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seeing Report

SOCIAL, ENVIRONMENTAL
AND ECONOMIC REPORT 2006-07



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

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Our cover image highlights that we pass stored carbon in trees, forests and products everyday, without realising it.



Message from the Minister

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

The period covered by this report was marked by the drought and the environmental issues it creates, devastating bushfires and the continuing decline in the housing timber market – difficult conditions in anybody’s language.

That’s why it gives me, as the responsible Minister, particular pleasure to note the positive results that have been achieved and reported in this Seeing Report.

With certification under the Australian Forestry Standard and other initiatives outlined in the report, this sustainability report card clearly shows that our forests are indeed being managed sustainably. This has been and continues to be a major objective of the government.

Forests NSW plays an important role in meeting the targets identified in the *NSW State Plan*. Specifically, Forests NSW is contributing to the achievement of State Plan priorities for the economic development of regional areas, the environment and public access to parks and recreational facilities.

Despite the many challenges, Forests NSW economic performance continues to contribute to growing prosperity across the state. This was highlighted to me on my visit to the Tumut region, where some 8 500 hectares of valuable pine plantation were destroyed by fire in late 2006. By the end of this reporting period, 75% of the salvageable logs had been harvested in time to be processed by Forests NSW customers, reducing the impact of what would have been a very significant loss for Forests NSW and the local communities supported

by its plantations. I would like to thank the industry for their cooperation and assistance in achieving this result.

As a self insurer, Forests NSW continues to pursue the highest safety standards. The introduction of an improved Safety Management System, along with the rollout of specific safety programs were among the highlights this year. I fully support the strong commitment to safety demonstrated by the new Chief Executive of Forests NSW, Nick Roberts.

I congratulate Forests NSW and NSW Department of Primary Industries on the achievements outlined in this report and acknowledge the diligence and dedication shown in pursuing the aims of sustainable forest management.

Ian Macdonald MLC
Minister for Primary Industries

Salvage harvesting and re-establishment after 11 469 hectare plantation fire. Page 25.

Forests NSW blowring nursery introduce water efficient containerised seedling production. Page 17.

Celebrating ten years of forest sustainability reporting

This report marks the tenth year of sustainability reporting for Forests NSW. To us this is a most rewarding milestone to reach.

Our Social, Environmental and Economic (Seeing) Report has evolved over this period to be recognised as a world leader in sustainability reporting in the forest industry.

The Seeing Report is the only sustainability report for the Australian forest sector to be independently verified and registered under the 'Global Reporting Initiative' framework, the acknowledged leader in development of sustainability reporting framework.

As our reporting has evolved, so have the issues affecting natural resource management. The impact of climate change on forest business and how Forests NSW can assist in mitigating these effects are the key focus of this year's Seeing Report.

The principles of sustainability have their origins in forestry and Forests NSW is proud to continue this lead, highlighted by our certification to the Australian Forestry Standard (AFS) in December 2006. AFS certification assures customers that all aspects of our forest operations are covered by a continuous improvement process. It is a powerful indicator of our commitment to ecologically sustainable forestry.

A key aspect of sustainability is the protection of health and safety of our employees. Reducing workplace incidents receives the highest priority throughout Forests NSW. The Safety Management System has been embraced by our staff and a detailed system improvement plan is being implemented to further improve our safety performance.

Forests help mitigate the effects of climate change, but they are not immune from climate change impacts. As a result of drought and extremes in weather conditions, significant losses were recorded in pine plantations and cypress forests from major fires in Tumut and the Pilliga in December 2006. In line with our continuous improvement principles, we are currently reviewing fire management practices and resources and our role in fighting fires within the community.

Supporting our social and environmental targets is our economic performance and initiatives in developing new business opportunities. Forests NSW achieved a strong operating profit result in a slow market while also bearing the cost of the devastating fires. New business opportunities are being pursued in carbon trading, biomass and commercial seed sales, among other things.

Forests NSW commitment to social, environmental and economic sustainability is fundamental to its business and is at the core of the work carried out by all staff. We acknowledge the contribution of Forests NSW staff to the goals of the continual improvement process as part of their daily work.

Recovery from 97 197 hectare fire in white cypress forests. Page 25.

Githabul People gain native title within State forests. Page 14.

Tree Improvement Program capitalises on seed resource generating \$900 000 in revenue. Page 26.

814 hectare extension of Perricoota State Forest with significant ecological advantages. Page 17.



Barry Buffier
Commissioner for Forests
Director General, NSW
Department of Primary Industries



Nick Roberts
Chief Executive Officer
Forests NSW

Interpreting our Seeing Report

Sustaining all forest values now and into the future is a day to day challenge for responsible forest managers across the globe, with Forests NSW taking its role both as a leader in sustainable forest management and reporting to the community very seriously.

This sustainability report, known as the Seeing Report for the last ten years, is evidence of this commitment and is produced as part of an integrated set of documents. The set also includes Forests NSW Annual Report and a Facts and Figures booklet.

This year's theme of climate change is not just topical, but also closely associated with sustainability and forestry. Forests are carbon sinks, assisting in reducing greenhouse gases and combating climate change. As evoked by our Seeing Report cover, we pass by stored carbon every day without realising it.

During the year the Forestry and Forest Products Committee supported a member of Forests NSW staff to attend an international meeting in Japan. Delegates from around the world were interested in the NSW emissions trading scheme, being the first one in the world. The Seeing Report was well received by the delegates, some considering this model for their own sustainability reporting. Particular interest was in the external verification undertaken every two years, including this year's report, demonstrating openness and transparency.

We report against four key result areas of our business:

Social: building partnerships and generating economic and social benefits within the community, especially for rural and regional communities; developing and valuing our staff (Indicators 1-10);

Environmental: ecologically sustainable forest management (ESFM), protecting and enhancing environmental values and processes and minimising our ecological footprint; helping to meet the demands of future markets for environmental services (Indicators 11-21);

Economic: ensuring an adequate return from the marketing of wood products from the state's native forests and plantations; developing innovative commercial products and services to promote investment in new planted forests and the environmental values of forests (Indicators 22-24); and

Sustainability: managing State forests for the long-term and retaining opportunities and resources for future generations to meet their needs and expectations, while providing for the present (Indicators 25-31).

These four key result areas are supported by ten forest values selected on the basis of:

- values recognised corporately;
- input from representative stakeholders groups;
- input from staff;
- reference to internationally recognised methods of measuring progress towards sustainable forest management through triple bottom line accounting; and
- consistency with state (e.g. Forest Agreement), national (e.g. State of the Forest) and international (e.g. Montreal Process) reporting requirements.

Forests NSW has set targets against these forest values. Our performance is measured using a range of 31 indicators which forms the core of the Seeing Report. The 2006-07 Report Summary on page 6 shows an overview of these values, targets and indicators.

What we report on

The indicators used in this report are aimed at developing an understanding of our organisation, our decisions, policies and management practices that impact on the forests under our care, the products and services that are directly supplied from State forests, the consequences of these for the industries dependant on them and their importance to other stakeholders.

Information on our policy framework, governance structure, codes of practice, the regulation of forestry activities and full details of Forests NSW reporting framework can be found on Forests NSW webpages at: www.dpi.nsw.gov.au/forests

The relevance of indicators to our social, environmental and economic performance has changed over time and, as part of the process of continual improvement, Forests NSW will revise our suite of indicators where appropriate, to more closely align them with the recently revised International Montreal Process Criteria and Indicators and Global Reporting Initiative (GRI) 3 Sustainability Reporting Guidelines.

Symbols



TARGET ACHIEVED OR MAINTAINED



ON TRACK TO MEETING TARGET



TARGET NOT ACHIEVED AND ACTION REQUIRED

N/A: NOT APPLICABLE

N/D: NO DATA AVAILABLE

N/R: NOT REPORTED AS AN INDICATOR



Forests NSW is committed to having the Seeing Report verified by external, independent auditors biennially to give the public confidence in the accuracy of the information provided. This year's report has been verified by DNV using the AA 1000 Assurance Standard. Details of their verification are on page 31.

2006-07 Report Summary

	Forest Value	Target	Indicator	Results	Performance
SOCIAL	Community Benefits	Provide a wide range of benefits that meet community needs and expectations.	1. Social responsibility	\$126 918 in corporate sponsorships and other community services.	✗
			2. Public participation	905 regional community forums attended.	🕒
			3. Recreation and tourism	232 recreational facilities and 244 formal events.	✓
			4. Research and education	\$7 million spent on research.	🕒
				\$4.2 million spent on education.	🕒
			5. Regional employment	6 000 people estimated to be employed directly through forest industries; estimated 15 000 jobs generated in NSW through indirect employment in total.	🕒
	6. Other forest products	Continued sustainable provision of forest products of value to society: water, opportunities for grazing and beekeeping, seeds and seedlings, firewood with a total value of \$6.5 million.	✓		
	Staff	Provide a safe and forward-thinking workplace with management that meets staff expectations.	7. Quality of management	1 045 people directly employed by Forests NSW; Aboriginal/Torres Strait Islander employees represented by 2.2% of total staff.	🕒
			8. Management and training	\$2.26 million spent on training.	✓
				9. Health and safety	75 OHS meetings held; Lost Time Incident rate of 16.4; 218 voluntary audits; 634 risk assessments carried out.
Cultural Heritage	Conserve and protect cultural heritage.	10. Management of cultural heritage	Additional 62 Forests NSW staff and contractors trained in cultural heritage awareness.	✓	
	Forest Value	Target	Indicator	Results	Performance
ENVIRONMENTAL	Biodiversity	Maintain the extent and distribution of native species of flora and fauna, across the estate.	11. Extent of forest type	Total forest estate managed approximately 2 492 652 hectares.	✗
				1 997 896 hectares of native forest estate.	✓
			• Native forests • Planted forests	494 311 hectares managed for the establishment, management and protection of planted forest. Within this area, 262 480 hectares is established plantation.	🕒
	12. Native forest structure	22.7% Regrowth, 24% Mature, 4.1% High Conservation Value Old Growth, 3.9% Rainforest and 45.3% unassigned.	✓		
	13. Surveyed species	41 targeted species found in surveys prior to harvesting, with 2 256 sightings.	✓		
	Forest Health	Manage healthy forests.	14. Pest animals and weeds	\$1.36 million spent on feral animal and weed control.	🕒
15. Plantation health			8% of hardwood plantations; and 48.7% of all softwood plantations with significant levels of insect infestation, fungal attack, frost damage or nutrient deficiency that could cause deleterious affects.	✗	
			16. Fire fighting and prevention	24% of State forests treated by fuel management strategies; and \$11.2 million spent on fire prevention and control.	✓ 🕒

	Forest Value	Target	Indicator	Results	Performance	
ENVIRONMENTAL	Soil and Water Quality	Maintain clean healthy streams and stable soils.	17. Protection of soil and water	125 554 hectares (5%) forest assessed for soil erosion hazard, which represents 100% of the area where operations are planned.		
	Compliance	Compliance through effective harvest planning and operations.	18. Regulatory compliance	Over 3 800 internal compliance check sheets completed with over 330 000 potential items checked.		
				Three PINs (penalty infringement notice) issued; and no prosecutions by regulators.		
				2 256 flora and fauna surveys and 252 soil and water surveys undertaken in native forest.		
	Environmental Services	Expand our contribution to reducing the greenhouse effect. Improve our eco-efficiency.	19. Carbon sequestration	4.2 million tonnes of carbon dioxide (CO ₂) equivalent sequestered by hardwood and softwood plantations.		
				20. Energy consumption	Over 8 900 tonnes of CO ₂ emitted through electricity and fuel consumption; and	
					1.2% of electricity sourced from green power.	
21. Material consumption and recycling	75% of waste recycled or reused; 24% of product purchased with recycled content.					
	Forest Value	Target	Indicator	Results	Performance	
ECONOMIC	Marketing and sales	Ensuring an adequate return, while developing innovative commercial products and services.	22. Volume of timber harvested	2.73 million m ³ of sawlogs; includes veneer		
			23. Product mix of timber harvested	1.8 million tonnes of pulpwood harvested.		
			24. National Greenhouse Abatement Certificates created	No significant change in proportion of hardwood and softwood sawlogs processed into high value products.		
				Over 530 000 National Greenhouse Abatement Certificates created.		
100% (23 515 hectares) of eligible plantation accredited for carbon trading.						
	Forest Value	Target	Indicator	Results	Performance	
SUSTAINABILITY	Productivity	Managing State forests for the long term.	25. Forest management*	Just under 1 300 000 hectares available for timber production on State forests;		
				503 107 hectares in Dedicated and Informal Reserves on State forests; and		
				690 502 hectares of forest managed for ecological functions.		
			26. Plantation establishment	Over 6 500 hectares of softwood plantation established; and		
				37% of softwood plantation area successfully established, one year after planting.		
	27. Mean annual growth of planted softwood forest	Mean annual growth increment for softwood plantations of 16.3 m ³ /ha/yr.				
	28. Native forest regenerated	63% of surveyed harvested native forest area successfully regenerated based on 20 regeneration surveys.				
	Maintainability		29. Harvesting within agreed targets	Actual annual yield of high quality sawlogs as percentage of allowable volume:		
				• 93% from native hardwood forests		
				• 98% from all softwood plantations		
30. Forest certification	Certification to the Australian Forestry Standard (AS 4708 (int)-2003).					
31. Trading profit	\$28 million trading profit generated.					

*Amendment to the area has occurred as a result of reallocation of forest types to appropriate FMZ categories

Do you know Forests NSW?

The Forestry Commission was created in 1916 to manage New South Wales State forests. Currently it delivers its functions under the trading name Forests NSW.

Forests NSW operates as a public trading enterprise, in effect a business run for the people of NSW, within NSW Department of Primary Industries (NSW DPI). Our purpose is to manage NSW State forests to provide a wide range of functions now and into the future.

Our management objectives, as identified by Forests NSW statement of affairs, are:

- to sustain our financial performance;
- to deliver ecologically sustainable management of natural resources;
- to provide accountability to the community; and
- to support our people.

Our business

Our overall strategic direction is consistent with NSW DPI's Corporate Plan 2005-2008 and its vision statement "profitable and sustainable primary industries building vibrant communities".

