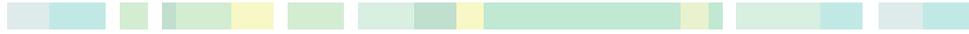




Forests NSW Annual Report 2010–11

Social, Environmental and Economic Performance



Letter to the Minister

The Hon. Katrina Hodgkinson, MP

Minister for Primary Industries
Minister for Small Business

Level 30 Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

Dear Minister

I am pleased to submit for presentation to Parliament the Annual Report of Forests NSW for the period 1 July 2010 to 30 June 2011.

The report complies with the requirements of the *Annual Reports (Statutory Bodies) Act 1984*, and the *Public Finance and Audit Act 1983*.

Copies have been made available for tabling in Parliament.

Yours sincerely



Nick Roberts

Chief Executive Officer
Forests NSW

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Acknowledgements

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Dave Barnes – DPI Photographer
Forests NSW Image Library and as acknowledged

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PDF format copies of this and previous Forests NSW Reports are available from the Forests NSW website: www.forests.nsw.gov.au

For hard copies of this report, contact Forests NSW at:

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In the interest of protecting and preserving our environment, Forests NSW has used Nordset paper which is made with fibre obtained from sustainably managed forests. It is oxygen bleached, Totally Chlorine Free (TCF) dioxin and acid free.



Our vision

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

Our mission

To provide safe and commercially sustainable forest management services to the Government and people of New South Wales and independent investors while increasing the value of their investment.

Who we are

Forests NSW is a public trading enterprise within the NSW Department of Primary Industries, part of the Department of Trade and Investment, Regional Infrastructure and Services.

Being a public trading enterprise means that Forests NSW is engaged in forest management services that could, in principle, be provided through the marketplace without compromising the Government's social, environmental and economic objectives.

Operating under the *Forestry Act 1916*, we manage more than 2 million hectares of native and planted forests across New South Wales (NSW) to internationally recognised standards, delivering a range of economic, environmental and social benefits to the people of NSW and future generations.

Safety is our first priority for our people, contractors, visitors and users of State forests. In all our forest management activities, the observance of safe work practices is the guiding principle by which we operate.



What we do

In managing State forests, we undertake planting and regeneration operations, plan and manage harvest operations and market and deliver timber.

Forests NSW supplies forest products and services to a wide range of customers located within NSW, across Australia and overseas. We engage over 100 contract companies employing over 1 300 people in the production and delivery of these products and services.

Along with traditional timber activities, we are expanding commercial business opportunities such as carbon sequestration and trading, wood-based renewable energy products and eco-tourism.

In undertaking these forest management services, we engage a workforce across many regional areas, building strong regional economies, with the timber industry contributing nearly \$1 billion to the NSW economy each year.



Overview

Consideration for the environment we live in, communities we are a part of and the materials we rely on forms the basis of how we manage State forests.

2011 is the United Nations International Year of Forests dedicated to celebrating people's action to sustainably manage the world's forests. Forests NSW continually strives to improve its sustainable forest management through regulatory compliance, continuity of supply and adherence to the internationally recognised Australian Forestry Standard (AS 4708:2007).

During the year Forests NSW achieved a strong financial performance with a trading profit of \$33.7 million. This is particularly pleasing considering difficult operating conditions in much of the State as a result of wet weather. Our continued focus on improving the way we do business, together with higher softwood timber sales and sale of NSW Greenhouse Abatement Certificates generated a strong cash flow. Thanks to this, Forests NSW has been able to pay down a further \$10 million of debt, reducing interest payments by \$550 000. In addition \$14 million was paid to NSW Treasury by way of dividend.

A key milestone during the year was the completion of the Integrated Forestry Operations Approvals (IFOA) for the red gum and the south-western cypress forests. Development of these IFOAs, which follows the Natural Resources Commission assessment and the red gum decision of the NSW Government in 2010, was achieved through cooperative negotiations with the Office of Environment and Heritage. The IFOAs provide certainty for the continuing forest industry in the south and south-west of the State.

People are at the heart of what we do and the health and safety of Forests NSW employees is paramount. Significant improvements and cultural change initiatives have been implemented over the last three years, which has assisted in achieving this year's recordable incident rate of 5.6; although better than last year, still below the target of 4.75. It is pleasing however that the reduction in the number of incidents is also accompanied by a reduction in the severity of incidents as indicated by a significant reduction in the number and cost of workers compensation cases and the overall cost of claims reducing by \$430 015 during the year.

Several initiatives were implemented during the year to extend the focus on safety to the contractors who undertake harvest and haulage for Forests NSW. One notable initiative implemented jointly with the Forest Industry Association was the introduction of the 1800 LOGHAUL phone number for members of the public to convey compliments or complaints about the behaviour of log trucks on roads. The initiative was implemented in the Hume Region and will extend to other regions over the coming months.

Investment in the Blowering Nursery in Tumut continued with the construction of the second stage of the containerisation facility. The nursery is now capable of producing just under 9 million containerised seedlings every year extending water savings and increasing the survival rate of seedlings after planting.



INTERNATIONAL YEAR OF FORESTS • 2011

Two members of the Senior Management Team left the organisation during the year. At the end of March 2011 Erle Robinson, Director of Native Forests Operations Branch vacated the post to return to New Zealand. This was followed in early July by the resignation of Sean Hooper as Director of Financial and Operational Business Services. Both Erle and Sean made very significant contributions to the management of Forests NSW in the last three years. We would like to thank them and wish them all the best in the future.

Marketing Director Dean Anderson has been appointed to head the Native Forest Branch. With Dean's appointment, the marketing of softwoods and hardwoods previously undertaken by the Commercial Services Branch has devolved to the operating branches.

We look back on a year of significant achievement, particularly in the face of substantial challenges, and it is thanks to the dedicated and professional staff of Forests NSW that the organisation has come closer to being the best and safest forest manager in Australasia. We thank all Forests NSW staff for their hard work and resourcefulness over the year.



Richard Shel Drake
Director-General
Department of Primary Industries
Commissioner for Forests



Nick Roberts
Chief Executive Officer
Forests NSW

Senior management team



From left to right; front row: Della Prowse, Nick Roberts, Rahmat Khaiami.

Back row: Dean Anderson, Ian Brown, Ross Dickson, Barry Heffernan (A/Financial & Operational Business Services).

Corporate business strategy

Key Result Area: Focus		
Performance measure / Goal	Target	Performance
Ongoing improvement in safety results	A 35% actual reduction on June 2010 for recordable injuries	Number of lost time incidents and recordable injuries was 41 compared to 57 in 2009–10. The recordable incident rate was 5.6, a 20% reduction on June 2010 result of 7.3
Meeting profitability and dividend targets as agreed with Treasury	As per Statement of Business Intent	Targets exceeded
Maintenance of AFS certification and ISO 14001 accreditation of the EMS	Ongoing	Certification to AFS and EMS maintained
Meeting or exceeding contractual obligations to customers	Ongoing	With timber supply impacted by severe wet weather in some areas in native forests, close contact was maintained with customers and force majeure provisions of contracts were invoked where required. A dispute with one major customer is continuing. Contract obligations met for softwood customers.
Forest burnt by damaging wildfire	Less than 0.3% of forest estate	703 hectares of State forest was burnt by wildfire representing 0.003% of the forest estate
Key Result Area: Organisational efficiency		
Performance measure / Goal	Target	Performance
Implementation of the performance management system for all staff	Ongoing	Implemented for public servants but not commenced for fieldworkers
Meeting the milestones of the approved reorganisation plan for Native Forest Operations to achieve cost neutrality	June 2011	Completed
Review fire fighting methods and resources	December 2010	An external review of fire management was completed in March 2011
Key Result Area: Revenue growth		
Performance measure / Goal	Target	Performance
Implementation of major pricing review recommendations	Ongoing	Two of the six 3% structural price increases have been implemented. The remaining instalments are planned to be implemented from 2012
Implementation of at least one initiative to increase revenue from forest management services	June 2011	Not completed due to external factors affecting managed investments schemes
Complete preparations and Expression of Interest (EOI) for at least two extractive resources projects	December 2010	One EOI was completed for Hamburger Hill in Central Region with preparatory work for a second EOI nearing completion
Key Result Area: Cost reduction		
Performance measure / Goal	Target	Performance
Implementation of approved options for the future of the retail nurseries business	December 2010	Delayed, but will be implemented in 2011–12
Implementation of at least two initiatives to reduce corporate overheads	June 2011	Site Based Management Strategy introduced for plantation establishment and re-establishment. Roading costs reduced through rigorous project management and fit-for-purpose construction
Continuous evaluation of business and operational practices	Ongoing	New Chart of Accounts and online purchase order system implemented

Key Result Area: Simplification		
Performance measure / Goal	Target	Performance
Ongoing review and streamline of organisational structures to meet business needs	June 2011	Marketing functions devolved to operating branches
Strategic review of information management and ICT requirements	June 2011	A draft ICT Strategic Plan prepared
Complete the review of the sales administrative support processes and implement approved recommendations	June 2011	Sales functions devolved to operating branches
Complete the review and resourcing of land management and estate administrative functions	December 2010	Completed

