | 688 525 | 645 040 |
| Apiculture (sites) | 3 843 | 3 371 | 3 363 | 1 310 |
| Leaf/oil (kg) | 8 013 | 0 | 0 | 0 |
| Seed (kg) | 969 | 53 | 51 | 102 |
| Bark (tonnes) | 1 109 | 0 | 0 | 0 |
| Firewood (tonnes) | 75 615 | 41 941 | 42 613 | 88 271 |
| Broombush (tonnes) | 1 977 | 3 611 | 4 255 | 4 225 |
| Charcoal (tonnes) | 119 | 1 594 | 1 465 | 1 417 |
| Craft timber ($m^3$) | 33 | 1 677 | 35 | 12 |
| Misc native plants pieces (No.) | 1 219 | 3 820 | 3 544 | 454 |
| Burls (tonnes) | 44 | 9 | 1 | 0 |
| Wood blocks (No.) | 0 | 3 750 | 3 750 | 50 |
| Film/documentary (permits) | 3 | 12 | 4 | 5 |
| Communication sites (permits) | 126 | 134 | 135 | 120 |
| Other structures (permits) | 227 | 168 | 153 | 188 |
| Powerlines/cables/pipelines (km) | 2 886 | 5 286 | 5 006 | 4 876 |
| Gravel/sand/rock (tonnes) | 69 495 | 88 952 | 88 147 | 94 665 |
| Research (permits) | 215 | 58 | 69 | 51 |
| Nursery seedlings to public (No.)* | 1 148 000 | 1 096 806 | 1 647 400 | 1 178 402 |
| Advanced plants sold to public (No.) | 5 491 | 6 213 | 6 505 | 80 355 |
| Total value ($'000) | n/r | 6 242 | 6 461 | 6 315 |

** Does not include plantation stock sold to external plantation owners*

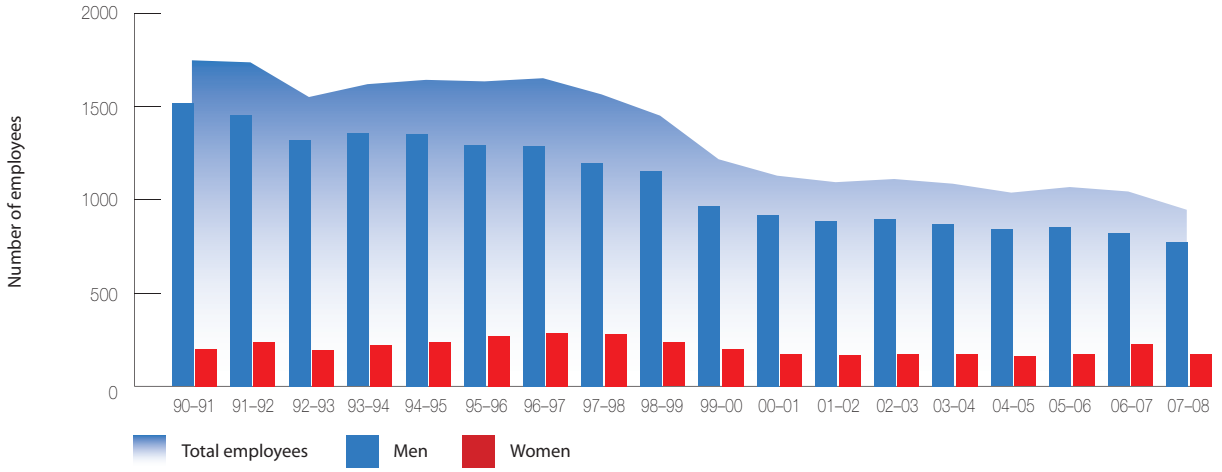
**Strategic Area:** Social **Forest Value:** Staff **Objective:** Maintain staff levels for effective and efficient operations **Indicator Name:** Quality of management

**Indicator 7**

| | Men | Women | REERM* | Persons with Disability | Aboriginal and Torres Strait Islanders | Total staff** | Expenditure on HR management ($M) |
|---|---|---|---|---|---|---|---|
| 1999-00 | 965 | 253 | 45 | 74 | 26 | 1 218 | n/r |
| 2005-06 | 860 | 209 | 78 | 70 | 25 | 1 069 | 1.34 |
| 2006-07 | 820 | 225 | 49 | 48 | 23 | 1 045 | 1.10 |
| 2007-08 | 772 | 171 | 37 | 48 | 19 | 943 | 1.74 |

*Note: the total men, women total staff values represent full time equivalents, whilst REERM, Disabilities & Aboriginals are actual head count. These figures excludes casual staff. Forests NSW has undergone several re-structures in line with Government policy and directives, over the past 15 years. Significant organisational reviews occurred in 1992, 1997 and most recently over the past year. As a result there has been a fall in staff number during this time.*

## Staff numbers




**Strategic Area:** Social **Forest Value:** Staff
**Objective:** Operations implemented by appropriately trained staff and contractors
**Indicator Name:** Training

**Indicator 8**

| Course | 2006-07 | 2007-08 |
|---|---|---|
| Management skills | 38 | 77 |
| Communication skills | 141 | 28 |
| Computer skills | 7 | 64 |
| Cultural heritage | 88 | 52 |
| Environmental | 137 | 68 |
| Fire | 119 | 197 |
| Flora and fauna identification and management | 4 | 2 |
| Operator training | 569 | 456 |
| Forest management, inventory and silviculture | 21 | 10 |
| HR management | 41 | 23 |
| Induction | 123 | 162 |