Forests NSW role is focused on our primary objective of ensuring the sustainable supply of timber to processing industries. Concurrently Forests NSW has forest stewardship functions, which include the protection of biodiversity, maintenance of soil and water values and protection of cultural heritage values in State forests, including the provision of community amenities. These are all accomplished while running a profitable business for the people of NSW.

These objectives have been progressed through Forests NSW Corporate Business Strategy 2006-2007, which identified key strategic directions:

- a focus on the core business of sustainable forest management and timber supply through three key businesses, namely planted forest operations, native forest operations and forest business and support services;
- as a public trading enterprise, financial viability is the first priority for the organisation whilst also meeting stakeholder performance targets and customer expectations;

- actively pursuing and assessing new business on their ability to meet profitability objectives and targets and to attract investors and third parties;
- matching social and environmental projects to government funding opportunities and identifying social and environmental services that are provided for the public good;
- integrate with, and capitalise on, government policy and directions; and
- maintained focus on safety and implementation of initiatives to ensure adoption of best practice health and safety standards.

Exceeding regulatory requirements

Australia's national forest policy statement, signed by the states and territories and the Commonwealth, seeks to maintain an extensive and permanent native forest estate which will be managed for the broad range of commercial and non-commercial benefits and values it can provide for present and future generations.

As the New South Wales Government's forest steward, Forests NSW is committed to operating our business and managing forests in a way that is environmentally sensitive, socially beneficial and economically viable.

In achieving this goal, Forests NSW not only meets but actually exceeds regulatory requirements. This achievement is evidenced through Forests NSW accreditation to the Australian Forestry Standard, internationally recognised under the Program for Endorsement of Forestry Certification Standards (PEFC).

Additionally, accreditation of our Environmental Management System to ISO 14001, which uses the four-step continual improvement cycle – plan-do-check-act – means that we now have an effective way of identifying and implementing improvement opportunities over time.

Forests NSW operates across NSW with ten main regional centres and a Sydney office at West Pennant Hills in Cumberland State Forest. The map of NSW on page 38 illustrates the distribution of State forests and Forests NSW management centres. More about our structure is detailed in our 2006-07 Annual Report.

Changing structure

Forests NSW continues to adjust to economic constraints and a reduced forest estate, by utilising innovative technology, increased training and up-skilling of staff. As a result of these factors, a new organisational structure was introduced during the past year.

Forests NSW Hunter and Mid North Coast Native Forest Regions were amalgamated into Central Region, while the South Coast and South East Regions became Southern Region (see map on page 38). These changes reflect a world of better information technology and improved transport.

Forests in NSW and Australia

There are 164 million hectares of forests in Australia covering 21% 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 8.2 hectares of forest per person, with the world average at 0.6 hectares per capita.

Forests NSW manage just under two million hectares of native forests. 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. Of this area, approximately 2.3% is harvested annually to supply timber to industry and the community.

In addition, Forests NSW manage approximately half a million hectares of forest plantations, which incorporates both

softwood and hardwood areas. The majority of the softwood plantation estate is comprised of radiata pine plantations in the highlands to the west of the Great Dividing Range and the hardwood areas consist of eucalypt plantations, predominantly located on the NSW north coast.

About 9% of total forests in NSW are managed as multiple use forests (allowing for harvest), with more than 16% being managed as nature conservation reserves, within State forests. The remaining forests are managed as leasehold and private tenures. The New South Wales Government is currently the third largest plantation owner in Australia, with a significant amount of timber sourced from the plantation estate managed by Forests NSW.

Most of the consumer demand for sawn timber and panel board products in NSW is met from our own multiple use forests. Meeting domestic demand for timber from local sources is viewed by Forests NSW as a positive contribution to the sustainability of the world's forests, achieved through best practice forest management and regulation in NSW. These harvested and regrowing forests also assist with the challenge of climate change by acting as carbon sinks.

Further statistics about Australia's forests are available at the Australian Department of Agriculture, Fisheries and Forestry website at: www.daff.gov.au

Forest NSW finances

	2007 \$'000	2006 \$'000	2005 \$'000	2004 \$'000	2003 \$'000
Revenue	270 550	259 747	247 546	240 634	219 515
Profit					
Operating profit	28 037	31 116	36 819	37 860	23 959
Significant items and biological assets revaluation	-166 357	-19 696	-29 163	17 392	-11 805
Operating profit (before tax)	-138 320	11 420	7 656	55 252	12 154
Distribution to Government					
Dividend payable	16 000	26 322	32 544	13 096	4 162
Capital expenditure	45 039	31 451	31 531	36 315	32 235

Forests NSW productivity measures	2007	2006	2005	2004	2003
Indicator					
Employee numbers (30 June)	1 045	1 069	1 039	1 112	1 146
Timber sales by volume (m ³)	4 659 225	4 414 591	4 338 255	4 489 397	4 133 719
Timber sales per employee (m ³)	4 458	4 130	4 175	4 037	3 607
Timber sales/employee (\$'000)	123	126	123	118	102

Social

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

Forest Value	Indicator	Results	Performance
Community Benefits	1. Social responsibility	9 volunteer programs with 138 participants.	🕒
	2. Public participation	905 regional community forums attended;	🕒
		99% of complaints resolved.	✅
	3. Recreation and tourism	232 recreational facilities managed;	✅
		244 formal events; 63 agreements with groups.	✅
	4. Research and education	\$7 million spent on research; \$4.2 million spent on education, over 4 500 participants in education.	🕒
5. Regional employment	Estimated 5 952 people employed with over 15 000 indirect jobs generated.	🕒	
Staff	6. Other forest products	Continued provision of products such as seed.	✅
	7. Quality of management	1 045 people directly employed by Forests NSW; over \$1.10 million on human resource management.	🕒
	8. Management and training	\$2.26 million on training, with 3 030 staff and contractors trained.	✅
Cultural Heritage	9. Health and safety	Lost Time Incident frequency rate was 16.4, with the number of Lost Time Incidents at 26.	❌
	10A. Protection of cultural heritage	96 new sites of Aboriginal cultural significance protected.	✅
	10B. Cultural heritage training	62 additional Forests NSW employees and forest workers were trained in cultural heritage awareness.	✅

✅ TARGET ACHIEVED OR MAINTAINED

🕒 ON TRACK TO MEETING TARGET

❌ TARGET NOT ACHIEVED AND ACTION REQUIRED

62

additional Forests NSW employees and forest workers were trained in cultural heritage awareness.

Living, working, playing forests

Forests NSW recreation and tourism policy and strategy document; *Living, working, playing... forests 2005-2009* was developed following a thorough consultative process. It continues to provide a successful framework for recreation, sport, tourism and training within State forests.

Living together

Forests NSW maintains dialogue with stakeholders by participating in meetings, giving presentations and being represented on committees. The pie chart on page 12 illustrates these engagements along with the range of community forums participated in over the past year. At a regional level Forests NSW ESFM draft plans are publicly exhibited prior to final review and implementation, giving stakeholders an opportunity to have their say.

Consistent with a need for continued improvement, Forests NSW has developed an improved system to identify new stakeholders and update existing stakeholder information. This system enables efficient and systematic engagement with stakeholders in a range of forest management issues at various levels, such as prescribed burns. Forests NSW regional offices continue to be the first point of contact for stakeholders' concerns, with an estimated 31 000 enquiries handled. It is these regional offices that dealt with the bulk of the 198 complaints received, all but one of which were successfully resolved.

The Githabul People of north-eastern NSW gained recognition of their native title rights in NSW with the registration of their indigenous land use agreement. The agreement with the NSW Government, including Forests NSW, relates to over 112 000 hectares of national parks and State forests in the Kyogle, Woodenbong and Tenterfield area. This means that the Githabul People will be consulted on the management of 13 State forests, including agreement on how some of the native title rights will be exercised, such as restrictions on hunting.

Our classroom

Forests NSW continues to deliver formal education programs to teachers and pupils, with a total expenditure on public education of \$4.2 million in 2006-07. This program aims to show the wonders of State forests and to explain ESFM, with 5 853 school pupils participating in activities held in Cumberland and Strickland State Forests.

Five of Forests NSW well trained fire fighters qualified as Division Commanders and assisted in controlling major fires in north-western United States. This is the fourth time in the past six years that Forests NSW has provided assistance to the US.

Staff working in softwood plantations around Bombala continue to set the example of working safely while maintaining a strong commercial focus. The region has not recorded any lost time due to accidents for the past four years (250 000 hours). Safety continues to be a high priority for Forests NSW, with a continued focus and evolution of its Safety Management System, under the banner "Think Safe, Act Safe, Stay Safe."

The WorkCover NSW audit of Forests NSW Safety Management System in February 2007 resulted in the renewal of Forests NSW self insurer's licence, with a few improvement areas identified. To implement these, a Safety Management System Improvement Plan was developed, forming the basis of a continuous improvement process in health and safety and injury management.

Working together

Across the organisation, a total of 493 days of volunteer work was carried out by 192 participants. This highlights a trend towards fewer participants putting in more time in fewer programs. The 'Communities in Forests' program, set up in 2004 by Conservation Volunteers Australia and Forests NSW to implement on-ground conservation work in State forests across NSW, has seen nearly 500 volunteer days contributed to date. Recent efforts include the construction and maintenance of a multiple-use recreational trail through Tumut State Forest on the edge of the Tumut township, where volunteers removed rubbish, planted more than 300 trees and constructed fences.

The introduction of conservation hunting in approved State forests saw the removal of 5 348 feral animals during this reporting period. Only licensed and accredited hunters who have obtained written permission may assist with the control of introduced species such as pigs, goats, foxes and rabbits in State forests. Conservation hunters are identifiable through their blaze orange caps or vests. Forests NSW works closely with the Game Council of NSW to ensure that hunting is practiced in a safe and ethical manner.

Playing forests

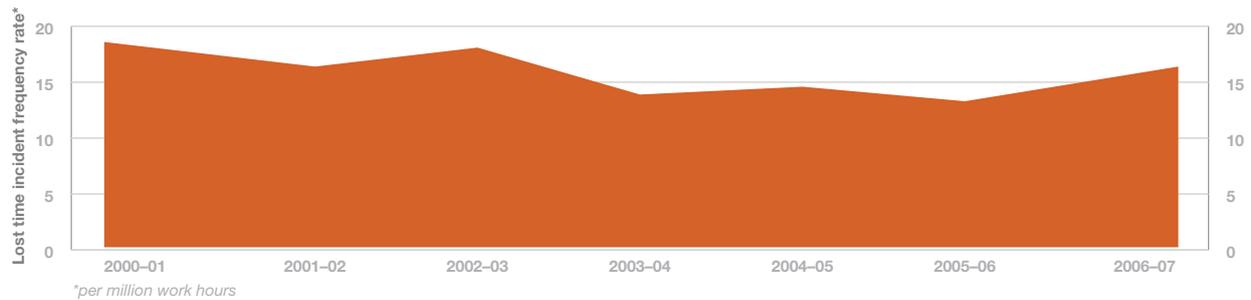
State forests offer the public a wide range of opportunities for recreation, from camping to rogain (long distance cross-country navigation). To help the public enjoy State forests, a revised edition of the popular *Best Bush Map, a guide to recreational opportunities on all public lands in NSW*, was published this year jointly by Forests NSW, other land management agencies and Tourism NSW.

The biennial Forest Fair was held at Cumberland State Forest, West Pennant Hills in Sydney on Sunday 15 October 2006. Over 3 000 people visited the forest and enjoyed the wide range of activities available including woodworking demonstrations, ranger-led walks, photography competition awards, an orienteering course, live entertainment and children's activities.

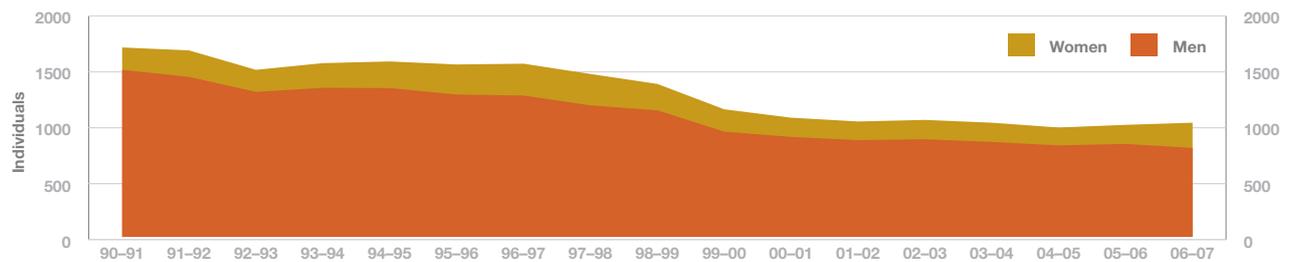
Road works ahead

Forests NSW undertake projects to build and maintain various types of roads to effectively manage State forests and provide important access for the public. One such project involved the reconstruction and sealing of the Brindabella Road in Hume Region, including the conversion of 4.7 kilometres of gravel road to a two-lane sealed road.

Lost time incident frequency rate

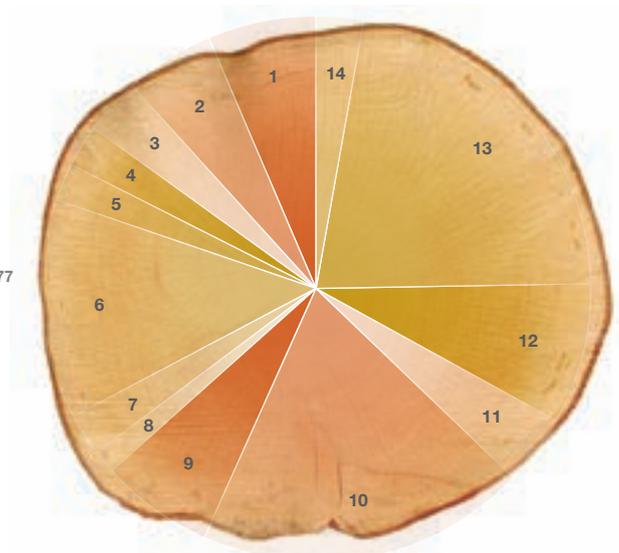


Employee numbers and gender



Forests NSW participation in public forums

- 1 Catchment management – 57
- 2 Community bushfire management – 48
- 3 Community / school / education – 29
- 4 Conservation / environmental – 24
- 5 Cultural management – 18
- 6 Feral animals / noxious weed control – 119
- 7 Flora and fauna management – 23
- 8 Forestry / forest practices – 12
- 9 Industry / stakeholders – 61
- 10 Local emergency management – 177
- 11 Local government – 37
- 12 Other – 76
- 13 Recreation/tourism – 198
- 14 Regional planning – 26





In the business of staying safe and healthy

Many health and safety incidents arise simply out of poor postural practices. Historically Forests NSW has dealt with these issues through courses on lifting and carrying. As any physiotherapist will tell you, such issues are better approached through a behavioural change program that can have wide ranging health and safety benefits.