Summary of significant achievements and challenges

Social	Environmental	Economic	Sustainability
<p>Working with partners to improve safety in the timber industry:</p> <ul style="list-style-type: none"> ■ Implemented 1800 LOGHAUL – 24 hour phone line to report truck driver behaviour ■ Partnering with WorkCover NSW 	<ul style="list-style-type: none"> ■ Commencing three projects to address recommendations from an external review of fire management capabilities and resourcing 	<ul style="list-style-type: none"> ■ Paying a dividend to NSW Treasury of \$14 million 	<ul style="list-style-type: none"> ■ Completing Stage 2 of Blowering Nursery containerisation expansion
<ul style="list-style-type: none"> ■ Delivering Forests NSW education programs to 4190 school students 	<ul style="list-style-type: none"> ■ Working with regulators to eliminate further breaches following the issue of penalty notices for breaches of forestry regulations 	<ul style="list-style-type: none"> ■ Reducing debt by \$10 million and reducing interest payments by \$550 000 million per annum 	<ul style="list-style-type: none"> ■ Maintaining certification to Australian Forestry Standard (AS 4708:2007)
<ul style="list-style-type: none"> ■ Finalising two Expressions of Interest to establish commercial recreation businesses 	<ul style="list-style-type: none"> ■ Working effectively with customers to manage impact of prolonged wet weather periods on timber supply, while protecting environment values 	<ul style="list-style-type: none"> ■ Implementing a Site Based Management Strategy for planted forest estate resulting in significant savings in plantation establishment and re-establishment 	<ul style="list-style-type: none"> ■ Signing harvest and haulage contracts for Monaro Region valued at \$14 million annually to supply new mill
<ul style="list-style-type: none"> ■ Delivering Leadership, Management and Supervisor Development Programs to 44 staff 	<ul style="list-style-type: none"> ■ Maintaining environment management system certification to ISO 14001:2004 	<ul style="list-style-type: none"> ■ Introducing a new Chart of Accounts to better support our business and improve reporting 	<ul style="list-style-type: none"> ■ Finalised Integrated Forestry Operations Approvals for red gum and south-western cypress forests freeing the way for harvest operations

Five year comparison as at 30 June 2011

	2007 \$'000	2008 \$'000	2009 \$'000	2010 \$'000	2011 \$'000
Revenue¹	270 550	293 795	286 259	328 712	327 307
Profit					
Trading profit ¹	28 037	14 499	- 16 389	19 738	33 746
Significant items and biological assets revaluation ²	- 166 357	19 356	-30 284	-23 852	93 068
Profit/(Loss) from ordinary activities (before tax)	- 138 320	33 855	-46 673	- 4114	126 814
Distribution to Government					
Distribution payable	16 000	1000	0	9600	14 000
Capital expenditure	45 039	10 242	8 230	8 862	11 767
Balance sheet					
Value of biological assets ³	1 403 831	625 000	670 000	661 986	750 628
Total assets	2 703 913	1 891 823	1 871 865	1 872 903	1 920 399
Borrowings	159 743	169 489	165 209	140 734	132 002
Total equity ⁴	1 921 105	1 365 299	1 308 222	1 069 820	1 111 228
Ratios % (excl abnormals & MVI)					
Return on equity ¹	1.46%	1.06%	-1.25%	1.84%	3.04%
Return on assets ¹	1.04%	0.77%	-0.88%	1.05%	1.76%
Debt to equity	8.32%	12.41%	12.63%	13.15%	11.88%
Return on equity (including MVI)	10.45%	3.02%	2.19%	1.03%	11.01%
Sawlogs ('000 of cubic metres)⁵					
Native forest hardwood sawlogs	567	610	593	564	468
Plantation hardwood sawlogs	106	122	151	122	111
Plantation softwood sawlogs	1955	2071	1918	2101	2115
Cypress pine sawlogs	58	49	56	59	52
Other Products	48	47	161	208	164
Total	2734	2899	2879	3053	2910
Pulp (tonnes)					
Native forest hardwood	552	500	465	488	525
Plantation hardwood pulpwood	65	77	99	84	68
Plantation softwood pulpwood	1188	1169	1083	1224	1562
Total	1805	1746	1647	1796	2155

¹ Exclusive of forest revaluation, asset impairments and superannuation fund interest and significant items

² Inclusive of forest revaluations, asset impairments and superannuation fund interest

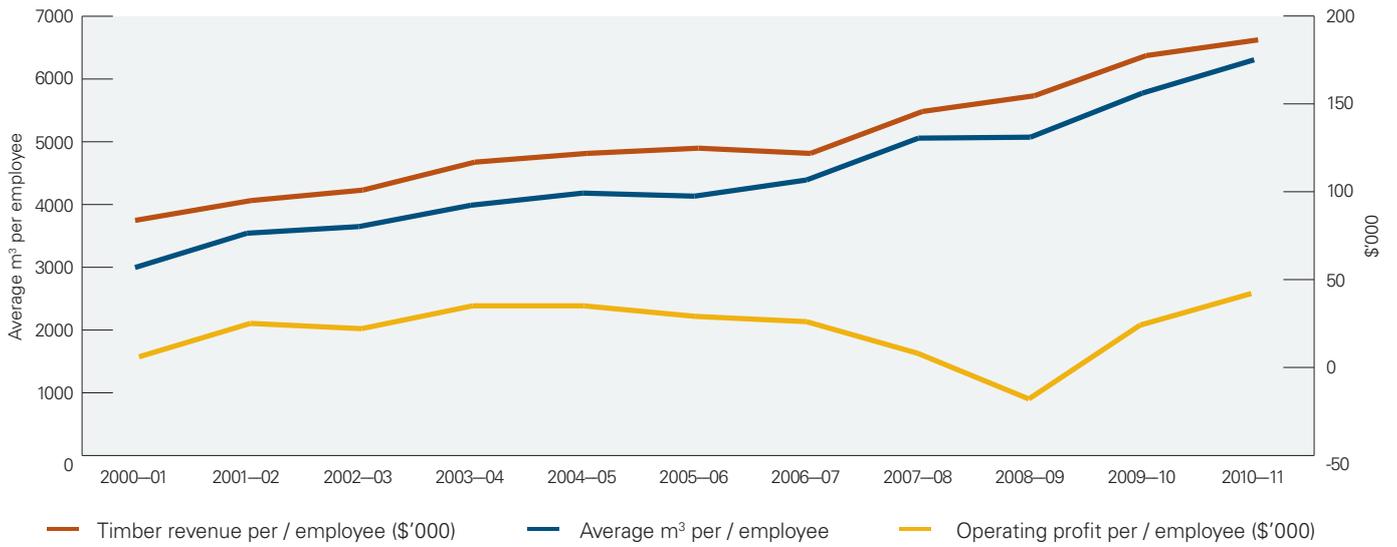
³ Biological assets represent the commercial value of Forests NSW timber resources

⁴ Australian Equivalents to International Accounting Standards (AEIFRS) was effective from 01/07/04

⁵ Softwood preservation included from 2010–11

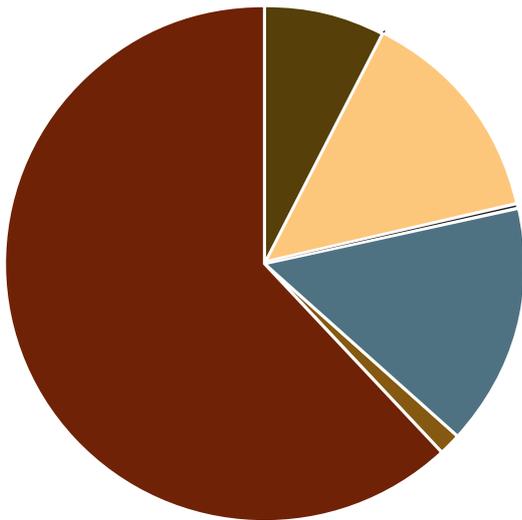


Productivity measures



Types of harvest operations undertaken by area¹

Native forest area harvested¹

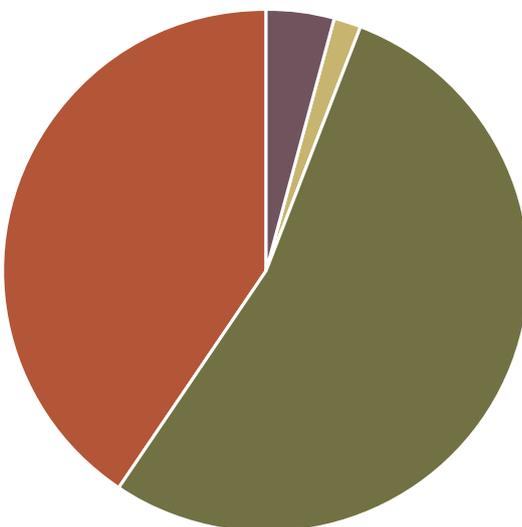


Native forest area harvested total (ha)		27 864
Alternate coupe	2147	
Australian Group Selection	10	
Commercial thinning	3873	
Cypress release ²	4212	
Non-commercial thinning ²	380	
Single Tree Selection	17 242	

¹ Descriptions of the native forest harvest methods can be found in the Forests NSW Native Forest Silviculture Manual, and involve retaining a percentage of trees in the harvested area.

² Western Region estimates. Non-commercial is defined as areas thinned according to silvicultural practices for the purpose of improving future productivity of a stand, but which do not yield a commercial product.

Plantation area harvested



Plantation area harvested total (ha)		14 943
Hardwood clearfall	653	
Hardwood thinned	221	
Softwood clearfall	8037	
Softwood thinned	6032	

Social

Operating as the safest commercial forest manager in Australasia, while building partnerships and generating economic and social benefits within the community, particularly for rural and regional communities.

Forest value: Community benefits		
Indicator	Results	Performance
1. Social responsibility	228 community participants in voluntary programs	●
2. Public participation	At least 2100 hours of staff time invested in attending stakeholder meetings and forums	●
3. Recreation and tourism	121 recreational sites providing a range of facilities, with information for specific locations available through the website;	●
	568 permits issued for organised recreational activity with \$2.4 million spent on recreational service provision	
4. Research and education	\$3.5 million on research;	○
	\$2.4 million on education with over 4190 participants in educational programs	
5. Regional employment	Based on 2006 census data over 12000 indirect jobs are dependent on timber processing in NSW. State forests-dependent employment has decreased since last year due primarily to revocation of State forests in the south-west of the State	●
6. Other forest products	Access maintained to State forests for apiary, grazing and other products appropriate to forestry	●
Forest value: Staff		
7. Quality of management	803 people directly employed by Forests NSW; \$2.39 million on staff management;	○
	\$2.68 million on training	
8. Management and training	Sum of attendance at training courses for staff and contractors was 3151, representing a 44% increase on last year	●
9. Health and safety	Recordable Incident Rate of 5.6 and Lost Time Incident Rate of 2.9	●
Forest value: Cultural heritage		
10.	Protection of cultural heritage	●
	Cultural heritage training	
<p>Symbol interpretation: ● Target achieved or maintained ○ On track to meeting target ● Target not achieved – action required</p> <p>Performance is measured against stated objectives listed with each of the indicators in the appendices; pages 34–41</p>		



Primary school students from North Ryde Public School on an educational tour of Cumberland State Forest. Photo by Dominic Loneragan

Part of and contributing to communities

With forest estate spread across the State, Forests NSW is both an integral part of and a social contributor to regional communities. This is most obvious through recreational opportunities, roads and employment provided, but is also evident in education, tourism development, safety initiatives and co-management agreements.