**Indicator 8 cont.**

| Course | 2006-07 | 2007-08 |
|---|---|---|
| Authorised officer training | 20 | 14 |
| OHS legislation & awareness | 605 | 457 |
| Maps reading and airphoto interpretation | 6 | 27 |
| OHS - including chainsaw, 4WD training and firstaid | 1 519 | 2 395 |
| Pest and weed control | 7 | 6 |
| Product identification and assessment | 19 | 211 |
| Roading and road survey | 20 | 3 |
| Soil and water | 91 | 71 |
| Total | 3 575 | 4 323 |
| Expenditure on training ($M) | 2.26 | 2.24 |

*The methodology for grouping this data has been revised resulting in revised figures for 2006-07.*

**Strategic Area:** Social **Forest Value:** Staff
**Objective:** Lost Time Incidents and recordable injuries less than 50 by June 2009
**Indicator Name:** Health and safety

**Indicator 9**

| OH&S Issue | 2001-02 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Number of safety meetings held | 83 | 80 | 75 | 104 |
| Number of lost time incidents & recordable injuries* | 109 | 77 | 86 | 103 |
| Number of days lost due to lost time incidents | 971 | 380 | 381 | 527 |
| Lost time incident frequency rate** | 3.1 | 2.4 | 3.3 | 4.5 |
| Provision of health or fitness services | 15 | 121 | 161 | 212 |
| Provision of specialised equipment or clothing | 367 | 261 | 216 | 368 |
| Risk assessments | 241 | 356 | 634 | 392 |
| Training | 194 | 277 | 477 | 313 |
| Voluntary audits | 72 | 173 | 218 | 161 |

**Where a workplace injury becomes a LTI when the injured employee lodges a workers compensation claim and has a whole day/shift off work.*

***Lost time incident frequency rate = No. Lost Time Incidents (LTI) x 200 000 / Total hours worked*

**Strategic Area:** Social **Forest Value:** Cultural heritage
**Objective:** Identify and protect all significant cultural heritage sites
**Indicator Name:** Management of Cultural Heritage

**Indicator 10A**

| | 2001-02 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Number of cultural heritage surveys | n/d | 260 | 243 | 184 |
| Total heritage sites (post-settlement) managed | 554 | 271 | 275 | 286 |
| Area managed for cultural heritage | 176 | 4 234 | 1 114 | 1 725 |
| Agreements for Co-management of Land (No.) | 3 | 4 | 4 | 3 |
| Agreements for Co-management of Land (ha) | 1 730 | 55 022 | 53 550 | 53 279 |
| Partnerships | 19 | 11 | 6 | 10 |
| Land with recognised Native title | 0 | 0 | 30 782 | 30 782 |

**Strategic Area:** Social **Forest Value:** Staff
**Objective:** Ensure all appropriate employees and contractors are trained in cultural heritage awareness
**Indicator Name:** Management of cultural heritage

**Indicator 10B**

| | 2001-02 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Number of employees and contractors trained | 239 | 78 | 62 | 52 |

**Strategic Area:** Environment **Forest Value:** Biodiversity
**Objective:** Maintain area of native forest for the sustainable supply of timber
**Indicator Name:** Extent of forest type

**Indicator 11A**

| | 1997-98 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Alpine ash forest | n/d | 1% | 1% | 1% |
| Blackbutt forest | 6% | 6% | 6% | 6% |
| Blue gum forest | 8% | 6% | 7% | 6% |
| Messmate forest | 11% | 10% | 12% | 11% |
| Mixed coastal eucalypt | 8% | 12% | 11% | 11% |
| Non eucalypt forest | 2% | 1% | 0% | 1% |
| Non forest | n/d | 7% | 3% | 3% |
| Other inland eucalypt types | 2% | 8% | 9% | 9% |
| Rainforest | 4% | 4% | 3% | 4% |
| River red gum forest | 3% | 5% | 5% | 6% |
| Snow gum woodland | 1% | 1% | 1% | 1% |
| Spotted gum forest | 7% | 9% | 9% | 9% |
| Stringybark forest | 13% | 11% | 10% | 9% |
| Un-classified | 34% | 11% | 14% | 10% |
| White cypress pine forest | 1% | 8% | 8% | 8% |
| Total | 100% | 100% | 100% | 100% |

**Strategic Area:** Environment **Forest Value:** Biodiversity
**Objective:** Increase capacity of plantations to meet sustainable supply of timber
**Indicator Name:** Extent of planted forest type

**Indicator 11B**

| Plantation type | 1999-00 | 2005-06 | 2006-07 | | 2007-08 |
|---|---|---|---|---|---|
| Softwood (*Pinus spp*) | 57% | 47% | 46% | 209 252 | 42% |
| Hardwood (*Eucalyptus spp*) | 14% | 11% | 10% | 63 614 | 13% |
| Total planted area | 71% | 58% | 56% | 272 866 | 54% |

**Indicator 11B cont.**

| Plantation type | 1999-00 | 2005-06 | 2006-07 | | 2007-08 |
|---|---|---|---|---|---|
| Retained vegetation and infrastructure | 21% | 41% | 40% | 198 453 | 39% |
| Land for future planting | 8% | 5% | 6% | 26 852 | 5% |
| Other Exclusions | n/r | 1% | 1% | 4 365 | 1% |
| Total planted forest estate | 100% | 100% | 100% | 502 536 | 100% |

** Note: this figure includes State forest, Joint Venture and Annuities. Areas for hardwood plantation include pre-1994 plantations that may or may not be accredited are also included.*