A program called Posture @ Work was held over a period of six weeks. The program was presented as a series of short interactive videos combined with simple but effective postural exercises and movements designed to improve the way staff move through their daily work routine. The aim was to minimise health and safety incidents by improving postural alignment.

The program focused on how to strengthen and position the body in a way that minimises injury both at home and at work. This pro-active safety program encouraged staff to incorporate postural exercises into their daily routine and record their progress. Some staff were so enthusiastic that entire offices could be seen doing their 10 minute exercise programs together.

In this very hands-on program, musculoskeletal problems that might lead to injury in the workplace (including poor postural alignment, muscle imbalances and joint dysfunction) were identified individually and monitored over the program. Improvements were noted by almost all participants.

The program also included segments on setting up an ergonomic work station and safe working procedures for being in and around vehicles, using personal digital assistants (PDAs) safely and applying postural alignment to heavy manual handling tasks.

This is just one example of the 32 health and safety training programs provided to staff this year. The implementation of these programs represents 1 629 staff and contractor training days.

While the Posture @ Work program has highlighted a new approach to key health and safety issues, this year saw an increase in the lost time incident rate to 16.4 per million work hours. Forests NSW Chief Executive has noted this and has sought a commitment from staff to reduce this result for 2007-08.

A 44% increase in risk assessments reflects staff commitment to the revised Safety Management System implemented during the year. Forests NSW is confident that the combination of a sound Safety Management System and a positive attitude to safety from staff will lead to improved safety performance over the coming year.

Aboriginal consultation – Yuin Nation and Gulaga Mountain

Aboriginal people are the custodians of their own culture. This philosophy is firmly embedded in Forests NSW policies and guidelines for the management of Aboriginal cultural heritage in State forests.

Forests NSW recognise that Aboriginal communities have specific interests in their heritage. Staff spread across the state document and implement local arrangements agreed with Aboriginal communities for the management of cultural heritage in State forests.

The adequacy of this consultation and management process was tested in early 2007, when Forests NSW south coast staff faced criticism and protest about timber harvesting near Gulaga Mountain, a place of considerable cultural significance for Aboriginal people.

Forests NSW faced accusations of ignoring the rights and opinions of Aboriginal people of the Yuin Nation by commencing harvesting in adjacent State forest twelve months after the NSW Government had handed back ownership of Gulaga Mountain, which is now managed as a national park, to the Yuin People. Local newspapers ran allegations that the Yuin People had not been consulted about timber harvesting proposals.

A number of concerned Aboriginal people signed a petition requesting Forests NSW cease harvesting. Although Forests NSW staff had discussed the harvesting proposals with local Aboriginal groups, media reports were providing a confused message about what was actually occurring.

When staff met with the Yuin People again, including the local Aboriginal lands councils, community and elder groups, maps were used to clarify the area being harvested and identified the mountain within the national park, was not being logged.

The interest in this emotive issue had drawn in Aboriginal people with links to the area, including people living away from the region. As part of additional meetings, Forests NSW female Aboriginal staff also spoke with Aboriginal women about their particular interests concerning Gulaga.

After outlining processes to protect environmental and cultural values, and answering questions about the operation, Yuin Elders agreed that Forests NSW continue the harvesting operation. The Elders conveyed their trust in the accuracy of information provided by Forests NSW and believe that dialogue and information sharing will continue openly in the future.

Local staff gained valuable lessons during this period, including additional contacts for future consultations. As part of continuous improvement, staff in the region were able to strengthen the consultation process to ensure it is inclusive and enables matters of significance to be discussed and appropriate management implemented.



36°18'24"S 150°1'9"E

YUIN NATION
Gulaga Mountain

Forests NSW consultative approach resulted in the Aboriginal people with links to the area being satisfied that the harvesting was not of concern to them. It was an opportunity to implement the protocol Forests NSW has in place to address stakeholder concerns.

Environmental

4.2 million tonnes of CO₂ sequestered by plantations

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

Forest Value	Indicator	Results	Performance
Biodiversity	11. Extent of forest type	Total forest estate managed 2 492 652 hectares.	✗
	11A. Native forests	1 997 896 hectares of native forest estate.	✓
	11B. Planted forests	262 480 hectares of established plantations.	🕒
		231 830 hectares of future plantation and protection. 6 527 hectares of new plantation established.	🕒
	12. Native forest structure	22.7% Regrowth, 24.0% Mature, 4.1% High Conservation Value Old Growth, 3.9% Rainforest and 45.3% unassigned.	✓
	13. Surveyed species	41 targeted species found with 2 256 sightings.	✓
Forest Health	14. Pests and weeds	\$1.36 million spent on feral animal and weed control.	🕒
	15. Plantation health	Estimated 8% of hardwood plantation and 51% of softwood plantation affected by significant health issues.	✗
		Less than 3.9% of State forests burnt by wildfire;	🕒
	16. Fire fighting and prevention	24% of State forests treated by fuel management strategies;	✓
\$11.2 million spent on fire prevention and control.		🕒	
Soil and Water Quality	17. Protection of soil and water	5% (125 554 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% compliance rate; 3 fines issued; 0 prosecutions.	🕒
Environmental Services	19. Carbon sequestration	4.2 million tonnes of CO ₂ sequestered by plantations.	✓
		Estimated 8 989 tonnes of CO ₂ emitted;	✓
	20. Energy consumption	1.2% of electricity sourced from green power;	✗
		Reduced fleet size by 9.8%;	✓
		Reduced fuel consumption by 14%;	✓
		Reduced fleet CO ₂ emissions by 15%.	✓
21. Material consumption and recycling	75% of waste recycled or reused; 24% of product purchased with recycled content.	✓	

✓ TARGET ACHIEVED OR MAINTAINED

🕒 ON TRACK TO MEETING TARGET

✗ TARGET NOT ACHIEVED AND ACTION REQUIRED

Policy and practice

Our policy

Forests NSW has an Environmental Policy in place to conserve and advance forest values such as biodiversity, forest productivity and carbon sequestration. Forests NSW will achieve Ecologically Sustainable Forest Management by managing forests for the benefit of current and future generations, while ensuring that our management complements forest management on other tenures and working with others to develop a sustainable forest industry.

The future

Forests NSW successfully trialed specially bred containerised radiata pine seed stock in 2006. The seed is to be used to replant areas of plantation pine burnt during the Billo Road fires near Tumut in late 2006. Containerised pines have numerous advantages over traditional methods, including water efficiency and a long planting season. We estimate that 100Mg/L of water will be saved in our nursery operations next year, which is equivalent to over 650 full baths of water.

Forests NSW pioneering involvement with carbon sequestration research has not been limited to how much carbon forests act as a 'sink', but has also looked at how long the carbon remains fixed in wood products. New, significantly lower decomposition rates for wood products in landfills were reported in a paper authored by Forest Resources scientists (see figure on page 21).

Responsible management

Forests NSW uses ecological burning as one of a range of tools to rehabilitate wetland areas, increasing plant diversity and foraging habitat for a range of waterbirds.

Forests NSW has used the extremely dry conditions in the Murray River catchment to treat areas of the Moira Lake and Reed Beds wetlands with fire to remove the locally invasive giant rush, *Juncus ingens*. Other initiatives under 'The Living Murray' program include substantial infrastructure to provide a more natural wetting and drying cycle to these wetlands. In a significant development, the acquisition of Toorangabby property, will allow the periodic flooding of the 31 000 hectares of Pericoota/Koondrook State Forests near Deniliquin ensuring the health and productivity of this forest ecosystem.

A study on koala populations was recently completed in the Pilliga State Forest near Baradine. Koalas were radio-tracked for one year. Several months after the study began; areas were selectively harvested for white cypress, within a white cypress/mixed eucalypt forest type. Koalas continued to occupy all or part of their previous home-ranges after selective harvesting, and home-range sizes remained similar between logged and unlogged areas, suggesting that selective harvesting for white cypress does not adversely affect koala populations.

Monitoring of bats by Forests NSW in a derelict mine in Mumbulla State Forest near Eden shows the trend in the number of bats roosting in the mine during spring when bats congregate. Changes in these populations reflect changes to the health of bats in the surrounding forest. Annual monitoring is showing positive trends of a stable population pattern, without large fluctuations. Continued monitoring will allow Forests NSW to track the potential impact of forest management practices.

Forest NSW continued to be proactive in carrying out internal audits under the four tiered audit system to ensure

environmental compliance with regulatory and Forests NSW requirements. The first tier audit reveals a 99% compliance rate of the elements checked. The table below details these outcomes along with the Penalty Infringement Notices issued by regulatory authorities.

Working in partnership

Forests NSW has been closely involved with the development of the Firewood Association of Australia (FAA) Certification Scheme. The scheme provides independent certification of NSW red gum firewood. Certified members must source firewood in accordance with sustainable management principles to protect biodiversity and ecosystem processes.

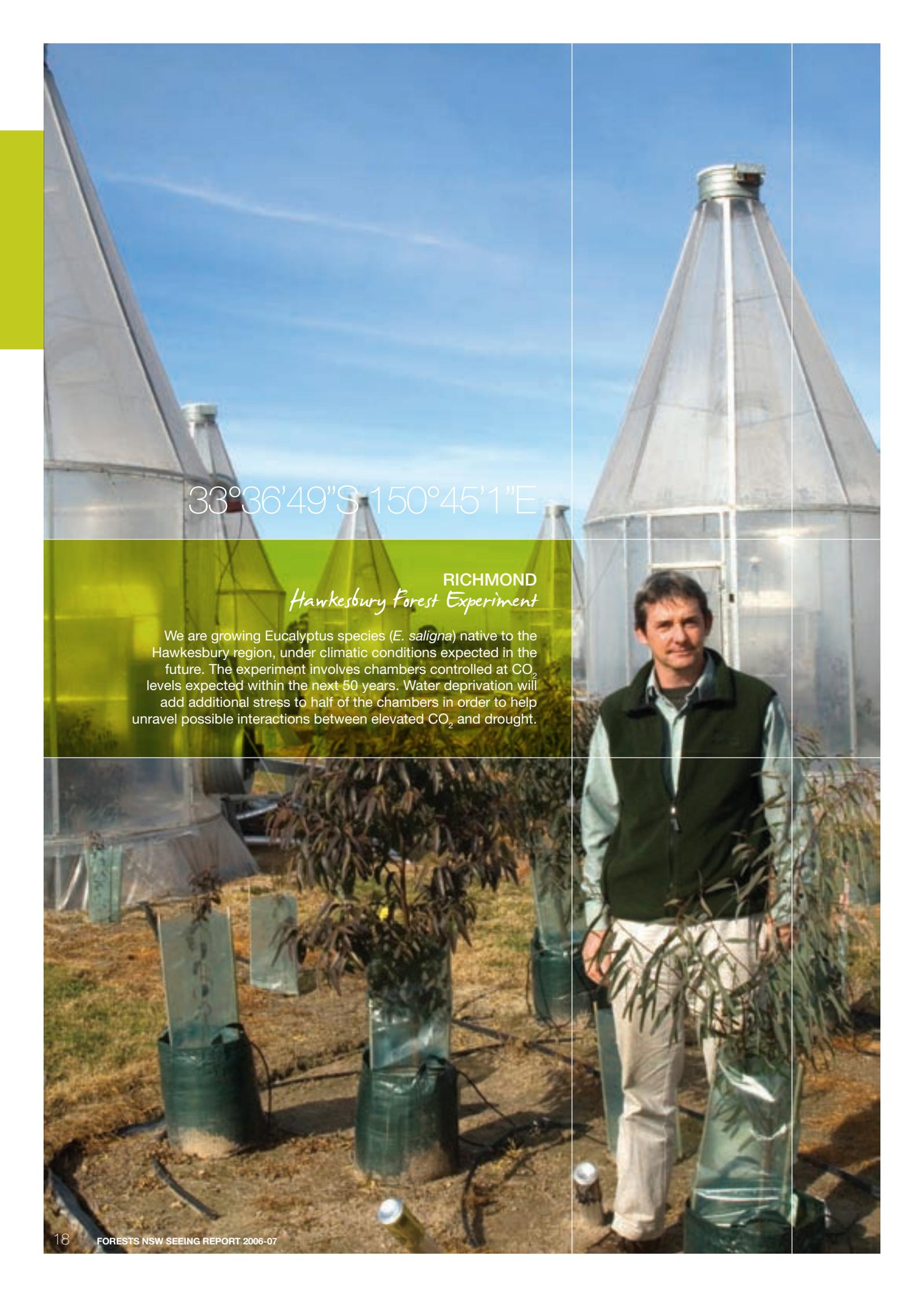
To safeguard environmental and economic values the Cooperative Research Centre (CRC) for Forestry is working with Forests NSW in Greenhills State Forest, a multi-age pine plantation near Canberra. The project is developing hazard and risk assessment techniques and robust management systems to reduce the probability of loss of production and ensure sustainable production through multiple rotations.

The techniques developed will be used by Forests NSW Health Surveillance Unit. The unit is also developing and trialing a computerised real-time sketch mapping system which will ensure that Forests NSW remains an Australian leader in this field. The importance of this work is highlighted by the marked increase in occurrence of the Monterey Aphid (*Essigella californica*) from 15% in 2004-2005 to 40% this year. This particular pathogen agent does not kill Radiata Pine, but does reduce productivity. Research supported by Forests NSW into biological control agents is underway and results are expected within four years.