Community engagement and education

The visitor facilities within Cumberland State Forest, Australia's only metropolitan State forest, were substantially improved during 2010–11. Two of the popular picnic areas were upgraded with new tables, barbecue and toilet facilities, while two of the forest's three walking tracks were reconstructed to improve visitor safety and the Forest Visitor Centre, open seven days a week, was refurbished, complete with interactive stations, informative displays and multimedia elements.

Forests NSW also worked with other state-based forestry agencies and industry associations to develop a new education website focusing on forests and forestry – www.forestlearning.edu.au

In October, Cumberland State Forest hosted the Forest Fair attended by more than 3500 people. The fair showcased the multitude of forest benefits such as timber, recreation opportunities and environmental interests.

Forests NSW support for industry and community events continued with sponsorship of the Timber and Working with Wood Show, Kendall Violin Competition and a number of industry conferences.

Working with our contractors

Forests NSW continued to work with business partners to improve the safety performances of contractors, particularly those employed in harvest and haulage operations. Training forums shared the Forests NSW professional health and safety team experience and knowledge.

During 2010–11 Forests NSW entered a partnership with WorkCover NSW aimed at improving safety performance across the entire forest industry.

Forests NSW has worked with the Forest Industry Council to develop truck safety initiatives to improve safety on forest and high use public roads. One such initiative was 1800 LOGHAUL, a 24-hour telephone service for people to confidentially report driver behaviour and make comments on log haulage in general. The initiative began within the Hume Region with high visibility signs being placed on all Forests NSW haulage contractors' vehicles. The signs show the truck number and the 1800 phone number for callers to report the actions of log truck drivers, both good and bad.

Cultural heritage

Forests NSW works with Aboriginal people to protect cultural heritage and empower people through participation in management programs and processes.

In Central Region a Memorandum of Understanding between Forests NSW and the Anaiwan Elders saw Forests NSW funded site improvements undertaken, including the installation of two water tanks, dual toilet constructed and installed and a slab for a shelter poured.

During the year Southern Region signed a co-management agreement with Ulladulla Local Aboriginal Land Council (LALC) on an area of State forests that contains significant Art sites. The agreement opens the way for use of the area in a possible LALC Eco-tourism venture.

Southern Region also signed an agreement with Eden LALC on a Land and Sea Country Plan that will see the LALC develop a group of rangers active throughout their boundaries for Forests NSW, National Parks and Wildlife Service, Shire Council and Landcare groups as well as the Southern Rivers Catchment Management Authority. The intention is that collectively these land management agencies can give a number of Aboriginal people full-time work undertaking weed clearing along rivers and beaches, hazard reduction burning for Forests NSW and National Parks and Wildlife Service as well as other works for Landcare and the Council.

In another project Eden LALC is working with Forests NSW and National Parks and Wildlife Service on developing a walking trail that connects the coast at Eden to the high country around Mount Kosciuszko. The track known as the Bundian Way is based on the old travel route used by the Aboriginal people to connect with each other from the high country to the coast for trade and for the coastal people to travel up and feast on the Bogong moths which settled in the mountains at certain times of the year. This, it is hoped, will bring tourists from around the country and the world to walk the trip and visit the LALC-owned areas along the route to provide much needed tourism work and money to the local Aboriginal and non-Aboriginal people of the area. The route was mapped out during the year and work will continue on camping areas, signage and safety management systems over the coming year.

For a state wide snapshot of data for social indicators see pages 34 to 38.

Supporting tourism

Forests NSW has expanded its commitment to supporting tourism in State forests and encouraging commercial recreation businesses to operate within forests.

During 2010–11 two operators were selected to establish commercial recreation businesses.

One will be an adventure ropes course at Cumberland State Forest and the other an educational course through the tree tops at Bruxner Flora Reserve near Coffs Harbour.

A new \$600 000 viewing platform is being built at Coffs Harbour's Sealy Lookout. More than 50 000 tourists a year visit the popular lookout and the new 20-metre long suspended walkway 10 metres above the ground will offer spectacular views of Coffs Harbour, the Solitary Islands Marine Park and about 100 kilometres of coastline.

An occupation permit has been formalised with Coffs Harbour Cycle Club over Pine Creek State Forest where the club has been using a network of close to 100 kilometres of tracks and trails for many years. It is regarded as one of the best single tracks in Australia with events attracting more than 300 cycling enthusiasts. The occupation permit transfers responsibility for maintenance and management of the network to the mountain bike club.



50 000
tourists a year
at Sealy Lookout

Photo by Howard Spencer

Capturing the past for the future – historic forestry photographs digitised

As technologies change and more information is available online, the demand for libraries as repositories of books and journals has waned. This, along with ongoing efforts to rationalise costs, has resulted in the closure of the Forests NSW library at Cumberland State Forest. During 2010–11 the library's collection was redistributed, retained or disposed of. This was no easy task and credit is due to those staff who worked so hard to ensure that books and journals found suitable homes.

The team managing this process recognised that the collection included a significant quantity of important historical forestry photographs. Rather than only moving the photographic collection to a new location, a project was undertaken to scan and catalogue the many thousands of hard copy and negative photographs first.

A number of volunteers came forward to take part in the project and a scanner was provided. Their commitment, along with dedicated support of Lindsay Nicks, has since seen the project steadily progress.

The Fred Bailey collection was the first batch scanned with nearly 4000 photographs completed. The collection gets its

name from a former Forestry Commissioner who took the photographs during the full length of his career with Forests NSW beginning in 1928. Each photograph is noted with details describing what, where and who has been photographed. This treasure trove of photographs, along with the descriptions are now available online. Please contact Forests NSW if you would like to see the photographs.

Towards the end of June 2011 the second stage of the project was underway with work focused on photographs from a vast collection spanning over a century. Forests NSW plans to make an application for government funding to engage contract services to work with the volunteers to process this large collection.

Another project has seen the care of a unique collection of wood samples from around the world transferred to the Royal Botanical Gardens and Domain Trust.

Forests NSW recognise with appreciation the volunteers and staff members for their valuable contribution to securing the future of these collections and making them available to a wider audience.



Taken in 1961 this photograph shows visitors to Billapaloola State Forest as part of a research conference.



This photograph taken in 1948 shows George Jones and Jack Sharkey selecting the next Sydney blue gum for felling in Bellangry State Forest west of Port Macquarie.



A Forestry Commission lorry taking Brushwood logs from State forests near Wauchope in 1944.



The Cory Bullock Team bringing in logs for dump in what was then the Manning River National Forest near Taree.



Boat building at Lavender Bay, Sydney, with a view across the water to the old rail line and Luna Park taken in 1965.



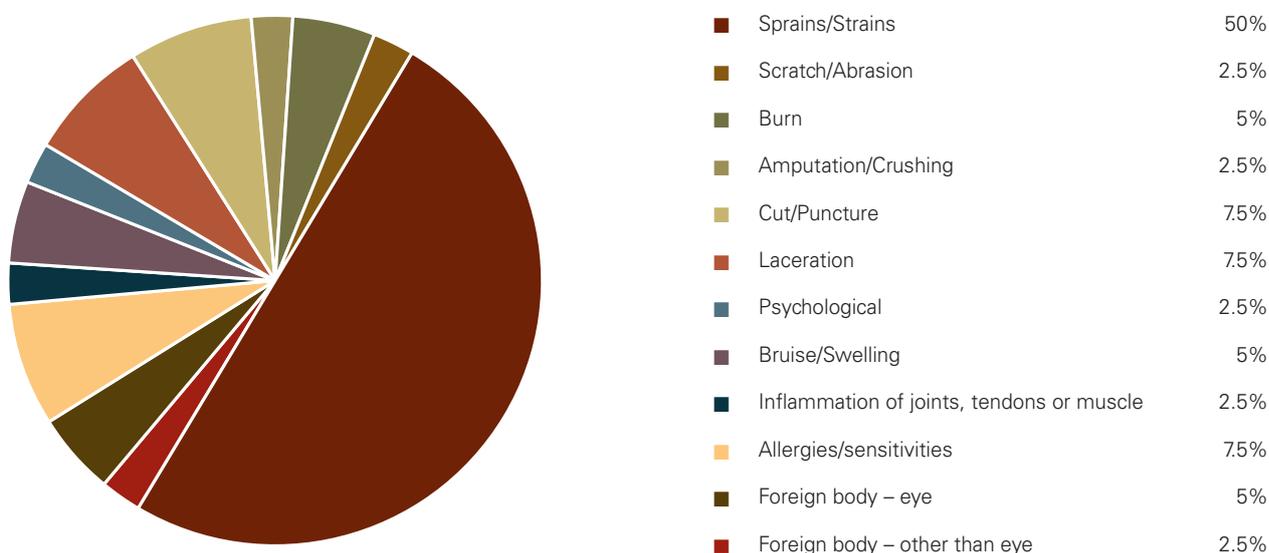
Wauchope log yard showing the loading of a log onto a rail truck by jib crane in 1947.