*The change in percentage of plantation type is due to a revised assessment of hardwood plantation areas.*

**Strategic Area:** Environment **Forest Value:** Biodiversity
**Objective:** Threatened species at risk from forestry operations identified and adaptive management applied.
**Indicator Name:** Sightings of surveyed species

**Indicator 13**

| Species sightings | 1997-97 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Arboreal mammals | 268 | 1 040 | 1 129 | 989 |
| Ground mammals | 195 | 77 | 31 | 22 |
| Frogs | 204 | 937 | 305 | 324 |
| Bats | 93 | 121 | 66 | 183 |
| Raptors | 86 | 154 | 182 | 133 |
| Non raptor birds | 110 | 380 | 542 | 402 |
| Reptiles | n/r | 3 | 1 | 0 |
| Total | 956 | 2 712 | 2 256 | 2 053 |
| Number of Fauna Surveys | n/r | 1 491 | 1 779 | 2 754 |
| Sightings per survey | n/r | 1.82 | 1.27 | 0.75 |
| Expenditure on surveys ($'000) | n/r | 1 482 | 1 427 | 621 |

*Revised methodology has resulted in a more comprehensive report on survey numbers.*

**Strategic Area:** Environment **Forest Value:** Biodiversity
**Objective:** Ecosystems maintained over a range of successional growth stages and forest management zones
**Indicator Name:** Native forest structure

**Indicator 12**

| Structure class | Dedicated reserve | Informal reserve – Special management | Informal reserve – Harvest exclusion | Special prescription | General management | Non forestry use | Further assessment | Percentage of total native forest |
|---|---|---|---|---|---|---|---|---|
| FMZ | 1 | 2 | 3A | 3B | 4 | 7 | 8 | |
| High conservation value old growth | 1.3% | 37.6% | 57.9% | 0.2% | 2.3% | 0.1% | 0.6% | 4.7% |
| Rainforest | 3.1% | 34.7% | 37.1% | 0.6% | 19.4% | 0.1% | 7.8% | 4.6% |
| Mature | 1.2% | 9.8% | 11.4% | 2.2% | 67.4% | 0.2% | 8.9% | 32.3% |
| Regrowth | 1.1% | 5.1% | 5.1% | 3.2% | 76.4% | 0.2% | 2.9% | 22.3% |
| Not assigned | 0.7% | 0.9% | 14.3% | 10.5% | 70.1% | 0.3% | 2.9% | 36.0% |
| Percentage of total native forest | 1.3% | 8.0% | 14.4% | 5.3% | 65.1% | 0.2% | 5.8% | 100.0% |

*This information was originally used in the establishment of a Comprehensive and Adequate Reserve system for State forest in Forest Agreement areas. Changes in this data from last year are related to corrections in collation rather than on-the-ground changes in structure.*

**Strategic Area:** Environment **Forest Value:** Forest health

**Objective:** Manage weeds and animal pests though active coordinated and cooperative programs

**Indicator Name:** Expenditure on pest animal and weed control

| Indicator 14 | | | | |
|---|---|---|---|---|
| Year | 1997-98 | 2005-06 | 2006-07 | 2007-08 |
| Weeds | $1 325 000 | $ 669 365 | $ 779 070 | $ 596 874 |
| Pest animals | $ 328 000 | $ 546 268 | $ 586 343 | $ 546 194 |
| Total | $1 653 000 | $1 215 633 | $1 365 413 | $1 143 068 |

*Forests NSW continues to be a major contributor to control programs for foxes, dogs, goats, pigs, cattle, blackberries, willow, serrated tussock, horehound, lantana and patersons curse.*

**Strategic Area: Environment** **Forest Value: Forest health**

**Objective:** Monitor and address plantation health issues: minimise impact of health issues on plantations

**Indicator Name:** Plantation health

| Indicator 15 | | | | |
|---|---|---|---|---|
| **Hardwood plantation** | | | | |
| Agent | 2001-02 | 2005-06 | 2006-07 | 2007-08 |
| *Creiis lituratus* (psyllid) | n/d | n/d | n/d | 3.0% |
| Herbivorous and sap-sucking insects | 5.8% | 2.0% | 3.0% | 3.0% |
| Stem borers (insects) | 0.1% | 0.0% | 3.0% | 5.0% |
| Soil pathogens (fungi) | < 0.1% | 0.0% | 0.0% | 0.0% |
| Frost Damage | n/d | 0.0% | < 0.1% | 0.2% |
| Leaf and shoot fungi | 2.4% | 2.0% | 2.0% | 2.0% |
| **Softwood plantation** | | | | |
| Agent | 2000-01 | 2005-06 | 2006-07 | 2007-08 |
| *Dothistroma septosporum* (needle blight) | 2.0% | 0.2% | 0.5% | 1.0% |
| Drought (*Diplodia pinea* (fungus) & *Ips grandicollis* (bark beetle)) | 0.5% | < 0.1% | 6.0% | 15.0% |
| Boron deficiency | 0.5% | < 0.1% | n/d | n/d |
| *Sirex noctilio* (woodwasp) | < 0.1% | < 0.1% | 1.2% | 15.0% |
| *Essigella californica* (aphid) | n/d | 25.0% | 40.0% | 47.0% |
| Possum | 0.2% | < 0.1% | 1.0% | 6.0% |
| Unaffected | 96.6% | 75.0% | 52.3% | 16.0% |

**Strategic Area:** Environment **Forest Value:** Forest health

**Objective:** Managed through integrated and cooperative fire hazard management and wildfire suppression programs, resulting in less than 0.3% of forest estate burnt by damaging wildfire