Environmental compliance

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Potential compliance checks covered by check sheets*	220 470	129 085	134 702	148 613	124 787	139 528	134 137	295 452
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
Number of fines issued to Forests NSW by regulators	3	5	3	1	1	1	4	3

* relates to Forest NSW Tier 1 audits only



33°36'49"S 150°45'1"E

RICHMOND
Hawkesbury Forest Experiment

We are growing Eucalyptus species (*E. saligna*) native to the Hawkesbury region, under climatic conditions expected in the future. The experiment involves chambers controlled at CO₂ levels expected within the next 50 years. Water deprivation will add additional stress to half of the chambers in order to help unravel possible interactions between elevated CO₂ and drought.

How will changes in CO₂ and climate affect our business?

With a continuing rise in the atmospheric CO₂ concentration inevitable, understanding the impact of this on Australia's forest and woodland ecosystems is pivotal to ecologically sustainable management of State forests. Craig Barton, a research officer with Forests NSW, is currently working on a joint initiative to better understand how trees respond to these changes.

Craig has been responsible for the reconstruction and running of the centre-pieces of this joint project. The twelve CO₂ temperature and moisture controlled chambers are large enough to hold a tree up to three stories tall. The chambers came from Sweden, where they have already provided data for that part of the world and are the first of their kind in the southern hemisphere.

There are several accepted effects of rising atmospheric CO₂ on plants that can potentially impact Australia's Eucalyptus species. Plants tend to grow faster and use water more efficiently, but on the other hand if canopies are denser more rainwater will evaporate back into the atmosphere, leaving less to penetrate into the ground.

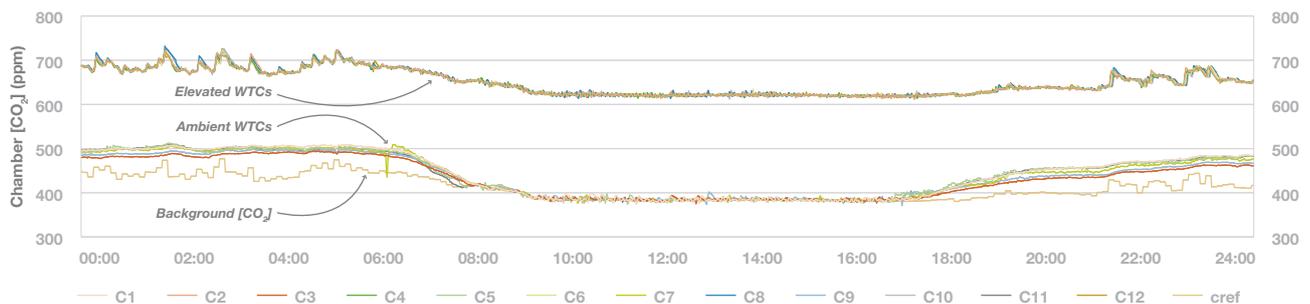
The Hawkesbury Forest Experiment is designed to provide the information on how these effects play out. The broad focus

is on developing an understanding of the growth and carbon storage potential and productivity of eucalypt forests and their responses to the rising CO₂ levels and changing rainfall patterns that will occur during the next 50 years.

This project will provide Forests NSW with important information to develop strategies to deal with these risks to our business, and to ensure continued management of our forests in a sustainable manner.

This is a joint initiative with the Department of the Environment and Heritage Australian Greenhouse Office, University of NSW, University of Western Sydney, University of Technology Sydney, Macquarie University and the Swedish University of Agricultural Science.

Atmospheric CO₂ activity



The graph shows the ability of whole tree chambers (WTC) to track the background atmospheric CO₂ concentration. With elevated chambers having an additional 240 part per million (ppm) added. The ambient CO₂ concentration in the chambers rises above the background reference at night due to soil respiration within the chamber.



Silviculture in action

Silviculture: (noun) The study, cultivation and management of forest trees.

Forests NSW silvicultural practices in State forests are designed to sustain or enhance productivity, vitality and diversity of forest ecosystems. In the state's north east, Forests NSW is taking part in silvicultural trials to combat one form of eucalyptus dieback, known as Bell Miner Associated Dieback (BMAD). Dieback, where trees respond to acute stress by reducing their crown, is a classic sign that a tree is suffering stress. It's a clear sign that something is wrong, but it is often much harder to identify the primary cause or to treat the problem.

The Bell miner is a species of native bird that is increasing its range in key productive forests affected by this problem. Although the causes of BMAD are not conclusively understood, the bell miner only plays a part in the dieback syndrome.

It is hoped the trials will demonstrate that silvicultural treatments, including fire treatments, are able to restore healthy forests and that post harvesting treatment can help improve forest health and prevent the further decline. This decline has been increasing dramatically throughout Australia in the last 100 years and is closely associated with infestation by the weed lantana and an absence of the low intensity fire treatments.

Mount Lindesay, near the Queensland border, was selected as the trial site as it has a full range of dieback conditions, contains forest types most commonly affected by BMAD and has good access and highway visibility. In addition,

Bell miners have been in the area for many years, with the old Bellbird Highway Rest Area nearby. The stands range from low to high quality and are variable in their age and structure.

There is a long history of harvesting and silvicultural operations in Mount Lindesay State Forest. Before the 1950s, the forest is reported to have been extensively grazed and burnt to maintain grass cover. During the 1970s and 1980s, selective harvest silviculture supplied timber for many uses ranging from furniture to girders.

Another characteristic of the trial area, typical of many similar forests, is that regeneration in some areas has been suppressed by the exotic weed lantana. These areas require large-scale silvicultural treatments, including clearing of lantana and direct seeding or planting with seedlings to ensure vigorous eucalypt regrowth.

During the trial, areas within the forest will be harvested. This, along with site preparation including weed control, will prepare the area for low intensity burns. After these treatments, a variety of tree species will be planted. A total of 65 000 native trees will be established.

Results will be of interest to all partners in the BMAD working group, including Forests NSW, the Department of Environment and Climate Change, the North Coast Environment Council Inc, the North East Forest Alliance and private land holders.

The living and breathing forest

Net carbon storage in wood and paper products in service and in landfills in Australia



What is climate change?

The term 'climate change' commonly refers to influences on climate resulting from human practices. Increases in the concentration of greenhouse gases in the atmosphere, resulting largely from the burning of fossil fuels and deforestation across the globe, have led to an observed and projected warming of the earth.

The greenhouse effect occurs because gases have the capacity to trap heat by allowing the transmission of incoming radiation from the sun whilst impeding outgoing radiation from leaving the earth. Carbon dioxide is the greenhouse gas that is contributing most to the enhanced greenhouse effect.

What is the role of forests?

All natural systems have evolved to their current state as a result of the climate in which they developed. Many Australian forests and other natural resource systems are vulnerable to the impacts of climate change but forests can also adapt to and help mitigate the effects of climate change.

Mitigation refers to the reduction of emissions through new technology, changing management practices, eco-efficiency measures and organisational change. Forests can contribute to mitigation by sequestering CO₂ thereby reducing the amount of CO₂ in the atmosphere. Carbon dioxide is converted to carbon in trees and other forest plants and organisms, and if harvested, is stored in wood products (see graph above). Known as forest sinks, these can provide a practical contribution to efforts reducing the amount of greenhouse gases in the atmosphere, while potentially contributing to Australia's other environmental and economic goals. Forests NSW plantations 'sink' a quantum of over four million tonnes annually.

Since 2005, about 10% of Forests NSW plantations have been accredited under the NSW Greenhouse Gas Abatement Scheme as a carbon pool from which certificates can be created and traded with companies who wish to off-set their greenhouse gas emissions. The first batch of these certificates was sold for over one million dollars to Energy Australia to help offset greenhouse gases released into the atmosphere as a result of electricity use in NSW. In addition to developing a carbon accounting system that is sufficiently robust to gain

accreditation under the NSW Greenhouse Abatement Scheme, Forests NSW has been heavily involved in developing state, national and international standards and guidelines to enable carbon accounting and trading.

Eco-efficiency in our organisation is vital to reducing our ecological footprint. Over the past nine years, Forests NSW has reduced the amount of CO₂ emitted through energy and fuel by 12% (indicator 20A). Forests NSW is currently participating in a project to measure its entire ecological footprint, in collaboration with the University of Newcastle, the Victorian Environmental Protection Authority and the NSW State of the Environment Taskforce.

Adaptations for plantation forests

Adaptation refers to the resilience of systems or their capacity to respond to change or cope with climate variability and indirect impacts such as fire or pests that are predicted under climate change. The species that make up natural systems such as forests have adapted to survive within certain climate zones or 'envelopes'.

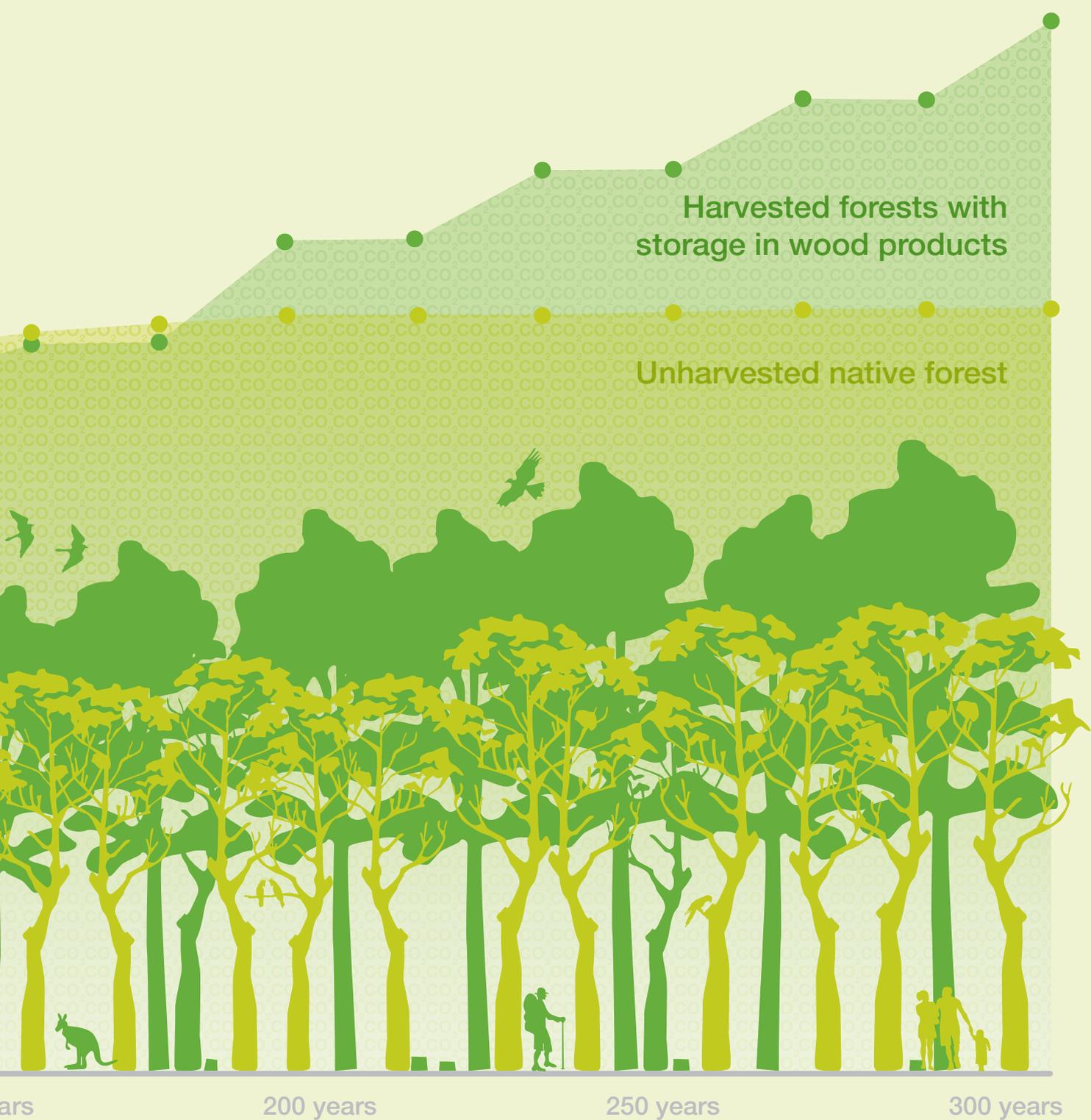
Similarly, human systems such as production forestry have developed to suit the climate experienced over the last 100 or so years. Over the next 40 to 80 years, (one to two plantation rotations), climate change is predicted to increase average temperatures in NSW by 0.7-6.4 °C, with the greatest increase in the west of the state. Rainfall is likely to decrease, other than in the north east of the state. Projections suggest an increased incidence of hot days, bushfire and intense storms. The potential impacts of these changes on forests are not well understood, especially for native tree species under typical Australian conditions. The interacting impacts on forest growth of elevated CO₂ and water availability is the subject of the pioneering Hawkesbury Forest Experiment (see pages 18-19).

The capacity of different management systems to adapt to changes in climate that are outside those that have been experienced previously is largely unknown. Forests NSW recognise that it will require an adaptive approach to management that is resilient, flexible and forward looking.

Carbon storage in harvested and unharvested forests

This illustration shows one of the major advantages of forests managed for their full suite of functions. Through sustainable harvesting of timber, more carbon is removed from the earth's atmosphere. This stored carbon ends up in the everyday wood-based products such as timber house frames, flooring and furniture.





Source: Cooperative Research Centre for Greenhouse Accounting (2006): Forests, Wood and Australia's carbon Balance (www.fwpa.com.au)

Economic

100%

of eligible plantation accredited for carbon trading.

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	Indicator	Results	Performance
Marketing and Sales	22. Volume of timber harvested	2.73 million m ³ of sawlogs and 1.8 million tonnes of pulpwood harvested.	
	23. Product mix of timber harvested	No significant change in proportion of hardwood and softwood sawlogs processed into high value products.	
	24. National Greenhouse Abatement Certificates created	538 471 National Greenhouse Abatement Certificates (NGAC) created. 100% (23 515 hectares) of eligible plantation accredited for carbon trading.	