Safety activities and outcomes

Pillar: Leadership	
Safety activity	Outcome
Define what Safety Leadership behaviours and activities look like	Safety behaviours included in all position descriptions
Develop and deliver a comprehensive Safety Leadership training program	Additional training and refreshers are being provided to new and promoted employees
Track leadership actions	Actions are integrated into the business unit plans and reported regularly
Continue safety benchmarking for key leaders	A delegation from Forests NSW participated in an inter-company benchmarking project. Applicable learnings have been shared with the various business units
Develop 'first priority' program	Program supported through the strategic and operational Health and Safety plans
Pillar: Engagement	
Safety activity	Outcome
Each employee to commit to two safety activities annually	Continuation of the Take 2 program and all staff Safety Days for operational employees are ongoing
Employees actively involved in development of Safe Work Procedures	Structured process in place. All Safe Work Procedures have been reviewed and risk rated as part of the safety system review
Introduce benchmarking for OHS committees	New reporting criteria introduced to capture the Health and Safety committee events
Implement and train for use of Stop Work Authority Cards	Safe Work Cards were prepared and issued to all employees through business unit briefing sessions
Provide standardised resource for Toolbox Talks	A selection of standard Toolbox Talk material has been developed and is provided on the Forests NSW intranet
Pillar: System	
Safety activity	Outcome
Move to national safety model ¹	Safety Management System review has Forests NSW well prepared for the new Workplace Health & Safety laws commencing 1 January 2012
Continue with rewrite of the safety documentation	A full review of all safety standards has been conducted. Ongoing maintenance continues
Refine OHS Committee Chair training	Training delivered as required by accredited provider
Train 4 Level 1 incident investigators and 10 Level 2 investigators	Training undertaken within business units
Commence Safe Work Procedures development on a risk basis	All Safe Work Procedures have been reviewed and now include initial and residual risk indicators

¹ On 4 May 2011 the NSW Government introduced a Bill to enact the national model work health and safety legislation. The Occupational Health & Safety Amendment Bill 2011 was passed by the NSW Parliament on 1 June 2011.

Recordable incidents by type of injury



Forests NSW engaging staff on safety

With safety statistics showing that every day our routine activities are causing many of the injuries to staff in our workplace, changing safety culture and behaviours around these daily activities was an obvious high priority for the health and safety team.

The three key pillars of Forests NSW Safety Strategy 2008–11 are 'Leadership', 'Engagement' and 'Systems'. While leadership in safety and effective safety systems are vitally important to enabling a sound safety framework, engagement and ownership of safety outcomes relies largely on employees through awareness of hazards and modifying behaviours to eliminate risks at their source. These are all key components to improving safety performance and meeting our safety objectives.

Changing behaviours and increasing staff awareness and engagement in workplace safety has been the cornerstone of safety activities during the year. Two initiatives encompassing these key components of our safety strategy were launched during the year.

'Take 2 for Safety' is a hazard and risk awareness process that was rolled out to all staff at safety meetings. 'Take 2', meaning 'Talk, Actions, Knowledge, Equipment', takes a simple and practical approach to risk management by encouraging employees to 'Take 2' minutes before starting each work task to think about any potential hazards and risks involved. If a hazard or risk is identified that staff are not trained to deal with or do not have adequate safe work procedures for, additional controls are required. Where staff identify a significant hazard and do not feel confident to proceed they are required to stop, advise their supervisor and conduct a formal risk assessment before any further work proceeds.

The 'Take 2' approach to work practices is proving successful and part of normal daily activities, allowing staff to continuously consider and take action on known and unusual

hazards associated with a work area or task.

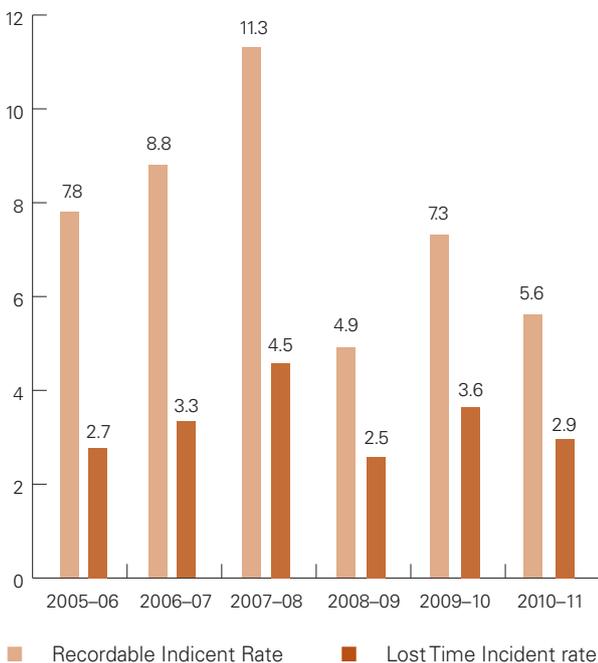
This is the case in Forests NSW workshops where the incidents of employees requiring first aid to remove foreign bodies from their eyes was cause for concern. A simple pocket book assisted employees to note observations made during the 'Take 2' process. On reviewing these observations, it became clear that the hazards and potential frequency for eye injuries had generally been underestimated. Mandatory eye protection was implemented for all workshop employees whether they were inside workshops or performing maintenance in the field.

Forests NSW also provided every staff member with a Safe Work Card which is aimed at empowering and encouraging them to stop work anytime they identify a hazard and serious risk that they do not feel confident to manage. The Safe Work Card also works to empower staff to have the courage to challenge others when they observe another member of staff, contractor or visitor working or acting in an unsafe way.

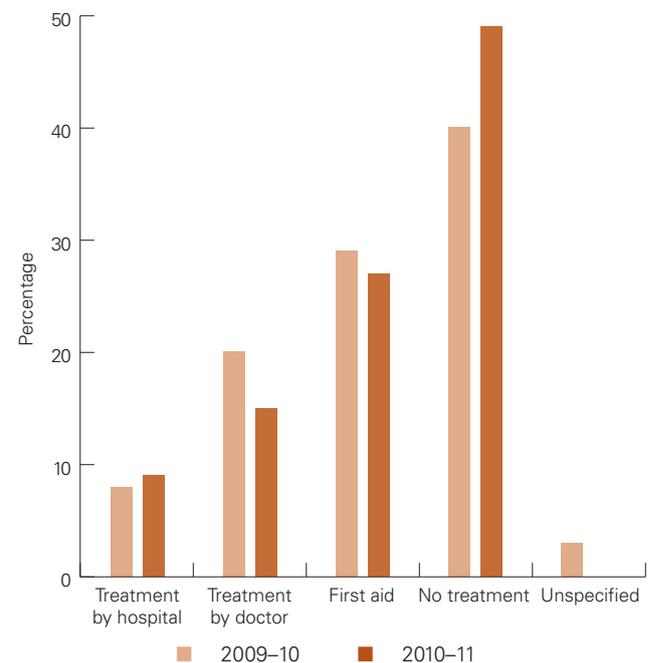
Together, these safety initiatives increase safety awareness and provide an environment in which employees look after each other, developing a positive safety culture and helping us achieve our goal that every member of our staff goes home safely at the end of every working day.



Recordable Incident Rates and Lost Time Incident Rates



Treatment of injuries sustained



Environmental

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

Forest value: Biodiversity			
Indicator	Results	Performance	
11.	Extent of forest type	Total forest estate managed 2.2 million hectares	
	Native forests	1.76 million hectares of native forest managed within the native forest estate and an additional 155 557 hectares of retained vegetation made up primarily of native forests and managed within the planted forest estate	○
	Planted forests	203 784 hectares of softwood and 34 720 hectares of hardwood plantations; 47 162 hectares of future plantations, infrastructure and unassigned areas; 9590 hectares of softwood and 1104 of hardwood plantation planted	○
12. Native forest structure	5% high conservation value old growth, 30% mature, 5% rainforest, 17% regrowth and 31% unassigned	●	
13. Surveyed species	71 targeted species found with 1791 fauna sightings. The drop in sightings compared to last year is associated with fewer targeted bat surveys	●	
Forest value: Forest health			
14. Pests and weeds	\$1.4 million spent on feral animal and weed control	●	
15. Plantation health	Overall maintenance of planted forest health, based on forest health sample surveys undertaken	●	
16. Fire fighting and prevention	0.003% of State forests burnt by wildfire;	●	
	21% of State forests treated by fuel management strategies;		
	\$5.8 million spent on fire prevention and control		
Forest value: Soil and water quality			
17. Protection of soil and water	\$5.2 million spent on harvesting supervision and environmental compliance in native forests;	●	
	258 212 hectares of State forests primarily managed to protect water catchments	●	
Forest value: Compliance			
18. Regulatory compliance	12 fines issued; 1 prosecution	●	
Forest value: Environmental services			
19. Carbon sequestration	Over 4.3 million tonnes of CO ₂ -e sequestered by plantations and an estimated net 7.08 million tonnes of CO ₂ -e sequestered by native forests;	○	
	Estimated 12 607 tonnes of CO ₂ -e emitted, including previously unreported heavy truck and plant		
20. Energy consumption	2.7% of electricity sourced from green power;	○	
	A continuing drop in heavy plant fleet numbers, while passenger vehicle numbers increased		
21. Material consumption and recycling	1.6% drop in the reported potable water usage compared to 2009–10. A 2.8% increase in the percentage of materials recycled	●	

Allyn River rapids above the Ladies Well swimming hole in the foothills of the Barrington Tops in Chichester State Forest. Photo by David Barnes

Responsive management

As demonstrated by the prolonged wet weather across the State, forest management is subject to operational risks and challenges. How Forests NSW anticipates and responds to these challenges is instrumental in ensuring positive environmental, social and economic outcomes.

Fire management

As at the end of June, Forests NSW was implementing the recommendations from a major fire management review undertaken by an external consultant in early 2011. This includes the development of a new format for fire management policy, planning and procedures, which accounts for changing organisational structures and priorities.

There has been a clear focus on ensuring that training and training records are current and that Forests NSW is capable of meeting an acceptable level of bushfire risk.

As part of the training focus, Forests NSW, assisted by the Rural Fire Service, commenced a series of workshops for senior managers to enhance their incident management skills in major fires in State forests focussing on leadership, teamwork and good record keeping within incident management teams.

The workshops cover issues raised during the Royal Commission into Victoria's 2009 bushfires.