**Indicator Name:** Fire fighting and prevention

| Indicator 16 | | | | |
|---|---|---|---|---|
| Wild fire | 2001-02 | 2005-06 | 2006-07 | 2007-08 |
| Percent of total State forest estate | 3.50% | 0.7% | 3.9% | 0.03% |
| Expenditure ($M) | 2.7 | 2.2 | 3.0 | 1.8 |
| **Fuel management** | | | | |
| Hazard reduction (ha)* | 58 893 | 38 008 | 37 014 | 32 474 |

| Indicator 16 cont. | | | | |
|---|---|---|---|---|
| Fuel management | 2001-02 | 2005-06 | 2006-07 | 2007-08 |
| Hazard reduction outside of Forests NSW estate (ha) | n/r | n/r | n/r | 5 092 |
| Grazing (ha) | 644 966 | 535 213 | 564 591 | 528 933 |
| Expenditure ($M) | 6.1 | 6.7 | 8.2 | 9.8 |

** includes pre and post harvest burning.*

*The increase in expenditure on fuel management reflects funding availability through the Bush Fire Mitigation Program*

**Strategic Area:** Environment **Forest Value:** Soil and water

**Objective:** Maintain Ecological processes associated with soil and water. Assess all areas to be harvested for risks to soil and water quality

**Indicator Name:** Assess all areas to be harvested for risks to soil and water quality

| Indicator 17A | | | | |
|---|---|---|---|---|
| | 1999-00 | 2005-06 | 2006-07 | 2007-08 |
| Area assessed for soil and water (ha) | n/r | 117 190 | 125 554 | 131 857 |
| Number of soil and water surveys | n/r | 340 | 252 | 215 |
| Expenditure on harvesting supervision and environmental compliance ($'000) | n/r | 6 009 | 6 219 | 5 164 |
| Area of native forest harvested | 56 900 | 43 709 | 45 945 | 57 631 |
| Area of softwood plantation harvested | 14 000 | 11 930 | 12 754 | 14 659 |
| Area of hardwood plantation harvested | 2 000 | 0 | 10 | 127 |
| Total Area harvested | 73 000 | 55 639 | 58 709 | 72 417 |
| Percent of forest estate harvested | 2.4% | 2.2% | 2.3% | 2.7% |
| Soil and water non-compliance incidents self reported | 1 255 | 284 | 395 | 318 |
| Fines received in relation to Soil and Water | 3 | 4 | 2 | 2 |

*Forests NSW carries out extensive soil and water assessments prior to harvesting. Conditions implemented are consistent with the level of risk to soil erosion and water pollution*

**Objective:** Protect water catchment values in socially strategic or environmentally sensitive locations

| Indicator 17B | | | | |
|---|---|---|---|---|
| | 1999-00 | 2005-06 | 2006-07 | 2007-08 |
| Fully protected land (hectares)* | 290 700 | 196 049 | 182 619 | 183 752 |
| Partly protected land (hectares)** | 30 200 | 53 587 | 62 839 | 60 295 |
| Total*** | 320 900 | 249 636 | 245 458 | 244 047 |

** Includes wetlands, filter strips reserved from harvesting and areas with extreme risk of erosion or water pollution hazard.*

*** Includes Forest Management Zone "Catchment" and filter strips protected in areas where modified harvesting methods are permitted.*

**** Excludes substantial tracts of land otherwise zoned primarily for natural and cultural protection which also provide a catchment protective function.*

**Strategic Area:** Environment **Forest Value:** Compliance

**Objective:** Achieve a 100% external regulatory compliance rate with zero penalty infringement notices, prosecutions and fines

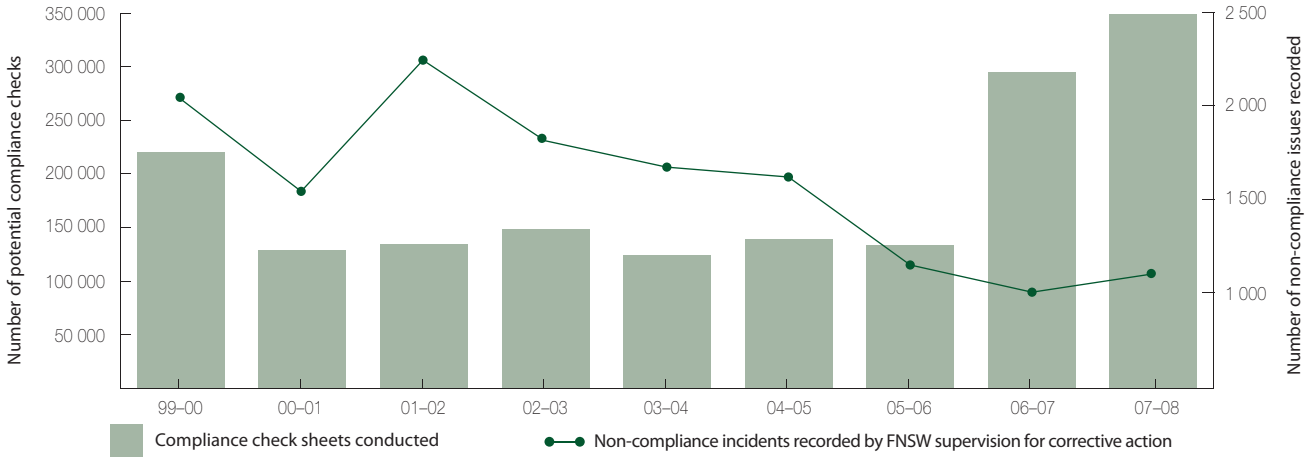
**Indicator Name:** Regulatory compliance