TARGET ACHIEVED OR MAINTAINED

ON TRACK TO MEETING TARGET

TARGET NOT ACHIEVED AND ACTION REQUIRED

Big River Timbers – a step ahead

When Big River Timbers was faced with a changed resource base in the 1980s, it started a period of innovation and adaptation for its Grafton sawmill that set the base for its market-leading position of today.

With rainforest species protected in native forests, a switch to a new supply of denser eucalypts meant some changes at the mill. The company investigated new methods of peeling, drying and laminating the timber and developed new product lines. But the company's problems weren't limited to ensuring it had a product to sell: it also had to find a market. They decided to move away from traditional distributors and sell direct to end-users, with word quickly spreading of the strength, durability and re-useability of their Formply product.

Today, the company is the Australian market leader in the manufacture and sale of Formply and decorative interior timber products such as engineered laminate flooring, step treads and wall panels.

And some 25 years later the company continues to adapt to change. Big River Timbers is now seeking certification to the Australian Forestry Standard for 'chain of custody', in order to meet market demands for environmental product verification.

The system allows consumers to trace the timber product from the log in the forest, through the sawmill and into the product they purchase, giving independent and rigorous reassurance that the product is manufactured from a sustainable resource.

Eventually, the chain of custody will be incorporated into Big River Timbers' quality control system. With the consumers increasingly seeking assurances of sustainability, Big River Timbers' aim is to be one step ahead once again.

Every business has its risks

Risk management is an intricate part of running any kind of business. Any impact on the forest health expresses itself in a reduction in productivity. Not only is the volume produced affected, but also the value.

Fire management

Fire management within Forests NSW estate has three main objectives – the protection of life and property; the protection of current and future forest assets; and the protection and maintenance of biodiversity. Through generating revenue from State forests, Forests NSW has the capacity to be in a better position to protect the organisations production base and subsequently also better able to protect social and environmental values.

One of the major risks to the economic performance of Forests NSW is wildfires in State forests, especially in plantations. During last years fire season, 97 197 hectares of State forest was burnt, including over 11 000 hectares of plantations.

Climate change modelling has highlighted two main issues relevant to fire management. Firstly, there is a predicted increase in fire-weather risk in most areas. Secondly, the window for prescribed burning is expected to narrow and may shift in most areas making it harder to carry out the annual hazard reductions burn programs. This, along with other circumstances, may explain the trend within State forests for a fall in the area of prescribed burns, while the area of wildfires appears to be increasing (see Wildfire and prescribed burning graph on page 26).

Despite the historically high efficiency and effectiveness of Forests NSW fire management capacity, the risk to our business as a result of the projected effects of climate change, means a continued investment is required in further improving our ability to detect, suppress and mitigate wildfires.

Detection

Quick initial response is the key to Forests NSW ability to protect the state's valuable plantation resource, which suffered significant damage in the Billo Road fire (8 500 hectares of radiata pine plantations burnt) near Tumut in late 2006, despite a highly successful salvage operation.

This detection system continues to be refined and improved, for example through the introduction of a new lightning tracking technology, which has enabled fire managers to anticipate the direction of lightning strikes and follow up through ground and air surveillance.

Suppression

During the last fire season, 162 bushfires were attended by Forests NSW staff, with a total direct cost of fighting these fires of over \$3 million.

At the peak of the Billo Road fire, close to 10% of Forests NSW entire workforce was directly involved as fire fighters, heavy plant operators and members of the Incident Management Team.

Mitigation

Forests NSW carry out regional prescribed burns to reduce the fuel load. These burns are the primary tool used to mitigate the risk of wildfires and aim to replicate the positive impacts of natural bushfires, without the negative consequences for our society and the environment. These operations require rigorous planning. During the reporting period, a total of 16 530 hectares was managed in this way. Prescribed burning in State forests only ever takes place on a very small percentage of the forest, so that effects are localised. It only requires a small number of strategic zones with reduced fuel loads to have a significant impact on fire control.

Supply management

Damage to forests, for example through wildfire, affects the timber supplied to the timber processing industry. Forests NSW works closely with the processing industry to mitigate the effects of these challenges.

After the Billo Road fire, salvage operations began immediately to harvest the damaged trees. Forests NSW, the local mills and more than 20 harvesting and haulage contractors all worked together to ensure the success of the recovery plan. It was as a result of this hard work that by the end of the reporting period 75% of the recoverable timber had been salvaged, including most of the sawlog recovery.

Within native forests, two major fires burnt in excess of 95 000 hectares of State forest and national park between Coonabarabran, Baradine and Narrabri. Of this, an initial estimate indicated some 17 000 hectares of commercially viable white cypress (*Callitris glaucophylla*) had been burnt within State forests. Aerial surveys were used to identify worthwhile compartments to harvest and salvage timber. Over the six month period after the January fire, 18 500 cubic metres of cypress sawlog was salvaged from fire damaged stands and sent to sawmills located at Gunnedah, Baradine, Gulargambone and Qurindi for processing into floor boards and structural timber.

A fundamental forest management objective was fulfilled in the south east of NSW during the year when Forests NSW secured a market for low-grade logs. This significantly improves our ability to grow and maintain healthy and high quality forest, through a regime of thinning out poor and less healthy trees. It also represents one step in our drive to improve the marketing and value-adding processing of our timber.

In another positive development, Forests NSW has entered the commercial seed market initially selling wild seed (seed collected from native forests) to build up a client base for future improved seed from a range of clonal seed orchards. To date, this tree improvement program has generated over \$900 000 in revenue, helped by high global demand for *Eucalyptus dunnii* seed and a large client base.

Financial performance

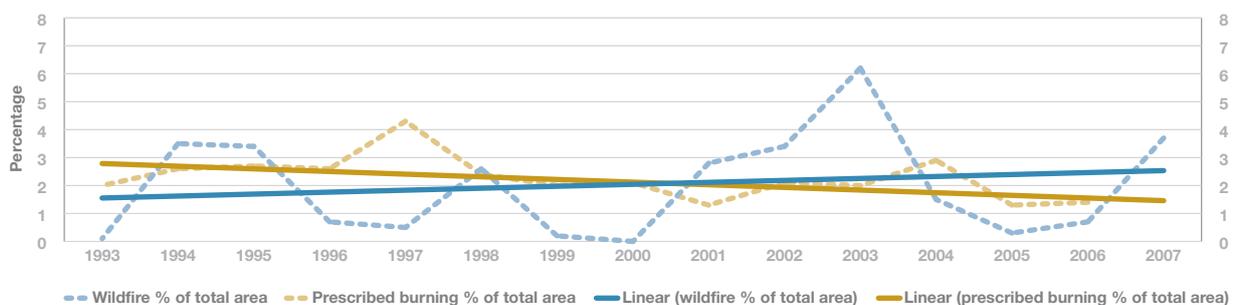
Forests NSW made an operating profit of \$28 million in 2006-07. While below target, this was still a strong result given the slow market conditions, increased costs and losses sustained during the fire season.

Revenue from timber sales was lower than projected due to softer market conditions in the housing and construction industry for most of the financial year, and due to the lower prices received for fire affected timber. On the other side of the ledger, costs rose due to sharp increases in fuel prices, which prompted development of new cost-sharing mechanisms with industry.

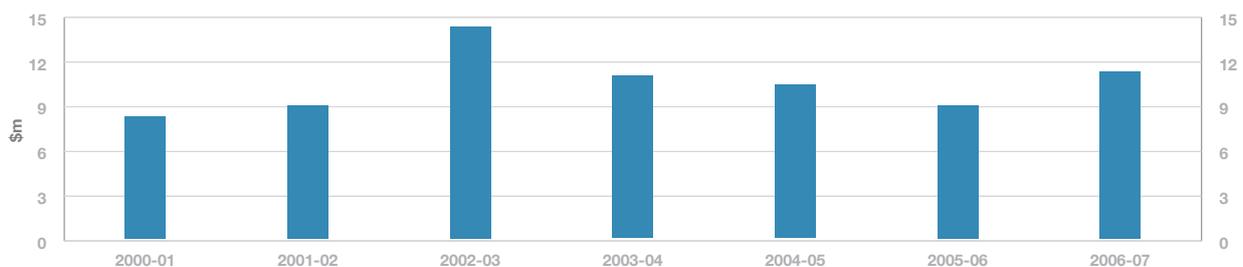
The trading downturn was offset by the sale of NSW Greenhouse Abatement Certificates, together with the sale of surplus assets, and the strengthening of some market sections late in 2006-07.

Fitch Rating was engaged by NSW Treasury to review the credit ratings of all government businesses, with Forests NSW reviewed in March 2007. Forests NSW maintained its 'BBB minus rating' thereby achieving a key financial performance target.

Wildfire and prescribed burning trend as a percentage of Forests NSW estate



Total expenditure on fire management



Sustainability

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

Forest Value	Indicator	Results	Performance
Productivity	25. Forest management	1 299 042 hectares available for timber production;	✓
		503 107 hectares in State forest reserves;	✓
		690 502 hectares of other forest managed for ecological functions.	🕒
	26. Plantation establishment and survival	6 527 hectares of new softwood plantation.	🕒
		37% of softwood plantation successfully established.	✗
		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	20 surveys and 63% of surveyed harvested area successfully regenerated.	✗	
Maintainability	29. Sustainable yield*	Actual annual yield of high quality sawlogs as percentage of allowable volume:	✓
		<ul style="list-style-type: none"> • 91% from native hardwood forests; • 96% from cypress; • 94% from all softwood plantations. 	
	30. Forest certification	Certification to the Australian Forestry Standard (AS 4708 (int)-2003) on December 8, 2006.	✓
	31. Trading profit	\$25 600 profit per employee generated.	✗

* within the scope of the wood supply and licensing agreements

✓ TARGET ACHIEVED OR MAINTAINED

🕒 ON TRACK TO MEETING TARGET

✗ TARGET NOT ACHIEVED AND ACTION REQUIRED

6,527
hectares
of new softwood plantation established.

Better forests now and in the future



Sustainable forest management certified to national and international standards

The principle of sustainability was born out of a shortage of timber for the firing of glass production over 200 years ago in Europe. Sustainable forest management addressed that shortage and restored the social and environmental values associated with these forests for current and future generations.

Sustainability

Today sustainability in forest management means providing a broad range of products and values derived from our forests. Through its commercial focus, Forests NSW generates the resources to maintain these products and values into the future. The better our environmental performance, the more stable State forests (our production base) will remain.

Limitations

The area of native forest that is available for harvest, how well Forests NSW is meeting commitments to the timber industry, and the degree to which the environment is protected during timber harvesting continue to be significant short-term sustainability issues for the organisation. Our ability to meet government expectations of a growing profit from timber revenue also influences organisational decision-making and efficiency.

To optimise commercial returns, Forests NSW intends to move from a plantation expansion phase to a focus on maximising the benefits derived from the existing planted forests. A key strategy is the merchandising of complete logs in the Macquarie Region to enhance value recovery, with a view to rolling this out to other Planted Forest Regions.

Assurance

Forests NSW Environmental Management System, based on an internationally recognised standard (ISO 14001), was successfully certified in July 2006. Regular independent audits have been conducted to determine how well this system operates and the results have been used to motivate staff to continuously improve our sustainable management practices, with a view to identifying and minimising system failures.

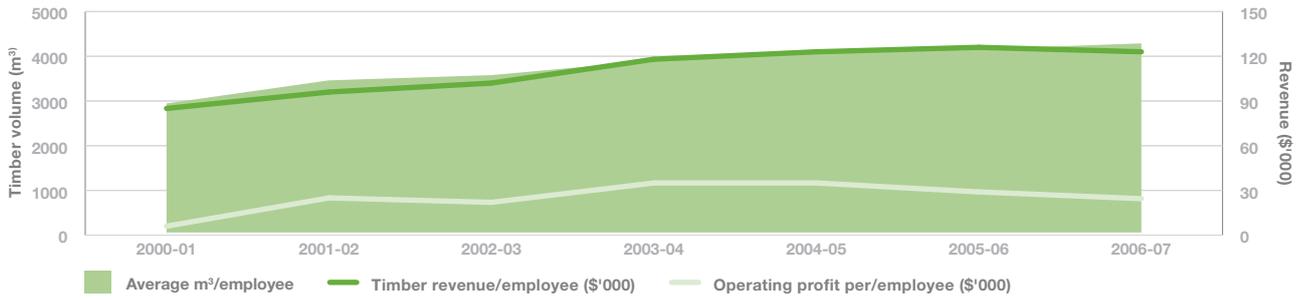
Through certification to the Australian Forestry Standard (internationally recognised standard AS 4708), Forests NSW provides independent assurance that its forest management is consistent with the principles of sustainable forest management. The standard requires rigid requirements are met or exceeded in order to be certified. This allows our customers to mark the timber they purchase from us with a logo as certified timber from sustainably managed forests. The logo assures consumers that the timber has been legally and sustainably grown. Forest management certification is part of Forests NSW ongoing commitment to a sustainability action plan developed in conjunction with the plantation industry, sawmilling and paper sector and environmental non-government organisations.

Forests NSW has been closely involved in the development of the Firewood Association of Australia (FAA) Certification Scheme, with a view to develop a more sustainable firewood industry. The scheme provides independent assurance of the quality of NSW red gum firewood produced through licensees, as a byproduct of harvest operations. Certified members of the FAA comply with the National Voluntary Code of Practice for Firewood Merchants.

Our forest management plans

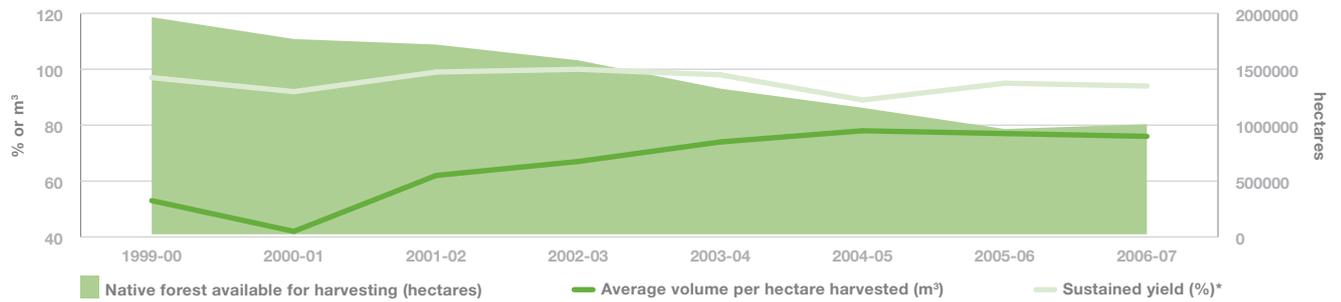
A fundamental key to achieving certification has been the development and implementation of Ecologically Sustainable Forest Management Plans (ESFM). These lay out the strategy for managing our ten regional areas and are subject to community consultation and input. Originally developed as a result of the Forest Agreement process, Forests NSW has made the decision to extend the implementation of ESFM Plans across the entire estate, including regions that were not included in the Forest Agreement areas.