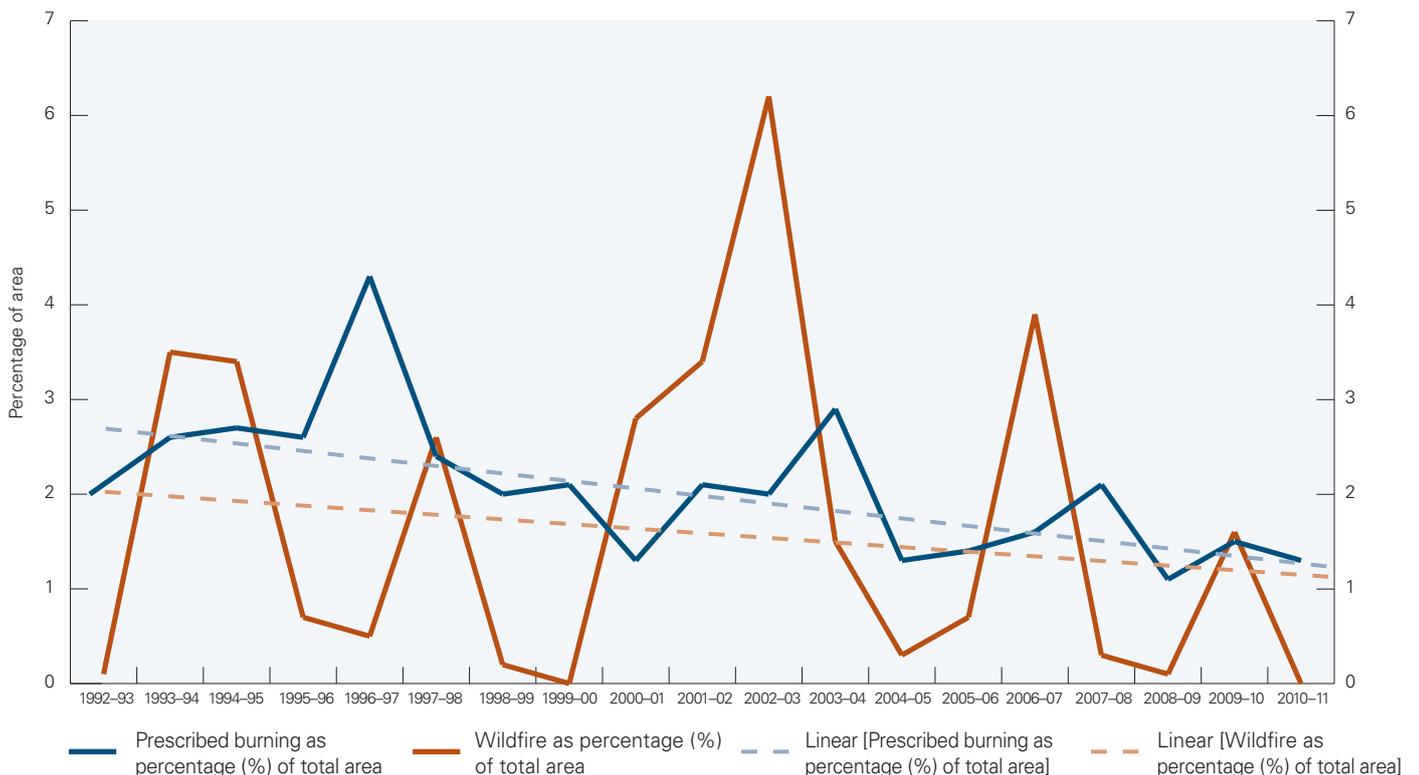
Widespread heavy rainfall during 2010–11 greatly reduced the number and severity of wildfires. Unusually, there were no Section 44 declarations by the Rural Fire Service in NSW. There was only 703 hectares of State forest estate burnt by wildfire, with no significant damage.

The rainfall reduced the area of hazard reduction burning that could be conducted during the year. Despite the wet conditions, 3.5 per cent of burnable forest estate was able to be treated with hazard reduction burning equating to approximately 30 000 hectares. This does not include the significant areas of forest estate that is fuel-reduced by leased grazing (see Indicator 16 on page 41).

Forest health

The majority of softwood (pine) and a large proportion of hardwood (eucalypt) plantations were surveyed in the Forests NSW helicopter in winter 2010. All aspects of forest health were mapped, including damage from pests, diseases, vertebrate pests, climatic disorders, nutritional imbalances and weeds. Follow-up ground surveys were carried out where

Wildfires and prescribed burns trend as percentage of Forests NSW estate



necessary, such as to further diagnose tree mortality and detect ips bark beetles in pine plantations and to survey for stem canker and stem borer damage in eucalypt plantations.

Overall, the health of softwood plantations was generally good in 2010, with few major issues, while in hardwood plantations, overall health status generally remained static. For more details on plantation health see Indicator 15 on page 40–41.

A significant development for both plantations and native forests has been the detection and subsequent spread of Myrtle rust from a nursery on the central coast of NSW in April 2010. This exotic rust is part of the eucalyptus/guava rust complex. NSW DPI mounted an emergency response to eradicate the rust but this proved difficult as the rust spores can be easily spread by wind, plant movements and human intervention.

Myrtle rust is now considered established along the east coast of Australia, from the South Coast of NSW to Central Queensland and is having a significant impact on some rainforest species in NSW.

Several land management agencies are developing management plans and strategies to combat Myrtle rust, including the NSW Office of Environment and Heritage and the Royal Botanic Gardens.

Myrtle rust will have an impact on Forests NSW assets and operations and a strategy has been developed to minimise impacts in State forests. The main actions under the strategy include identifying high risk assets, staff training and monitoring the spread and impact of the rust in both plantations and native forests.

Water interception

Competition for water resources in the Murray-Darling Basin (MDB) has resulted in the Murray-Darling Basin Authority (MDBA) releasing a draft 'Basin Plan', a requirement of the *Water Act 2007*, to account for water used by various land use change activities including plantation forests.

To date generalised forest conversion models have been used to assess the likely impacts of future afforestation on streamflows within the basin. These models are a useful starting point but do not account for forest age or silvicultural¹ intervention such as thinning.

One of Forests NSW long-term research projects has seen the monitoring of plantation water use at the catchment scale since at least 1989 at various locations throughout the MDB, to better inform these models and assist in managing interception impacts of plantations. In particular, research undertaken in the Red Hill paired catchment study has made a significant contribution to our understanding of the water use impacts of plantations. Results from the Red Hill study are to be published in an article in the *Journal of Hydrology*.

Forests NSW research scientist on water and forests is a technical advisor to the NSW Interception Working Group that has been liaising with the MDBA regarding the proposed Basin Plan. Forests NSW has contributed technical expertise in reviewing the MDBA's science, and has also provided valuable information regarding the plantation estate and its likely impacts within the NSW section of the MDB.

As the significant cost of purchasing water entitlements would threaten the economic viability of the plantation industry, Forests NSW will work hard to influence the debate on the draft Basin Plan.

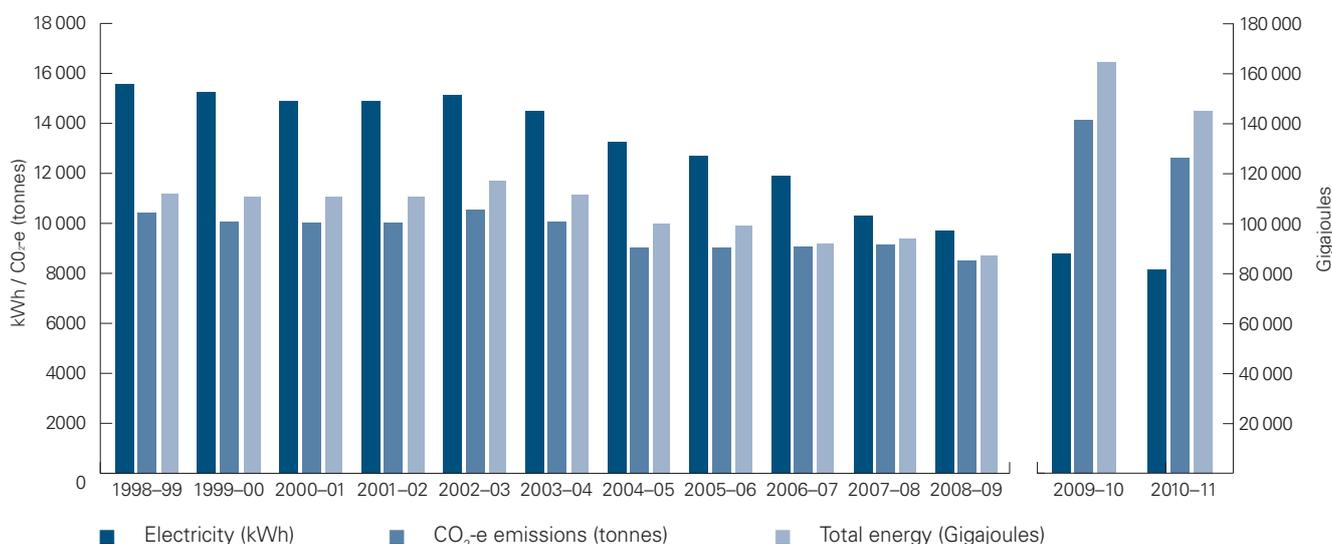
Compliance

Forests NSW regulators, the Office of Environment and Heritage and Fisheries NSW issued several penalty notices for breaches of forestry regulations. Forests NSW was also convicted and fined \$5600 and ordered to pay costs of \$19 000 by the Land and Environment Court after pleading guilty to allowing a hazard reduction burn to escape into an endangered Smoky Mouse habitat in 2009.

Forests NSW is committed to minimising any environmental impacts and to improving its regulatory compliance performance.

¹ Silviculture is the practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values

Energy and carbon emission trends¹



¹Note that data for CO₂-e emission and total energy include diesel from large trucks and plant that was not reported prior to 2009-10. Previously only non bulk purchase fuel data had been available for reporting.

Tumut Nursery now truly world class

With the completion of Stage 2 of the container pine seedling program, Forests NSW Tumut Nursery is now truly world class.

The nursery is currently reaping the benefits of the \$3 million expansion program and is in an excellent position to support Forests NSW growing demand for pine seedlings.

This year the nursery located at Blowering near Tumut produced seven million seedlings and almost five million were grown in containers.

Above all else the move into container stock (as opposed to bare-rooted seedlings) has given the nursery flexibility.

Forests NSW now has a much bigger planting 'window of opportunity' whereby it can plant earlier, later or even the following year, depending upon weather conditions.