| Indicator 18 | | | | |
|---|---|---|---|---|
| Compliance items | 1999-00 | 2005-06 | 2006-07 | 2007-08 |
| **Number of compliance check sheets conducted** | | | | |
| - 1st tier supervision checks | 5 428 | 3 184 | 3 396 | 4 013 |
| - 2nd tier supervision checks | 420 | 347 | 444 | 643 |
| - 3rd tier supervision checks | n/r | 27 | 50 | 58 |
| - 4th tier supervision checks | n/r | 0 | 3 | 6 |
| Total | 5 848 | 3 558 | 3 893 | 4 720 |
| Potential compliance checks covered by check sheets* | 204 636 | 120 037 | 295 452 | 410 640 |
| **Number of non-compliance incidents (NCI) recorded by Forests NSW supervision for corrective action** | | | | |
| - NCIs related to soil erosion & water quality | 1 255 | 284 | 395 | 318 |
| - NCIs related to flora and fauna | 469 | 281 | 192 | 89 |
| - NCIs related to fish habitat & passage | 1 | 0 | 0 | 0 |
| other NCI issues (e.g. safety) | 314 | 577 | 410 | 689 |
| Total | 2 039 | 1 142 | 997 | 1 096 |
| Compliance rate* | 100 | 99.99 | 99.99 | 99.99 |
| **Number of fines issued to Forests NSW by regulators** | | | | |
| Fines to DECC (NPWS) | 0 | 0 | 1 | 2 |
| Fines to DECC (EPA) | 3 | 4 | 2 | 2 |
| Fines DPI Fisheries | 0 | 0 | 0 | 0 |
| Total | 3 | 4 | 3 | 4 |
| **Number of prosecutions recorded against State forests** | | | | |
| Prosecutions by DEC (NPWS) | 1 | 0 | 0 | 0 |
| Prosecutions by DECC (EPA) | 0 | 0 | 0 | 0 |
| Prosecutions by DPI Fisheries | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 0 |

** relates to Forest NSW Tier 1 audits only*

*EMS (ISO 14001) and AFS (AS 4708) requirements have been incorporated into checksheets since 2006-07*

## Supervision and monitoring*




** relates to Forests NSW tier 1 monitoring of operations, such as harvesting and roading. Recent years has seen increased focus on compliance to internationally recognised standards as well as regulatory compliance.*

**Strategic Area:** Environment **Forest Value:** Environmental services

**Objective:** Maintain a positive contribution to Australia's net emission reduction program for carbon dioxide

**Indicator Name:** Carbon sequestration

| Indicator 19 | | | | |
|---|---|---|---|---|
| Planted forest type | 2002-03 | 2005-06 | 2006-07 | 2007-08 |
| Softwood (tonne) | 3 654 974 | 3 672 765 | 3 633 759 | 3 411 265 |
| Hardwood (tonne) | 585 331 | 575 571 | 563 688 | 624 344 |

**Assumptions**:

$CO_2$ sequestered (tonnes CO2-e) = net plantation area x MTBI x CP x CCF where:
MTBI = SBI + CBI + RBI where:
SBI (Stem Biomass Increment) = TSVI x BD where:
TSVI (Total Stem Volume increment) - softwood = 16m³/ha/year and hardwood = 15m³/ha/yr
CBI (Canopy Biomass Increment) = SBI x 0.1765
BD (Basic Density) - softwood = 0.42 t/m³ and hardwood = 0.55t/m³
RBI (Root Biomass Increment) = (SBI + CBI) x 0.2
CP (Carbon Proportion) = 0.5
CCDF (Carbon to Carbon dioxide factor) = 3.667
Net plantation area = Net Stocked Area in State Forest and Joint Venture plantations (refer Indicator 27)

| Native Forest Carbon Balance | |
|---|---|
| Measured in millions of tonnes (Mega tonnes) | 2007-2008 |
| Total standing volume $CO_2$ | 985 |
| Annual $CO_2$ sequestered forest growth | 7.0 |
| Annual $CO_2$ harvest storage in hardwood products | 0.5 |
| Annual $CO_2$ harvest emissions | 1.4 |
| Annual $CO_2$ fire emissions | 1.0 |
| Annual non $CO_2$ fire emissions | 417 144 |

*This is the first year Forests NSW has reported on carbon sequestration in native forests. The assumptions used here are the best available to date and may change in subsequent reporting periods, as we invest resources in developing better methods of calculating this information. The model reports the amount of carbon stored in forest products, along with emissions associated with harvesting. Research has shown that growth rates in harvested forests remain higher than in non harvested forests. 06-07 saw large areas burnt in wildfires resulting in a net release of carbon.*

| Annual Sequestration | |
|---|---|
| Net $CO_2$ | 4.16 |

**Assumptions**:

**model a**

$CO_2$ sequestered (tonnes $CO_2$e) = net plantation area x MTBI x CP x CCF where:
MTBI = SBI + CBI + RBI where:
SBI (Stem Biomass Increment) = TSVI x BD where:
TSVI (Total Stem Volume increment) native forest ave = 5m³/ha/yr
BD (Basic Density) = 0.325t/m³ (source AGO 2006)
CBI (Canopy Biomass Increment) = SBI x 0.1765
RBI (Root Biomass Increment) = (SBI + CBI) x 0.2
CP (Carbon Proportion) = 0.5
CCF (Carbon to Carbon dioxide factor) = 3.667

**model b**

Model b is based on weighted average growth rates in the AGO methodology 2006 (refer table A1) for the estimation of greenhouse gas emissions and sinks for the broad forest types within State forest.