Productivity measure



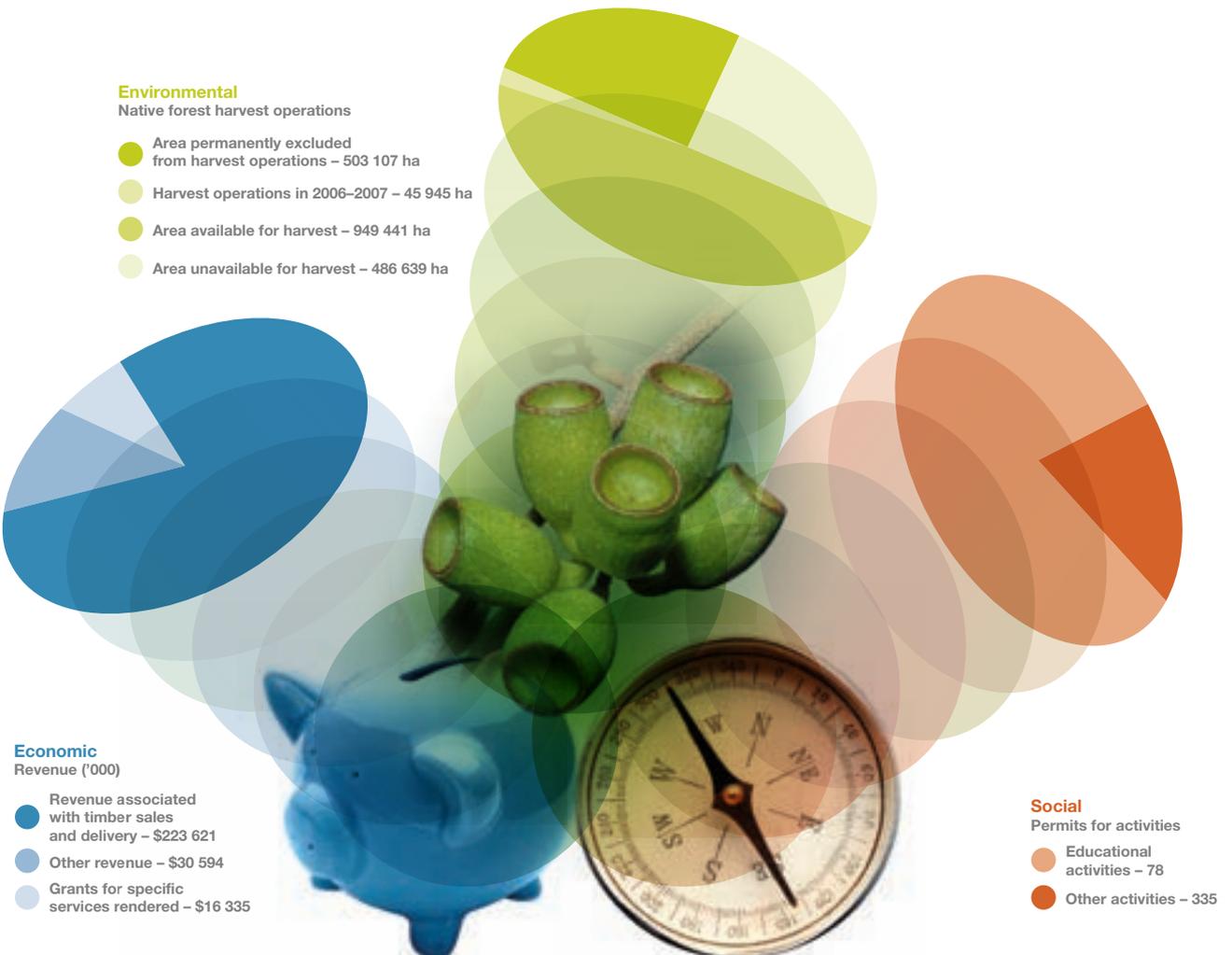
Information about changes in the number of Forest NSW employees is provided in Indicator 7

Forest sustainability



* See Indicator 29 on page 37 for more information

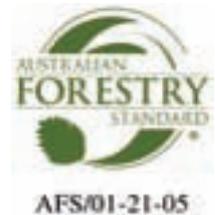
Economic, social and environmental forest management



Note: Further details on revenue are found in Forests NSW Annual Report



A day with the auditor



On day four of my first week working with Forests NSW, I was invited to attend a surveillance audit of Forests NSW Australian Forestry Standard (AFS) certification. The day began early, with key staff and an independent AFS auditor from NCS International.

The process of plan development, internal consultation, theory and practice were all discussed. It was a great overview for someone new to forestry, such as me. It seemed the majority of Forests NSW planning was right on track, with some regional supplementary management plans for areas such as roads, pest and weed management, close to completion.

It became apparent staffing changes, combined with associated recruitment, meant resources had been stretched in an effort to firm up the regional structure and set new processes in motion. July 2007 saw things settling down and most positions filled. This meant commitments were made to finalise outstanding strategic plans by the end of September.

The second part of the day was at an operational harvest area in Maria River State Forest, with the harvesting forester as our guide. First order of the day was to meet the contractor and undergo a safety induction. Boots and hard hats – check. ‘Safe’ zone identified – check. Instructions on how to conduct yourself on site – check. Signed induction sheets – check. Obviously safety is paramount, particularly in an ‘active compartment’ (operational harvest area).

The auditor was thorough and enquiring, asking questions of the supervising forest officer and forest assistant rather than simply ‘checking the box’. The line of questioning was smart. It engaged the staff, recognised their inherent knowledge and elicited information often missed in this type of process.

I discovered that Forests NSW ecologists, Aboriginal and cultural heritage officers were consulted on every harvesting plan, and their recommendations incorporated in the final document. The planners have the job of bringing together all relevant legislative and regulatory requirements into one blueprint for a sustainable harvesting operation. I wondered how many in the general public know of this side of forestry. I mentally added this to my order of works for the coming year to improve community understanding and appreciation of forestry processes and people.

The results of the audit delivered soon after flagged some important corporate system weaknesses, which have subsequently been addressed. Surveillance audits such as this one maintain the rigour of this Australian Standard.

Louise Faulkner

Community partnerships manager
Central Region



DNV verification report

DNV Assurance Statement Forests NSW 2006-07 Seeing Report

Introduction

DNV Certification Pty Ltd (DNV) has been commissioned by the management of Forests NSW to carry out an assurance engagement on the Forests NSW 2006-07 Seeing Report ("the Report") and its contents.

Forests NSW is responsible for the collection and presentation of information within the Report. Our responsibility in performing this work is to the management of Forests NSW only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decision, whether investment or otherwise, based upon this assurance statement.

Scope of assurance

Our scope of work has included the verification of:

- The overall Report for significant anomalies;
- The existence and integration of key systems which drive the performance of FNSW and form the basis for data gathering and reporting; and
- The source and accuracy of a sample of data items for significant indicators (as determined by Forests NSW and DNV based on our professional judgement) included in the Report.

Forests NSW reporting boundaries cover all Forests NSW offices and operations within the State of NSW, representing all of Forests NSW employees.

Limitations

We have verified the source of data and data aggregation processes, but have not verified the accuracy of reported data in relation to actual field operations and outcomes.

Verification approach

The verification was conducted during August and September, 2007. The engagement was planned and performed in accordance with DNV's Verification Protocol for Sustainability Reporting. The report has been evaluated against adherence to the principles of Materiality, Completeness, Accuracy, Neutrality and Comparability as set out in the AA1000 Assurance Standard.

In reaching our conclusions, we have conducted the following work:

- interviewed Senior Management representatives of Forests NSW to understand the objectives and priorities for embedding and managing goals as

set out in Forests NSW Seeing report, the means by which Forests NSW planned to accomplish its objectives, the degree to which those objectives were met, and how internal assurance is given to the Forests NSW Board on these matters;

- Analysed the centralised data gathering systems and processes to assess the consistency, completeness, quality and accuracy of the reported data;
- challenged the environmental, social and economic performance indicators, related statements and claims made in the report;
- reviewed specific documents, data, reporting systems and information made available by Forests NSW; and
- applied a risk-based approach in selecting reporting units, subject to an in-depth review for the purposes of observing and assessing the implementation and effectiveness of the corporate processes.

Conclusions

The Forests NSW Seeing report is a continuation of environmental, economic and social reporting related to the operational activities of Forests NSW. In our opinion, the Forests NSW Seeing report 2006-07 provides an accurate and fair representation of the level of implementation of sustainability and Corporate Reporting policies (as defined by Forests NSW).

Materiality

We consider that the Forests NSW Report provides a balanced representation of material aspects concerning Forests NSW sustainability performance.

Completeness

We have tested and challenged claims and statements made in this Report by obtaining supporting evidence from Forests NSW. Based on our review:

- We are not aware of any material issues excluded or misstatements made in relation to the information on which Forests NSW has made judgements in relation to the content of the Report;
- The report does not omit relevant information that would influence or inform stakeholder assessments or decisions, or that would reflect significant economic, environmental and social impacts;
- The information in the report includes all significant actions or events in the reporting period;

- The report includes all entities that meet the criteria of being subject to control or significant influence of the reporting organisation; and
- The report covers and prioritises all information that should reasonably be considered material on the basis of the principles of materiality, sustainability context, and stakeholder inclusiveness.

Accuracy

- We have not found any material inaccuracies that may significantly affect the comparability of selected key performance indicators; and
- The data measurement techniques and basis for calculations have been adequately described to DNV, and can be replicated with similar results.

Neutrality

- We conclude that the information contained in the report is unbiased; and
- The emphasis on the various topics in the report is proportionate to their relative materiality.

Comparability

The information in the report is presented in a format that allows users to see positive and negative trends in performance on a year-to-year basis.

Recommendations

In conducting our work, we identified the following key recommendations:

- Continue to review the relationship between licensed timber production and the available timber resource across all State forest available for timber production; and
- Continue development of the SEEDS and related databases to improve the efficiency of data collection for future Seeing report.

Simon Dawes
Lead Verifier

Esther Garcia
CSR Manager – UK

DNV Certification Pty Ltd, Sydney
31 October 2007

Appendices

Social

Forest Value: Community
Objective: Increase voluntary activities in non-operational business areas

INDICATOR 1 – SOCIAL RESPONSIBILITY			
Corporate sponsorships, donations and waived fees	2004–05	2005–06	2006–07
Number	424	394	381
Amount	\$174 053	\$115 510	\$126 918
Volunteering programs			
Number of programs	27	19	18
Number of participants	239	192	154

Forest Value: Community
Objective: Increase opportunities for stakeholder participation in planning

INDICATOR 2 – PUBLIC PARTICIPATION			
Community forum categories	1997–98	2005–06	2006–07
Catchment management	47	20	26
Community bushfire management	14	199	198
Community/school/education	29	59	76
Conservation/environmental	46	42	37
Cultural management	n/a	164	177
Feral animals/noxious weed control	79	90	61
Flora and fauna management	17	23	12
Forestry/forest practices	40	22	23
Industry/stakeholders	213	146	119
Local emergency management	63	19	18
Local government	44	31	24
Other	116	70	29
Recreation/tourism	252	38	48
Regional planning/RFA	67	44	57
Total forums	1 027	967	905

Forest Value: Community
Objective: Maintain well managed facilities

INDICATOR 3A – RECREATION AND TOURISM			
Recreational facilities provided	1997–98	2005–06	2006–07
Beaches	n/r	25	25
Roadside rest areas/picnic areas	160	60	63
Forest drives (marked)	30	24	15
Forest walks (marked)	90	35	34
Forest walks (un-marked)	n/d	2	2
Lookouts	84	17	16
Camping areas	308	78	61
Camps/huts/cottages	17	16	16
Mountainbike tracks (km)	n/d	107	108
Total facilities	691	257	232

The fall in the number of managed camp sites is consistent with Forests NSW focus on concentrating resources on fewer sites.

Objective: Increase opportunities for events and partnerships

INDICATOR 3B – RECREATION AND TOURISM			
Permits for organised recreational activities	1997–98	2005–06	2006–07
Eco tourism/4x4 tours	54	12	21
Horse, trail and endurance rides	32	23	29
Car rallies /go carts	38	28	28
Motor bike rallies	6	16	21
Mountain bike rallies	30	16	35
Orienteering/mountain runs/triathlon	37	14	22
Bushwalking	23	14	8

INDICATOR 3B – RECREATION AND TOURISM			
Permits for organised recreational activities	1997–98	2005–06	2006–07
Bowhunting/archery	60	0	2
Fossicking	n/r	n/r	44
Other*	22	55	125
Education/outdoor education schools	27	27	49
Training/exercises	152	43	29
Total activities	481	248	413
Area zoned primarily for recreation (ha)	n/d	4323	4490
Expenditure on recreation (\$'000)	n/r	2409	2721
Recreation Agreements	n/r	26	63

* Included fossicking in previous years

The increase in recreational activities this year is mainly attributed to a jump in the number of people fossicking (particularly Macquarie Region) and other special purpose permits issued such as weddings.