And the move to containers has certainly helped to 'drought proof' the nursery during a succession of dry years.

The container program has been underway for the past three years with Stage 1, which began in 2007, enabling the nursery to initially produce four million container seedlings.

Stage 2 of the expansion program, which was completed in November last year at a cost of \$1.5 million, has allowed the nursery to plant an additional five million container seedlings.

As well as the container stock, the nursery has ongoing capacity for around three million bare-rooted pine seedlings and cuttings a year, if required.

The introduction of these state-of-the-art production facilities at Tumut ensures the nursery will produce the best possible seedlings, in the most efficient and effective way possible, in the safest work environment.

The benefits of container stock are numerous:

- better management of growth, nutrition and diseases with reduced chemicals;
- safer work environment for employees;
- flexibility in delivery;
- more efficient and improved return on valuable seed resource;
- efficient watering through irrigation booms allows water savings of over 200 megalitres a year;
- extension of planting windows – earlier, later or even the following year;
- planting done direct from the trays reducing planting 'shock';
- cost reductions in overall establishment; and
- increased survival rates of more than 10 per cent, even in 'out-of-season' plantings.

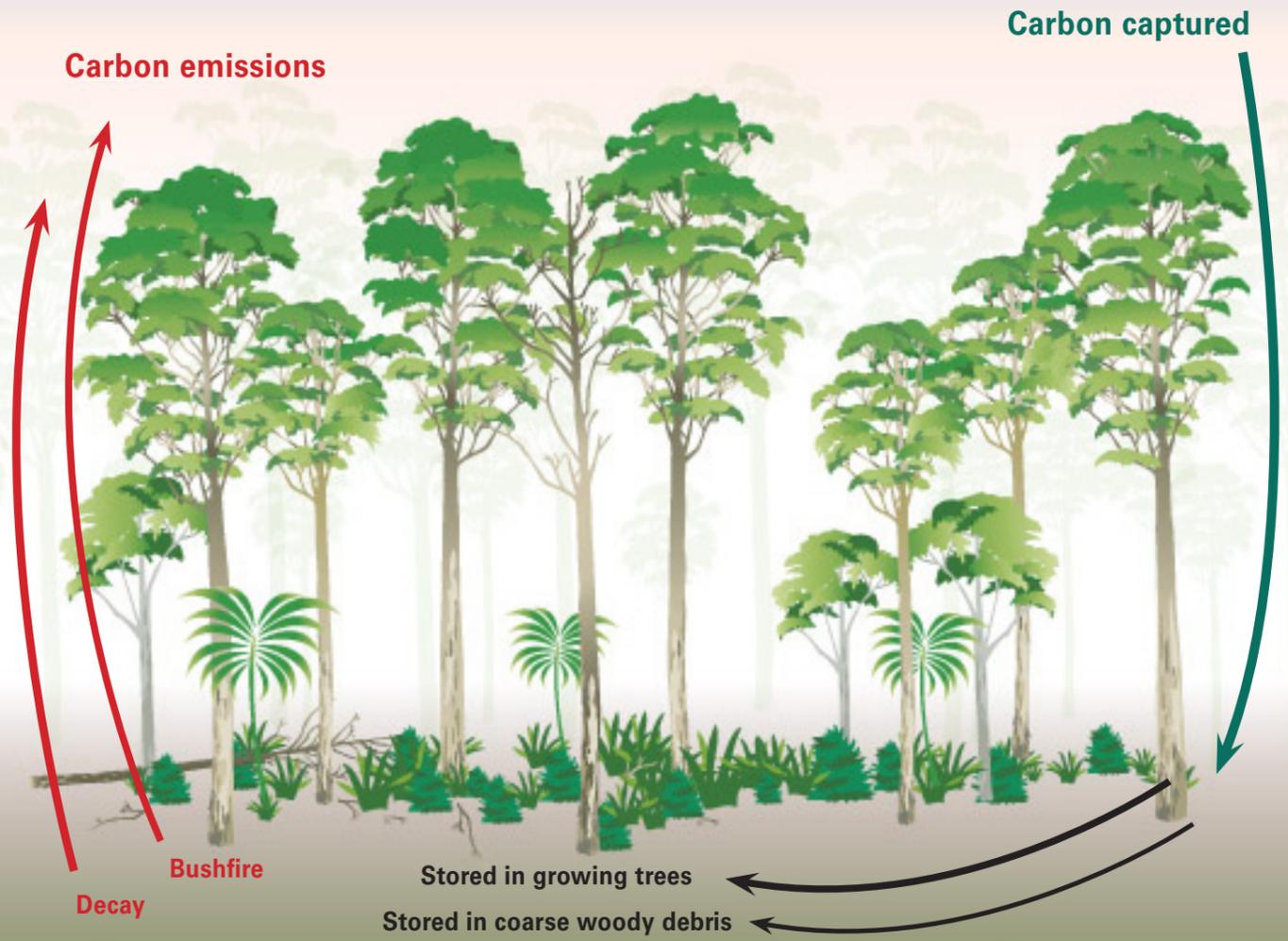
The infrastructure established to facilitate the container production includes a new \$120 000 mechanised sowing line and \$180 000 of associated infrastructure (including lateral movement lifts, transfer carts, production shed, vacuum pumps and compressors), which has fully automated a large number of manual tasks.



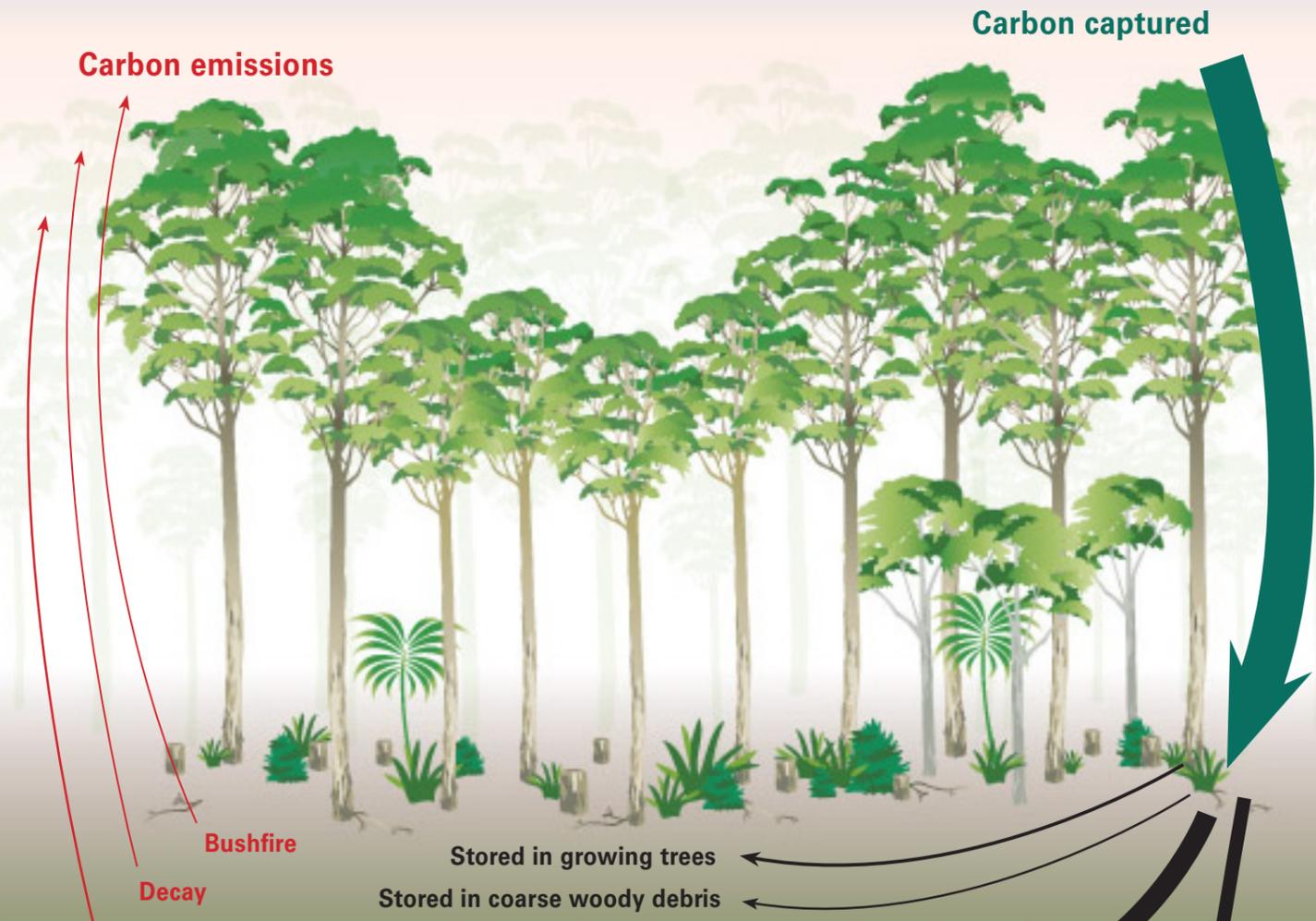
Carbon: Looking beyond the trees

An example from the Mid North Coast over 200 year life-cycle assessment

Unharvested reserve



Sustainably harvested forest



Harvesting and timber processing

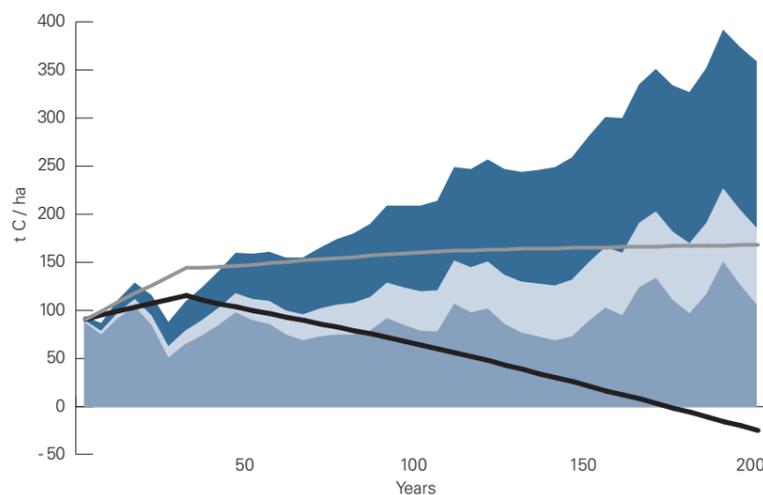
Timber products:

- store carbon
- product displacement

Energy from biomass

- carbon neutral
- fuel displacement

Carbon under the current harvesting regime in a representative North Coast native forest



Cut forest

- Product substitution effect: Net carbon emissions avoided through using timber products compared to more emissions-intensive alternatives. If logging residue was efficiently utilised for biochar or energy, the net product substitution effect would be much greater.
- Carbon stored in products
- Carbon stored in retained trees and from all parts of harvested trees left in the forest.