*Note that both methods were applied and the mean figure used. No adjustment for age class made. Calculations are based on a model conceived by Dr Hilary Smith.*

**Strategic Area:** Environment **Forest Value:** Environmental services

**Objective:** Reduce greenhouse gas emissions and increase energy sourced from green power

**Indicator Name:** Energy consumption

| Indicator 20A | | | | | |
|---|---|---|---|---|---|
| Energy Use | Total Energy GJ | $CO_2$-e Emissions (tonnes) Scope 1 | Scope 2 | Scope 3 | |
| | 2007-08 | | | | % change to 2006-07 |
| Electricity (kWh) | 10 069 | 0 | 2 502 | 483 | -16% |
| Green power (kWh) | 232 | 0 | -59 | -10 | 58% |
| Natural gas (MJ) | 504 | 26 | n/a | 6 | -15% |
| LPG (kg) | 1 844 | 110 | n/a | 12 | 33% |
| Petrol (L) | 9 038 | 518 | n/a | 41 | -16% |
| Diesel (L) | 71 973 | 5 020 | n/a | 472 | 8% |
| Aviation turbine fuel (L) | 400 | 28 | n/a | 3 | -51% |
| Total | 94 060 | 5 703 | 2 443 | 1 006 | 2% |

*Scope 1: Direct greenhouse gas emissions*
*Scope 2: Indirect emissions from the generation of purchased electricity*
*Scope 3: Indirect emissions from the extraction, production and transport of the specified fuel*
*Note that these figures do not include emissions produced by contractors*

**Objective:** Optimising fleet composition to meet business needs in a cost-effective and environmentally responsible manner.

| Indicator 20B | | | | | |
|---|---|---|---|---|---|
| Fleet | Fuel Type | 2000-01 | 2005-06 | 2006-07 | 2007-08 |
| Light vehicles | Number diesel vehicles | 573 | 478 | 439 | 342 |
| | Number petrol vehicles | 239 | 122 | 106 | 73 |
| | Number LPG vehicles | n/r | 1 | 1 | 1 |
| | Hybrid vehicles | n/r | 1 | 1 | 1 |
| | Total number vehicles | 812 | 602 | 547 | 417 |
| Trucks and light plant | Number diesel fleet trucks and light plant | 139 | 206 | 190 | 172 |
| | Number petrol fleet trucks and light plant | 11 | 6 | 5 | 4 |
| | Number LPG fleet trucks and light plant | n/r | 4 | 4 | 4 |
| | Total number fleet trucks and light plant | 150 | 216 | 199 | 180 |
| Heavy plant | Number diesel fleet heavy plant | 86 | 55 | 49 | 41 |
| | Number petrol fleet heavy plant | 0 | 0 | 0 | 0 |
| | Total number fleet heavy plant | 86 | 55 | 49 | 41 |

*A continued drop in vehicle and plant numbers (e.g. crawler tractor) is consistent with the Forests NSW commitment to rationalisation of the fleet to improve efficiency.*

**Strategic Area:** Environment **Forest Value:** Environmental services

**Objective:** Reducing the overall waste volume generated and the volume of waste disposed to landfill. Recycle appropriate wastes and use recycled content materials.

**Indicator Name:** Material consumption and recycling

**Indicator 21**

*A major review of procurement within Forests NSW is underway. This will result in improved ability to monitor consumables used by the organisation such as paper. A number of initiatives and improvements have been reported in this years Annual Report, including the introduction of recycled copier paper and implementation of an e-document/filing management system further reducing paper requirements.*

**Strategic Area:** Economic **Forest Value:** Marketing and sales

**Objective:** Meeting contractual obligations to customers

**Indicator Name:** Volume of timber harvested

| Indicator 22 | | | | |
|---|---|---|---|---|
| **Product** | **1999-00** | **2005-06** | **2006-07** | **2007-08** |
| **Sawlogs and veneer logs ($m^3$)** | | | | |
| Native forest hardwood sawlogs | 786 774 | 664 778 | 566 706 | 608 961 |
| Hardwood plantation sawlogs | 55 466 | 64 364 | 105 510 | 121 452 |
| Cypress pine sawlogs | 101 881 | 70 974 | 57 578 | 50 245 |
| Plantation softwood sawlogs | 1 648 790 | 1 964 487 | 1 955 399 | 2 100 251 |
| Plantation softwood veneer logs | 70 919 | 44 464 | 32 079 | 30 569 |
| Native forest hardwood veneer logs | 10 600 | 10 118 | 8 777 | 6 679 |
| Hardwood plantation veneer logs | 2 819 | 3 191 | 7 073 | 10 510 |
| Total sawlogs and veneer logs | 2 677 249 | 2 822 376 | 2 733 122 | 2 928 668 |
| **Poles, piles and girders ($m^3$)** | | | | |
| Native forest hardwood | 28 432 | 25 984 | 27 387 | 25 154 |
| Plantation hardwood | 5 479 | 11 535 | 11 768 | 14 286 |
| Total poles, piles and girders | 33 911 | 37 519 | 39 155 | 39 440 |
| **Round timber ($m^3$)** | | | | |
| Preservation plantation softwood | 56 422 | 27 706 | 68 472 | 87 859 |
| **Pulpwood (tonne)** | | | | |
| Native forest hardwood pulpwood | 503 546 | 504 259 | 551 955 | 531 089 |
| Plantation hardwood pulpwood | 82 660 | 39 433 | 64 431 | 75 067 |
| Plantation softwood pulpwood | 636 058 | 983 298 | 1 188 478 | 1 164 137 |
| Total Pulpwood | 1 222 264 | 1 526 990 | 1 804 864 | 1 770 293 |
| **Other** | | | | |
| Fencing/landscape/sleepers/firewood ($m^3$) | 7 575 | 30 833 | 50 419 | 25 116 |