Forest Value: Community
Objective: Cost-effective research services from NSW DPI and within Forests NSW

INDICATOR 4A – RESEARCH AND EDUCATION		
	Research (\$M)	Education (\$M)
1998/99	7.2	n/d
2005/06	6.9	4.2
2006/07	7.0	4.2

Forest Value: Community
Objective: Provide a strategic education program

INDICATOR 4B – NUMBER OF PEOPLE PARTICIPATING IN PROGRAMS AT CUMBERLAND STATE FOREST			
Activity	1998–99	2005–06	2006–07
School – lower primary	1 197	735	482
School – upper primary	1 585	3 791	4 792
School – secondary	753	263	150
School holiday activities	1 008	784	429
Information services – by phone	n/r	17 554	17 836
Information services – by email	n/r	5 347	6 454

Forest Value: Community
Objective: Increase opportunities for employment in forest dependant industries

INDICATOR 5 – REGIONAL EMPLOYMENT			
Forest sector	1997–98	2005–06	2006–07
Harvesting and haulage	1 132	1 292	1 245
Primary processing*	4 328	5 306	4 835
Apiary	302	294	419
Grazing	165	552	553
Eco-tourism	88	37	37
Other**	136	228	62
Total employed	6 150	7 709	7 151

* 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.

Timber from Macquarie and Hume Planted Forest Regions is now sold delivered to the mill door.

Forest Value: Community
Objective: Access maintained to State forests for apiculture, grazing and other products appropriate to forests

INDICATOR 6 – OTHER FOREST PRODUCTS			
Forest product	1997–98	2005–06	2006–07
Grazing (hectares)	768 946	652 699	688 525
Apiculture (sites)	3 843	3 371	3 363
Leaf/oil (kg)	8 013	0	0
Seed (kg)	969	53	51
Bark (tonnes)	1 109	0	0
Firewood (tonnes)	75 615	41 941	42 613
Broombush (tonnes)	1 977	3 611	4 255
Charcoal (tonnes)	119	1 594	1 465
Craft Timber (m ³)	33	1 677	35
Misc native plants pieces (No.)	1 219	3 820	3 544
Burls (tonnes)	44	9	1
Wood blocks (No.)	0	3 750	3 750
Film/documentary (permits)	3	12	4
Communication sites (permits)	126	134	135
Other structures (permits)	227	168	153
Powerlines/cables/pipelines (km)	2 886	5 286	5 006
Gravel/sand/rock (tonnes)	69 495	88 952	88 147
Research (permits)	215	58	69
Nursery seedlings to public (No.)*	1 148 000	1 096 806	1 647 400
Maps sold to public (No.)**	5 491	6 213	6 505
Total value (\$'000)	n/r	6 242	6 461

* Does not include plantation stock sold to external plantation owners
** This included maps sold to distributors that were not collected in the previous years

Although the quantity of seed sold is down on the previous year, the revenue generated from seed sale has increased dramatically from \$1 756 in 2002 to \$695 066 this year. This reflects Forests NSW decision to enter the commercial seed market directly.

The increase in the quantity of seedlings to the public is due to an increased demand from external plantation owners.

Forest Value: Staff
Objective: Maintain staff levels for effective and efficient operations

INDICATOR 7 – QUALITY OF MANAGEMENT							
	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

* Racial, Ethnic and Ethno/Religious Minority Groups
** Excludes casual staff

Forests NSW has undergone several restructures 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 numbers.

Forest Value: Staff
Objective: Forestry operations implemented by appropriately trained and accredited staff

INDICATOR 8 – TRAINING			
Course	2003–04	2005–06	2006–07
Computer skills	26	41	5
Cultural heritage	100	78	62
Environmental	35	87	117
Fire	100	103	102
Flora and fauna identification and management	22	4	3
Forest harvest operator	110	162	n/r
Operator training	n/r	n/r	264
Forest management, inventory and silviculture	42	27	112

INDICATOR 8 – TRAINING – CONTINUED			
Course	2003–04	2005–06	2006–07
HR management	77	49	225
Induction	127	112	116
Legal and administration	5	9	n/r
OHS legislation and awareness	n/r	n/r	282
Maps reading and airphoto interpretation	9	0	0
OHS – including chainsaw, 4WD training and first aid	891	707	1 629
Pest and weed control	11	8	6
Product identification and assessment	47	26	11
Roading and road survey	2	0	1
Soil and water	87	121	95
Total trained	1 691	1 534	3 030
Expenditure on training (\$M)	2.90	1.92	2.26

Notable increases are evident in training in occupational health and safety (OHS) and human resources management. The large increase in OHS training is reflective of the priority given to safety and the roll out of the new Safety Management System. The methodology of data collection has been refined resulting in changes to course categories.

Forest Value: Staff
Objective: Implement the safety management system and achieve lost time incident (LTI) frequency rate of zero

INDICATOR 9 – HEALTH AND SAFETY			
OHS issue	2000–01	2005–06	2006–07
Number of safety meetings held	76	80	75
Number of lost time incidents	42	26	26
Number of days lost due to LTIs	1 203	380	381
Lost time incident frequency rate*	18.6	13.3	16.4
Provision of health or fitness services	n/r	121	161
Provision of specialised equipment or clothing	n/r	261	216
Risk assessments	n/r	356	634
Training	n/r	277	477
Voluntary audits	n/r	173	218

* Lost time incident frequency rate = Number lost time incidents (LTI) x 1 000 000 total work hours worked

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

The increase in the lost time frequency rate is disappointing in light of current efforts to improve the Safety Management System. A concerted effort to reduce the lost time frequency rate is a priority for Forests NSW.

Forest Value: Cultural Heritage
Objective: Identify and protect all significant cultural heritage sites

INDICATOR 10A – MANAGEMENT OF CULTURAL HERITAGE			
	2001–2002	2005–06	2006–07
Natural features	1	1	0
Sites of historic importance	0	0	0
Art and ceremonial sites	0	6	1
Sites associated with tools, artifacts and hunting	44	76	60
Sites associated with traditional Aboriginal life	6	50	35
Not classified	0	0	0
Total Aboriginal sites found	51	133	96
Number of cultural heritage surveys	n/d	260	243
Total Heritage sites (post settlement) managed	554	271	275
Area managed for cultural heritage	176	4 234	1 114
Agreements for co-management of Land (No.)	3	4	4
Agreements for co-management of Land (ha)	1 730	55 022	53 550

INDICATOR 10A – MANAGEMENT OF CULTURAL HERITAGE – CONTINUED

	2001–2002	2005–06	2006–07
Partnerships	19	11	6
Land with recognised Native title	0	0	30 782

In Southern Region, the Wallagaraugh and Letts Mountain Flora Reserve agreements were initiated during the year. One of the intentions supported by Forests NSW is to provide a cultural training area for the local people to teach children about the local Koori history of the area.

Forest Value: Cultural Heritage
Objective: Ensure all employees and contractors are trained in cultural heritage awareness

INDICATOR 10B – MANAGEMENT OF CULTURAL HERITAGE

	2001–2002	2005–06	2006–07
Number of employees and contractors trained	239	78	62

Environment

Forest Value: Biodiversity
Objective: The Forestry Act requires that 3,250,000 hectares of State forests is managed
Objective: Maintain area of native forest for the sustainable supply of timber

INDICATOR 11A – EXTENT OF FOREST TYPE

	1997–98	2004–05	2005–06	2006–07
Alpine ash forest	n/d	1%	1%	1%
Blackbutt forest	6%	5%	6%	6%
Blue gum forest	8%	5%	6%	7%
Messmate forest	11%	10%	10%	12%
Mixed coastal eucalypt	8%	8%	12%	11%
Non eucalypt forest	2%	1%	1%	0%
Non forest	n/d	10%	7%	3%
Other inland eucalypt types	2%	16%	8%	9%
Rainforest	4%	4%	4%	3%
River red gum forest	3%	5%	5%	5%
Snow gum woodland	1%	1%	1%	1%
Spotted gum forest	7%	8%	9%	9%
Stringybark forest	13%	10%	11%	10%
Un-classified	34%	5%	11%	14%
White cypress pine forest	1%	11%	8%	8%
Total	100%	100%	100%	100%

Changes to this years native forest types is primarily due to changes in attribution of areas.

Forest Value: Biodiversity
Objective: Ecosystems maintained over a range of successional growth stages and forest management zones

INDICATOR 12 – NATIVE FOREST STRUCTURE

Structure class (FMZ)	Forest Management Zoning (FMZ) type 2006–07								Percentage of total native forest		
	Dedicated reserve (FMZ 1)	Informal reserve – special management (FMZ 2)	Informal reserve – harvest Exclusion (FMZ 3A)	Special prescription (FMZ 3B)	General management (FMZ 4)	Non forestry use (FMZ 7)	Further assessment (FMZ 8)	1997–98	2005–06	2006–07	
HCV Old Growth	0.8%	36.7%	58.4%	0.3%	3.3%	0.1%	0.5%	n/d	4.6%	4.1%	
Rainforest	3.0%	34.9%	37.2%	0.6%	19.3%	0.1%	4.9%	n/d	4.3%	3.9%	
Mature	1.5%	9.8%	13.7%	2.2%	63.8%	0.2%	8.8%	28.0%	28.0%	24.0%	
Regrowth	0.8%	5.9%	5.9%	2.9%	76.8%	0.2%	7.4%	16.0%	25.6%	22.7%	
Not Assigned	0.9%	7.5%	12.1%	3.5%	70.7%	0.8%	4.4%	56.0%	37.5%	45.3%	
Percent of total native forest	1.1%	9.9%	14.0%	2.8%	65.7%	0.5%	6.0%	100.0%	100.0%	100.0%	

Forest Value: Biodiversity
Objective: Manage not less than 600,000 hectares of land for afforestation with exotic softwood species

INDICATOR 11B – EXTENT OF PLANTED FOREST TYPE

Plantation type	1999–00	2005–06	2006–07	
Softwood (Pinus spp)	57%	47%	46%	232 227
Hardwood (Eucalyptus spp)	14%	11%	10%	50 334
Total planted area	71%	58%	56%	282 560
Retained vegetation and infrastructure	21%	41%	40%	203 308
Land for future planting	8%	5%	6%	27 967
Other Exclusions	n/r	1%	1%	4 731
Total planted forest estate	100%	100%	100%	518 566

* 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.

Forest Value: Biodiversity
Objective: Threatened species at risk from forestry operations identified and adaptive management applied.

INDICATOR 13 – SIGHTINGS OF SURVEYED SPECIES

Species sightings	1997–97	2005–06	2006–07
Arboreal mammals	268	1 040	1 129
Ground mammals	195	77	31
Frogs	204	937	305
Bats	93	121	66
Raptors	86	154	182
Non raptor birds	110	380	542
Reptiles	n/r	3	1
Total sightings	956	2 712	2 256
Number of fauna surveys	n/r	1 491	1 779
Sightings per survey	n/r	1.82	1.27
Expenditure on surveys (\$'000)	n/r	482	427

Surveys for threatened flora are also undertaken before harvesting occurs, however these are not reported here.

Forest Value: Forest Health
Objective: Manage weeds and animal pests through active coordinated and cooperative programs

INDICATOR 14 – EXPENDITURE ON PEST ANIMAL AND WEED CONTROL

	1997–98	2005–06	2006–07
Weeds	\$1 325 000	\$669 365	\$779 070
Pest animals	\$328 000	\$546 268	\$586 343
Total	\$1 653 000	\$1 215 633	\$1 365 413

Forests NSW is a major contributor to control programs for foxes, dogs, goats, pigs, cattle, blackberries, willow, serrated tussock, horehound, Lantana and Patersons Curse.

Forest Value: Forest Health
Objective: Monitor and address plantation health issues: 0% of plantation affected by health issues

INDICATOR 15 – PLANTATION HEALTH			
Hardwood plantation			
Agent	1998-99	2005-06	2006-07
Herbivorous and sap-sucking insects	23.80%	2.00%	3.00%
Stem borers (insects)	7.50%	0.00%	3.00%
Soil pathogens (fungi)	1.00%	0.00%	0.00%
Frost damage	n/r	0.00%	0.02%
Leaf and shoot fungi	n/r	2.00%	2.00%
Softwood plantation			
Agent	1998-99	2005-06	2006-07
Dothistroma (Needle blight)	1.00%	0.25%	0.50%
Sphaeropsis (fungus)	3.00%	0.01%	6.00%
Boron deficiency	4.00%	0.01%	n/a
Sirex (insect)	0.00%	0.01%	1.20%
Possum damage	0.00%	0.01%	1.00%
Essigella Aphid	n/r	25.00%	40.00%

Forest Value: Forest Health
Objective: Managed through integrated and cooperative fire hazard management and wildfire suppression programs

INDICATOR 16 – FIRE FIGHTING AND PREVENTION			
Wild fire	2001-02	2005-06	2006-07
Percent of total State forest estate	3.50	0.70	3.89
Expenditure (\$M)	2.70	2.20	3.05
Fuel management			
Hazard reduction (hectares)*	58 893	38 008	37 014
Grazing (hectares)	644 966	535 213	564 591
Expenditure (\$M)	6.10	6.70	8.18

* Includes pre and post harvest burning

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

Forest Value: Soil and Water Quality
Objective: Ecological processes associated with soil and water maintained
Objective: Assess all areas to be harvested for risks to soil and water quality

INDICATOR 17A – SOIL AND WATER MANAGEMENT			
	1999-00	2005-06	2006-07
Area assessed for soil and water (hectares)	n/r	117 190	125 554
Number of soil and water surveys	n/r	340	252
Expenditure on harvesting supervision and environmental compliance (\$'000)	n/r	6 009	6 219
Area of native forest harvested	56 900	43 709	45 945
Area of softwood plantation harvested	14 000	11 930	12 754
Area of hardwood plantation harvested	2 000	0	10
Total area harvested	73 000	55 155	58 709
Percent of forest estate harvested	2.40%	2.26%	2.36%
Soil and water non-compliance incidents self reported	1 255	284	395
Fines received in relation to soil and water	3	4	2

The area harvested figure for 2005-2006 has been amended here as the figure for the area harvested in the Tumut Sub-region was incorrect.

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

INDICATOR 17B – SOIL AND WATER MANAGEMENT			
	1999-00	2005-06	2006-07
Fully protected land (hectares)*	290 700	196 049	182 619
Partly protected land (hectares)**	30 200	53 587	62 839
Total***	320 900	249 636	245 458

* 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.

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.

Forest Value: Compliance
Objective: Achieve a 100% compliance rate with zero prosecutions and fines

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

* Relates to Forests NSW Tier 1 audits only

The increase in potential compliance checks is because the elements in each checksheet has substantially increased consistent with EMS (ISO 14001) and AFS (AS 4708) requirements.