No cut forest

- Carbon stored if the forests are not harvested.
- Net carbon stored: Net impact of not harvesting forests on carbon stocks, including the effect of substituting the sawlog products with more emissions-intensive alternatives.

This model excludes potential emissions due from wildfire. If included the carbon storage of the protected forests is much lower.

Key points:

- Carbon makes up 50 per cent of the tree dry weight.
- Young forests grow faster than old forests, so regular harvesting and regrowing can sequester more carbon in the long-term than not harvesting.
- Forest products store carbon and have lower emissions than alternative products such as concrete and steel, so using wood products from managed forests lowers emissions.
- A no-cut forest has higher fuel loads and greater burn intensity resulting in greater emissions (>3 times) compared to a managed cut forest (Based on *National Inventory Report 2009*).
- Most native forest sawlogs are manufactured locally into high-value, long-term products such as flooring, decking and structural timber.
- Managing the forests so they grow productively is important for sustained mitigation benefit, as is ensuring they are utilised in long-life products and can be utilised to reduce fossil-fuel emissions at the end of their lifespan.

Economic

Provide commercially sustainable forest management services to the Government and people of NSW and independent investors while increasing the value of their investment.

Forest Value: Marketing and sales		
Indicator	Results	Performance
22. Volume of timber harvested	Decrease in logs harvested from 2.81 down to 2.70 million m ³ of logs and an increase in pulp harvested from 1.79 to 2.15 million tonnes. The decrease in sawlog sales relates to native hardwood sales, while the increase relates to softwood sales	●
23. Product mix of timber harvested	No survey undertaken. The proportions of broad product types sold remained stable except for softwood pulp product, which increased through expanded capacity at the Visy processing facilities in Tumut	○
24. National Greenhouse Abatement Certificates created	100% (32 429 hectares) of eligible plantation accredited for carbon trading	●



Harvested radiata pine in the foreground with another stand of radiata behind taken in Sunny Corner State Forest. Photo by Howard Spencer

Performing well in uncertain times

Continued focus on improving operational and business practices was central to delivering a solid financial performance with a trading profit of \$33.7 million.

Reduced revenues caused by severe weather events hindering timber harvesting operations and a depressed domestic sawlog market were offset by savings in establishment and re-establishment costs from improvements to site preparation, more rigorous controls of infrastructure projects and reduced staff costs.

Continuing sales of New South Wales Greenhouse Gas Abatement Certificates (NGACs), amounting to \$6.3 million for the year, demonstrate the importance of carbon abatement certificate sales in modern forestry. The 2010 vintage of NGAC certificates has been registered following completion of carbon account analysis.

Generation of strong cash flows allowed for further pay down of \$10 million of debt including accrued interest, resulting in savings in interests costs of \$550,000.

Marketing and sales

Planted Forest Branch

Planted Forest Branch had forecast increased sawlog sales volumes and prices in line with a predicted upswing after the global financial crisis. However domestic sawlog markets were depressed due to a flat housing construction market.

The pulpwood market was buoyant following completion of the Visy pulp mill phase 2 with sales volumes increasing commensurately. This has seen sales of logs to Visy from non-traditional sources such as Bathurst and Bombala to satisfy the increased mill demand.

Demand for veneer logs has also shown improved volumes with sales ten per cent above budget. The preservation and salvage markets however were depressed with sales volumes more than ten per cent below expectations.

The export log market to China has performed well above global predictions. Forests NSW took advantage of this by selling parcels of logs out of Northern, Hume and Macquarie regions, for prices that were well above domestic averages. There has also been an increase in volume and price from our ongoing export arrangements through the Port of Eden.

Native Forest Branch

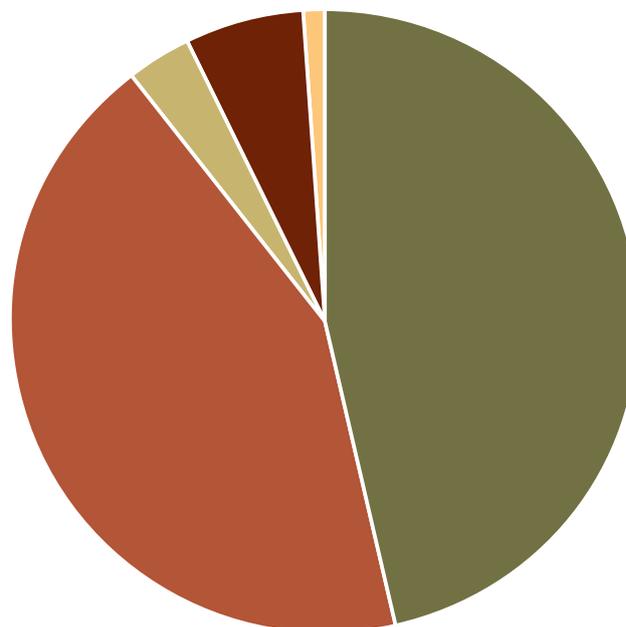
Native forest operations were significantly impacted by wet weather particularly in the two north coast regions which greatly reduced the volume of timber harvested during the year. Similarly, extensive flooding in the Riverina area of Western Region along the Murray River prevented harvesting

of river red gum forests for most of the year. See the case story on page 32 for more details.

Difficulties were also experienced in accessing high quality alpine ash forests in the Tumbarumba area while negotiations of conditions covering the yellow bellied glider population under the Threatened Species Licence were undertaken.

The net impact of these influences was that timber revenue was down by \$8.9 million on budget. The decline in timber revenue was partly offset by savings in operating expenditure excluding contract harvesting and haulage of \$3.5 million on budget.

Revenue sources



■ Royalties from sale of timber and other products ¹	46.2%
■ Contract harvest and haulage ¹	42.8%
■ Grants	3.5%
■ Other services rendered	6.0%
■ Rental income and interest received	0.9%

¹ Combined these give the revenue generated from timber supplied to processors and other products

Performance issues

Customer disputes

In January 2010, Forests NSW concluded a lengthy major review of the stumpage prices paid by one softwood customer. As agreement could not be reached on stumpage prices it was necessary for Forests NSW to determine them. The customer has disputed Forests NSW determination and it is now the subject of arbitration proceedings.

In another case a customer alleged breaches of a wood supply agreement for the supply of native forest timber on the NSW north coast. The allegations are broadly around the amounts charged by Forests NSW to deliver timber and undersupplying volumes of timber. The delivery charge matters were subsequently resolved by a consent judgment in favour of Forests NSW and the State of NSW. At the motion of Forests NSW and the State, the undersupply issues were discontinued in the Supreme Court and have resumed as a commercial arbitration subject to strict confidentiality requirements.

Managed Investment Schemes (MIS)

Agreements made with Forest Enterprises Australia and Willmott Forests to re-establish forests on State forests, remain in place but no further plantings will take place under the agreements after both companies were placed into receivership, thus removing Forests NSW access to third party capital. This re-establishment is now being completed using internal funding. The trees planted on Forests NSW land under these schemes are secure and there is no exposure for Forests NSW.

A forest management agreement with Agriwealth continues to attract funds from investors.

The failure in how the current MIS model has been implemented so far requires a new approach to encourage expansion of the national plantation estate if Australia is to meet projected demand for sawn lumber.

Efficiency programs

Efficient site preparations and productivity

Significant savings were made on re-establishment in the planted forest estate through development and implementation of a Site Based Management Strategy (read more on page 33) allowing for a consistent site-based approach to operational prescriptions.

Savings on road establishment were achieved through more rigorous project costing and fit-for-purpose construction.

Business improvements

The refocus of Native Forest Branch continued during the year with a new structure implemented to manage the extensive contract management process for harvesting operations with specialised contractor management skills training delivered to key staff. Work has commenced on new harvesting contracts designed to place greater emphasis on contractor service delivery, performance and management.

There were extensive systems and process improvement initiatives and upgrades undertaken during the year, including the introduction of a new Chart of Accounts providing better support for the business and improved reporting. A new on-line purchase order system was implemented and new project delivery methodology developed.

Upgrades and reviews were completed to our finance system and forest inventory and permanent growth plot information. Design and analysis support for development of a tactical regional resource planning model was also completed.

Reducing injury costs

The ultimate aim of Forests NSW focus on safety is the health and wellbeing of staff. As a self-insurer of a workforce, another positive aspect of the improved safety performance and severity injury rate is reduced workers compensation costs. Overall workers compensation claims this year were 50, compared to 76 in 2009–10, with a reduction in costs of claims of \$530 000 over last year.