**Strategic Area:** Sustainability **Forest Value:** Productivity

**Objective:** Maintain net area available for timber production, while conserving large areas for significant values and managing ecological functions

**Indicator Name:** Forest management intent

| Indicator 25 | | | | | | |
|---|---|---|---|---|---|---|
| | Land not available for harvesting (hectares) | | | Land available for harvesting (hectares) | | |
| **Forest Management Intent** | **1999-00** | **2006-07** | **2007-08** | **1999-00** | **2006-07** | **2007-08** |
| FMZ 1 Dedicated reserve | 33 500 | 22 936 | 25 636 | 0 | 0 | 0 |
| FMZ 2 Informal reserve – Special management | 322 500 | 245 440 | 169 658 | 0 | 0 | 0 |
| FMZ 3a Informal reserve – Harvest exclusion | 199 000 | 234 732 | 283 340 | 0 | 0 | 0 |
| FMZ 3b Special prescription | 54 500 | 22 936 | 21 508 | 13 500 | 17 472 | 82 171 |
| FMZ 4 General management native forest | 387 500 | 456 895 | 385 460 | 1 368 000 | 877 149 | 907 725 |
| FMZ 5 Hardwood planted forest estate* | 0 | 47 643 | 44 137 | 46 000 | 57 485 | 66 388 |
| FMZ 6 Softwood planted forest estate* | 102 600 | 156 221 | 154 507 | 201 720 | 233 407 | 233 621 |
| FMZ 7 Non forestry use | 8 000 | 6 808 | 4 846 | 0 | 0 | 0 |
| FMZ 8 Land for further assessment | 0 | 0 | 0 | 326 500 | 113 529 | 111 052 |
| Total forest estate | 1 107 600 | 1 193 609 | 1 089 091 | 1 965 720 | 1 299 042 | 1 400 958 |

** Includes State forest (including pre 1994 plantations), joint venture and annuities*

*The increase in the area available for harvest is due to a reassessment of FMZ categories in Western Region as a consequence of the outcome of the IFOA Nandewar/Brigalow negotiations.*

**Strategic Area:** Economic **Forest Value:** Marketing and sales

**Objective:** Increase the percentage of wood harvested going to high value products.

**Indicator Name:** Volume of timber harvested

| Indicator 23 | | | | |
|---|---|---|---|---|
| **Sawlog Product Mix from Hardwood forests (native and plantation)** | | | | |
| **Product** | **1995-96** | **2005-06** | **2006-07** | **2007-08** |
| Dry structural | 21% | 8% | 7% | 7% |
| Floorboards | 22% | 48% | 50% | 48% |
| Joinery/furniture | 1% | 5% | 6% | 6% |
| Decking & panelling | 4% | 3% | 4% | 6% |
| House framing | 30% | 15% | 14% | 14% |
| Pallets | 12% | 10% | 9% | 9% |
| High strength structural | 2% | 2% | 2% | 2% |
| Fencing/landscape | 8% | 9% | 8% | 8% |
| **Sawlog Product Mix from Softwood plantation** | | | | |
| House framing | 71% | 73% | 71% | 73% |
| Joinery/furniture | 2% | 2% | 2% | 1% |
| Decking/panelling | 1% | 4% | 5% | 6% |
| Floorboards/bearers/joists | 3% | 2% | 3% | 3% |
| Fencing/landscape | 7% | 8% | 7% | 6% |
| Other preservation | 1% | 4% | 4% | 4% |
| Unseasoned | 14% | 7% | 8% | 7% |

**Strategic Area:** Economic

**Forest Value:** Marketing and sales

**Objective:** Create maximum number of NSW Greenhouse Abatement Certificates from compliant plantations

**Indicator Name:** Carbon accounting*

| Indicator 24 | | | | |
|---|---|---|---|---|
| | **2004-05** | **2005-06** | **2006-07** | **2007-08** |
| Number of certificates created** | 166 005 | 541 200 | 538 471 | 694 935 |
| Area of plantation accredited for carbon trading | n/r | 27 019 | 23 515 | 26 864 |

**Note this indicator is not related to indicator 19, which reports net atmospheric carbon sequestration in planted forests.*

***Each certificate accredited represents one tonne of carbon dioxide removed from the atmosphere*

**Strategic Area:** Sustainability **Forest Value:** Productivity
**Objective:** Plantations, which maintain the timber supply strategy, effectively established
**Indicator Name:** Plantation establishment and survival

**Indicator 26**

| Year | Area planted (ha) | | Cost of age class at the end of subsequent Financial period ($'000) | | Percent requiring restocking after 1 year | |
|---|---|---|---|---|---|---|
| | Softwood plantation | Hardwood plantation | Softwood plantation | Hardwood plantation | Softwood plantation | Hardwood plantation |
| 1995 | 4 732 | 941 | n/r | n/r | n/r | n/r |
| 2005 | 6 547 | 267 | 15 998 | 1 852 | 6% | 0% |
| 2006 | 6 527 | 0 | 10 957 | 1 621 | 63% | n/a |
| 2007 | 7 702 | 0 | 11 598 | 3 316 | 26% | n/a |