Forest Value: Environmental Services
Objective: Maintain a positive contribution to Australia's net emission reduction program for carbon dioxide

INDICATOR 19 – CARBON SEQUESTRATION			
Planted forest type	2002-03	2005-06	2006-07
Softwood (tonnes)	3 654 974	3 672 765	3 633 759
Hardwood (tonnes)	585 331	575 571	563 688

*Assumptions:

CO₂ sequestered (tonnes CO₂e) = 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

BD (Basic Density) – softwood = 0.42 t/m³ and hardwood = 0.55t/m³

CBI (Canopy Biomass Increment) = SBI x .1765

RBI (Root Biomass Increment) = (SBI + CBI) x .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)

Forest Value: Environmental Services
Objective: Reduce greenhouse gas emissions and increase energy sourced from green power

INDICATOR 20A – ENERGY CONSUMPTION

Year	Total Energy (GJ)	CO ₂ Emissions (tonnes)	Green energy purchased (%)
1998–99	111 893	10 419	8.3
1999–00	110 774	10 066	14.5
2000–01	110 740	10 032	14.3
2001–02	110 740	10 032	14.3
2002–03	117 227	10 526	14.7
2003–04	111 392	10 060	13.6
2004–05	99 988	9 035	15.3
2005–06	99 018	9 031	16.0
2006–07	92 418	8 989	1.2

The drop in green energy relates to the closing of the Pennant Hills office. The remaining staff moved to the renovated offices in Cumberland State Forest at West Pennant Hills.

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

INDICATOR 20B – ENERGY CONSUMPTION

Fleet	Fuel type	2000–01	2005–06	2006–07
Light vehicles	Number diesel vehicles	573	478	439
	Number petrol vehicles	239	122	106
	Number LPG vehicles	n/r	1	1
	Hybrid vehicles	n/r	1	1
	Total number vehicles	812	602	547
Trucks and light plant	Number diesel fleet trucks and light plant	139	206	190
	Number petrol fleet trucks and light plant	11	6	5
	Number LPG fleet trucks and light plant	n/r	4	4
	Total number fleet trucks and light plant	150	216	199
	Heavy plant	Number diesel fleet heavy plant	86	55
Number petrol fleet heavy plant		0	0	0
Total number fleet heavy plant		86	55	49

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

Forest Value: Environmental Services
Objective: Increase recycling of products consumed, and purchase more products with recycled content

INDICATOR 21 – MATERIAL CONSUMPTION AND RECYCLING

	2002–03	2005–06	2006–07
Percent of waste recycled or re-used	53	74	75
Percent of product with recycled content	20	22	24

Economic

Forest Value: Marketing and Sales
Objective: Meet market demands for wood products

INDICATOR 22 – VOLUME OF TIMBER HARVESTED

Product	1999–00	2005–06	2006–07
Sawlogs and veneer logs (m ³)			
Native forest hardwood sawlogs	786 774	664 778	566 706
Hardwood plantation sawlogs	55 466	64 364	105 510
Cypress pine sawlogs	101 881	70 974	57 578
Plantation softwood sawlogs	1 648 790	1 964 487	1 955 399
Plantation softwood veneer logs	70 919	44 464	32 079
Native forest hardwood veneer logs	10 600	10 118	8 777
Hardwood plantation veneer logs	2 819	3 191	7 073
Total sawlogs and veneer logs	2 677 249	2 822 376	2 733 122

INDICATOR 22 – VOLUME OF TIMBER HARVESTED – CONTINUED

Product	1999–00	2005–06	2006–07
Poles, piles and girders (m ³)			
Native forest hardwood	28 432	25 984	27 387
Plantation hardwood	5 479	11 535	11 768
Total poles, piles and girders	33 911	37 519	39 155
Round timber (m ³)			
Preservation plantation softwood	56 422	27 706	68 472
Preservation native forest hardwood	11 169	0	0
Total round timber	67 591	27 706	68 472
Pulpwood (tonnes)			
Native forest hardwood pulpwood	503 546	504 259	551 955
Plantation hardwood pulpwood	82 660	39 433	64 431
Plantation softwood pulpwood	636 058	983 298	1 188 478
Total pulpwood	1 222 264	1 526 990	1 804 864
Other			
Fencing/landscape/sleepers/firewood (m ³)	7 575	30 833	50 419
Total other	7 575	30 833	50 419

The decrease in saw and veneer log volumes harvested reflects the continued downturn in the housing market. Note that minor differences appear between data provided here and in the Forests NSW Annual report. This is due to different approaches in reconciliation of harvested volumes within the period reported.

Forest Value: Marketing and Sales
Objective: Increase the percentage of wood harvested going to high value products

INDICATOR 23 – PRODUCT MIX

Sawlog product mix (%) from hardwood forests (native and plantation)			
Product	1995–96	2005–06	2006–07
Dry structural	21	8	7
Floorboards	22	48	50
Joinery/furniture	1	5	6
Decking/panelling	4	3	4
House framing	30	15	14
Pallets	12	10	9
High strength structural	2	2	2
Fencing/landscape	8	9	8
Sawlog product mix from softwood plantation (%)			
Product	1995–96	2005–06	2006–07
House framing	71	73	71
Joinery/furniture	2	2	2
Decking/panelling	1	4	5
Floorboards/bearers/joists	3	2	3
Fencing/landscape	7	8	7
Other preservation	1	4	4
Unseasoned	14	7	8

Forest Value: Marketing and Sales
Objective: Increase number of National Greenhouse Abatement Certificates created

INDICATOR 24 – CARBON ACCOUNTING*

	2004–05	2005–06	2006–07
Number of certificates created**	166 005	541 200	538 471
Area of plantation accredited for carbon trading	n/r	27 019	23 515

* 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 is removed from the atmosphere.

Sustainability

Forest Value: Productivity

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

INDICATOR 25 – FOREST MANAGEMENT INTENT						
Forest management intent	Land not available for harvesting (hectares)			Land available for harvesting (hectares)		
	1999–00	2005–06	2006–07	1999–00	2005–06	2006–07
FMZ 1 Dedicated reserve	33 500	28 958	22 936	0	0	0
FMZ 2 Informal reserve – special management	322 500	200 019	245 440	0	0	0
FMZ 3a Informal reserve – harvest exclusion	199 000	298 879	234 732	0	0	0
FMZ 3b Special prescription	54 500	26 138	22 936	13 500	24 904	17 472
FMZ 4 General management native forest	387 500	394 283	456 895	1 368 000	845 854	877 149
FMZ 5 Hardwood planted forest estate*	0	49 194	47 643	46 000	54 395	57 485
FMZ 6 Softwood planted forest estate*	102 600	177 406	156 221	201 720	231 324	233 407
FMZ 7 Non forestry use	8 000	8 267	6 808	0	0	0
FMZ 8 Land for further assessment	0	0	0	326 500	94 813	113 529
Total forest estate	1 107 600	1 183 145	1 193 609	1 965 720	1 251 290	1 299 042

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

The increase in the area is principally associated with allocating native forest previously within planted forest operations to appropriate native forest management zones.

Forest Value: Productivity

Objective: Plantations, which maintain the timber supply strategy, effectively established

INDICATOR 26 – PLANTATION ESTABLISHMENT AND SURVIVAL						
	Area planted (hectares)*			Cost (\$'000)	Percent with successful stocking after 1 year	
	Softwood plantation	Hardwood plantation	Total		Softwood plantation	Hardwood plantation
1995	4 732	941	5 673	n/r	n/r	n/r
2005–06	6 547	267	6 814	13 310	94	100
2006–07	6 527	0	6 527	12 555	37	n/a

* Third party investor plantings such as TEPCO are included.

The very poor survival rate in softwood plantations is directly related to continued drought conditions and represents a significant challenge for Forests NSW.

Forest Value: Productivity

Objective: Plantation growth rates are at acceptable levels to achieve future productivity

INDICATOR 27 – MEAN ANNUAL GROWTH IN PLANTED FORESTS			
Softwood plantation	2000–01	2005–06	2006–07
Annual increment* (m ³)	3 465 000	3 431 262	3 692 557
Net stocked area** (hectares)	205 007	210 006	225 983
Mean annual increment*** (m ³ /ha/yr)	16.90	16.34	16.34
Hardwood plantation	2000–01	2005–06	2006–07
Annual increment* (m ³)	n/d	342 990	359 829
Net stocked area** (hectares)	n/d	25 173	26 408
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.

Hardwood plantations as defined here relates to post 1994 hardwood plantations only.

Forest Value: Productivity

Objective: 100% of surveyed harvest area effectively regenerated

INDICATOR 28 – NATIVE FOREST REGENERATION			
Regeneration surveys	1997–98	2005–06	2006–07
No. of regeneration surveys undertaken	n/r	53	20
Area surveyed (hectares)*	n/r	3 870	824
Percent with effective regeneration	n/r	74%	63%
Expenditure on Silviculture and Inventory (\$'000)	n/r	4 342	4 321

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

The low percentage of effective regeneration is a result of the drought and in particular the lack of flood events in the river red gum forests of the Riverina Region.

Forest Value: Maintainability

Objective: Harvesting of wood products is within allowable levels

INDICATOR 29 – SUSTAINABLE YIELD*			
Forest type	1999–00	2005–06	2006–07
Native hardwood forest	95%	83%	93%
Native cypress forest	97%	96%	96%
Softwood planted forest	95%	96%	98%
Total pulpwood	102%	94%	89%
Native pulpwood	100%	104%	93%

* Within the scope of the wood supply and licencing agreements.

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

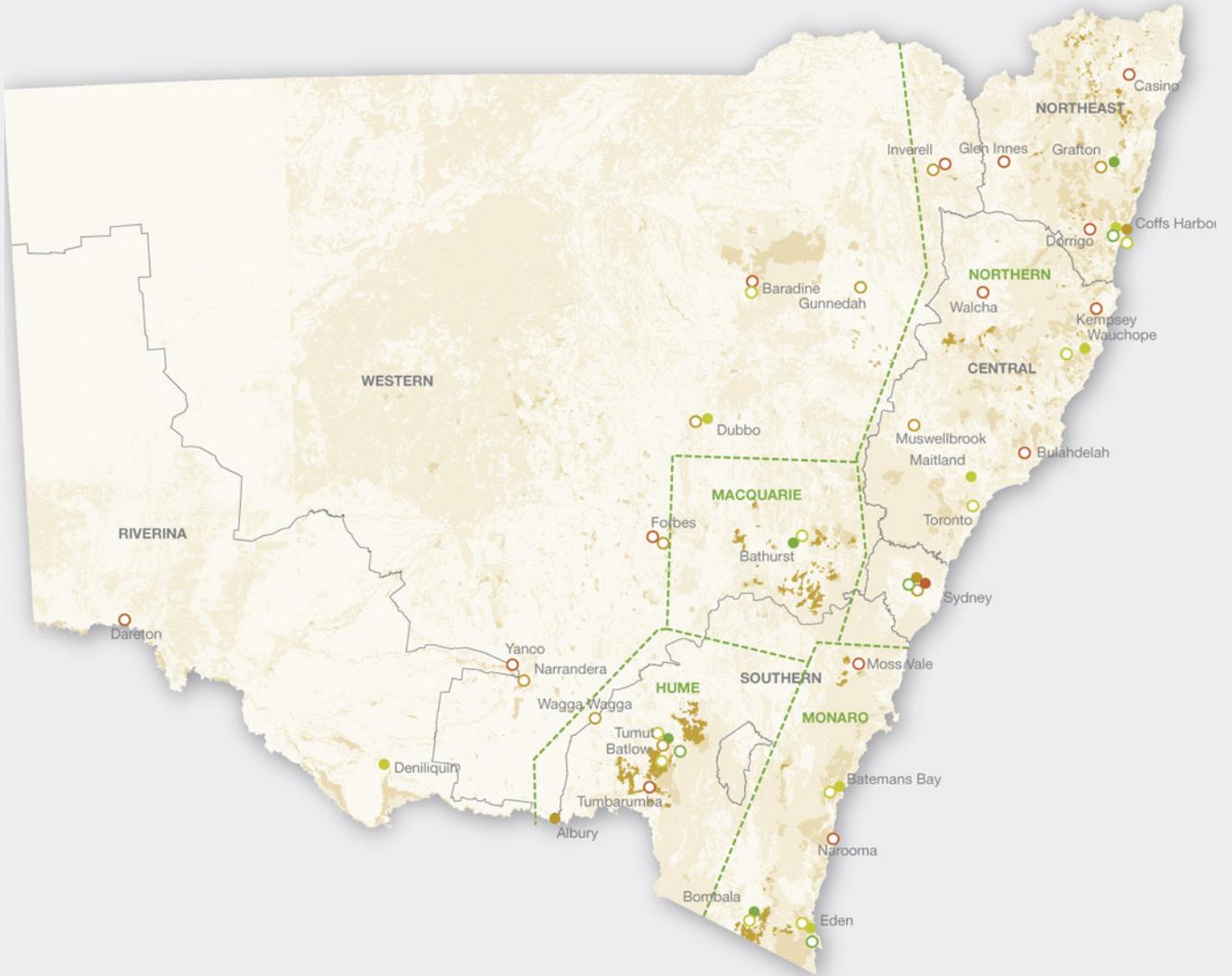
Forest Value: Maintainability

Objective: Increasing management efficiency is achieved as profit per employee increases

INDICATOR 31 – OPERATING PROFIT			
Year	1999–00	2005–06	2006–07
Value (\$'000)*	29 541	31 116	28 037
\$/000 per employee	24.3	29.1	25.6

* Exclusive of forest revaluation, capital grants, superannuation fund interest and abnormalities

Forests NSW Regions



- | | |
|--------------------------------------|---------------------------|
| ■ Native Forest | ● Corporate Office |
| ■ State Forest Native | ● Business Service Centre |
| ■ Hardwood Plantation | ● Regional - Native |
| ■ Softwood Plantation | ● Regional - Planted |
| — Native Forest Region Boundary | ○ Forest Centre |
| - - - Planted Forest Region Boundary | ○ Nursery |
| | ○ Workshop |
| | ○ Research |

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Feedback

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Facts and Figures
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