*Third party investor plantings such as TEPCO are included*

*The method used to derive cost has been revised since last here. Rather than using the historical cost, the cost to date of the ageclass is reported*

**Strategic Area:** Sustainability **Forest Value:** Productivity
**Objective:** Plantation growth rates are at acceptable levels to achieve future productivity
**Indicator Name:** Mean annual growth in planted forests

**Indicator 27**

| Softwood Plantation | 2000-01 | 2006-07 | 2007-08 |
|---|---|---|---|
| Annual increment* ($m^3$) | 3 465 000 | 3 692 557 | 3 419 171 |
| Net stocked area** (ha) | 205 007 | 225 983 | 209 252 |
| Mean annual increment*** ($m^3$/ha/yr) | 16.90 | 16.34 | 16.34 |
| Hardwood Plantation# | 2000-01 | 2006-07 | 2007-08 |
| Annual increment* ($m^3$) | n/d | 359 829 | 357 479 |
| Net stocked area** (ha) | n/d | 26 408 | 26 227 |
| Mean annual increment*** ($m^3$/ha/yr) | n/d | 13.63 | 13.63 |

** Annual increment is the change in volume of the planted estate*

*** Net stocked area is the area of the estate where trees are planted (i.e. does not include roads, environmental exclusion areas, area awaiting regeneration etc) as at the end of the financial year*

**** Mean annual increment (MAI) is an indication of the productive potential of an average hectare within the estate. The silvicultural and harvesting regimes adopted can influence this figure considerably, so calculating MAI over a 15 year timeframe gives a more balanced figure.*

*# relates to post 1994 hardwood plantations only*

**Strategic Area:** Sustainability **Forest Value:** Productivity
**Objective:** 100% of surveyed harvest area effectively regenerated
**Indicator Name:** Native forest regeneration

**Indicator 28**

| Regeneration surveys | 1997-98 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| No. of regeneration surveys undertaken | n/r | 53 | 20 | 14 |
| Area surveyed (ha)* | n/r | 3 870 | 824 | 2 298 |
| Percent with effective regeneration | n/r | 74% | 63% | 94% |
| Expenditure on Silviculture and Inventory ($'000) | n/r | 4 342 | 4 321 | 4 521 |

** Does not report regeneration 'cypress release' surveys undertaken in cypress forests prior to harvesting*

**Strategic Area:** Sustainability **Forest Value:** Productivity
**Objective:** Harvesting of wood products is within allowable levels
**Indicator Name:** Sustainable yield*

**Indicator 29**

| Forest type | 1999-00 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Native hardwood forest | 95% | 83% | 93% | 93% |
| Native cypress forest | 97% | 96% | 96% | 96% |
| Softwood planted forest | 95% | 96% | 98% | 98% |
| Total Pulpwood | 102% | 94% | 89% | 89% |
| Native Pulpwood | 100% | 104% | 93% | 93% |

** within the scope of the wood supply and licencing agreements*

**Strategic Area:** Sustainability **Forest Value:** Maintainability
**Objective:** Maintain ISO 14001 & (AS 4708) standards
**Indicator Name:** Forest certification

**Indicator 30**

*During 2007-08 Forests NSW was audited on two occasions against the Australian Forestry Standard {AS 4708 (Int)—2003} and twice against the environmental management system standard ISO 14001. Regions audited against the Australian Forestry Standard were Northern and Monaro planted forest regions, as were Native forest Regions Central and Southern. In addition the auditors visited the Corporate Offices in Cumberland State forest during each audit.*

*An issue identified was that ESFM plans and schedules had not been finalised and this was subsequently achieved to the auditors' satisfaction. Another issue related to the Adverse Impacts Identification Register and Procedure, which is part of the environmental management system. Social and economic aspects had not been included and this has since been addressed. A number of minor issues (referred to as non-conformances) and observations were also reported and summary reports are available on request from Forests NSW.*

**Strategic Area:** Sustainability **Forest Value:** Maintainability
**Objective:** Meeting profitability and dividend targets as agreed with treasury and increasing management efficiency.
**Indicator Name:** Operating profit (after tax)

**Indicator 31**

| Year | 1999-00 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Value ($'000)* | 29 541 | 31 116 | 34 321 | 42 646 |
| $'000 per employee | 24.3 | 29.1 | 25.6 | 24.4 |

** exclusive of forest revaluation, capital grants, superannuation fund interest and abnormals*

# Forests NSW Regions


- Native Forest
- State Forest Native
- Hardwood Plantation
- Softwood Plantation
- Native Forest Region Boundary
- Planted Forest Region Boundary

- Corporate Office
- Business Service Centre
- Regional – Native
- Regional – Planted
- Forest Centre
- Nursery
- Workshop
- Research


## Acknowledgements

This report was written and compiled by Forests NSW. The project team was:

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An electronic version of this and previous Seeing Reports is available from the Forests NSW webpages:
www.dpi.nsw.gov.au/forests

Copies of this report can be obtained from Forests NSW Information Centre on:

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8806 Seeing Report
November 2008

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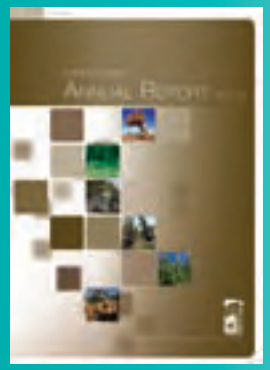

☐ Annual Report 2007–08

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