Other products and services

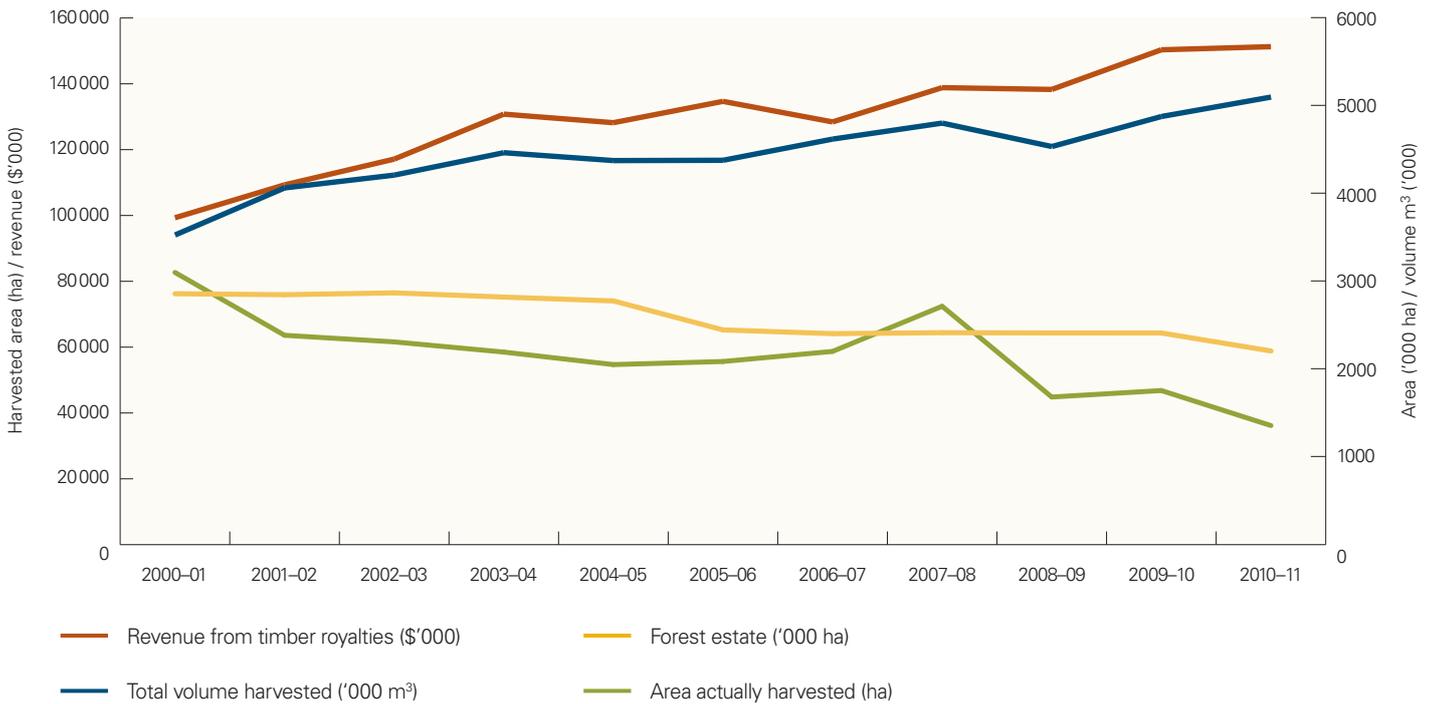
Developing markets for other products and services from State forests is another way of getting the best possible return from the State's forest assets.

The demand for extractive resources has led the organisation to complete an Expression of Interest at Hamburger Hill in Central Region for the supply of hard rock. A second project at Penrose State Forest is in the final stages of preparation prior to commencing an Expression of Interest process.

Forests NSW is continuing to look at establishing further commercial recreation activities in State forests. Two Expressions of Interest to establish commercial recreation businesses progressed this year, one for Cumberland State Forest at West Pennant Hills and one for Bruxner Park at Coffs Harbour.

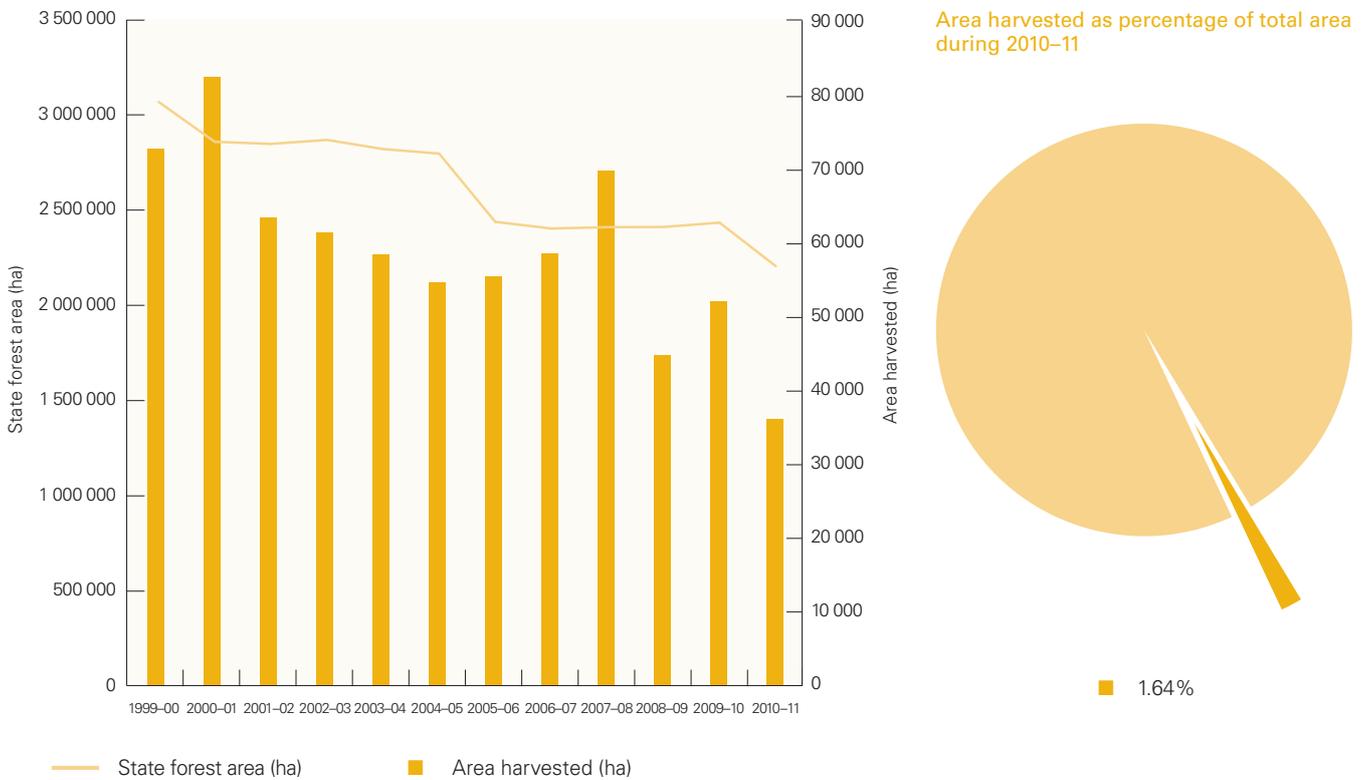


Forest productivity



The drop in area harvested is linked to a reduction in forest estate, while the increase in total volume harvested reflects increased capacity from softwood plantations. Note that revenue has not been adjusted for inflation.

State forests and the area subject to harvesting operations ¹



¹ Native forest area has declined over the period shown due to the transfer of State forests to other tenures, primarily National Parks and is matched by a drop in native forests harvested.

Sustainability

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

Forest value: Productivity		
Indicator	Results	Performance
25. Forest management	1.48 million hectares available for timber production;	○
	Over 391 331 hectares in State forest reserves;	
	271 776 hectares of other forest managed for ecological functions	
26. Plantation establishment and survival	10 694 hectares of plantations established;	○
	22% of softwood plantation and 9% of hardwood plantations underwent restocking after 1 year	
27. Mean annual growth of planted softwood forest	Mean annual increment for softwood plantations of 15.2 m ³ /ha/yr and 13.3 m ³ /ha/yr for hardwood plantations	●
28. Native forest regeneration	86% of surveyed areas had regenerated effectively with commercial species	●
Forest value: Maintainability		
29. Committed timber harvested	Actual annual yield as percentage of committed volume:	●
	■ 68% of native and planted hardwood forests high quality sawlog;	
	■ 91% of cypress;	
	■ 99% of softwood plantations	
30. Forest certification	Certification to the Australian Forestry Standard (AS 4708:2007) and Environmental Management System Standard (ISO 14001:2004) was maintained	●
32. Trading profit	\$42 024 trading profit per employee generated	●

Containerised radiata pine tubestock at Blowering Nursery, near Tumut.
Photo by Steve Sullivan

NSW State forests; here today and tomorrow

As with any business, Forests NSW is continually identifying and implementing new and improved ways of achieving the organisation's goals. Fundamental to this is planning for long-term timber supply, while conserving forest values, such as biodiversity, soils, carbon and water and building strong local economies and communities.

Future supply

Integrated Forest Operations Approvals

Following the NSW Government's 2010 red gum decision and Natural Resources Commission assessment, new Integrated Forestry Operations Approvals (IFOAs) for the red gum and south-western cypress forests were negotiated with the NSW Office of Environment and Heritage. Completion of the IFOAs provided certainty for the timber industry in the Riverina and allowed for the resumption of red gum harvesting operations, as they define how and what can be harvested in these areas.

Sustaining Native Forest Operations Audit

In April 2009 the Auditor-General released a performance audit report on the operations of the native forest and hardwood plantation operations of Forests NSW. The report made recommendations aimed to improve Forests NSW knowledge of timber availability and to address business risks.

Forests NSW is committed to implementing all of the Auditor-General's recommendations. Forests NSW has so far:

- Upgraded the forestry management system to capture all harvesting results and other events which impact on yield;
 - Finalised a Strike Rate Modifier report to improve the accuracy of the yield estimates. A net harvest area modifier report is expected to be published by the end of October;
 - Finalised a review of yield estimates for Eden, South Coast and Tumut native forest regions which is expected to be published by December 2011. A review of yield estimates for the hardwood plantations was included in the 2009 North Coast yield reviews;
 - Publicly reported on the results of yield estimates for high quality large sawlogs, high quality small sawlogs, low quality logs and pulpwood for each region;
 - Prepared a draft report on comparing harvest results against yield estimates over five-year periods;
 - Continued to obtain hardwood timber from private property wherever possible and look at ways of developing commercial markets for forest residues; and
 - Implemented a new pricing system and introduced non-compensable reduction in allocation provisions in the recent red gum and south-western cypress wood supply agreements.
-



Independent assurance

A key performance measure in Forests NSW Corporate Business Strategy was met with certification to the Australian Forest Standard (AS 4708:2007) and accreditation to Environmental Management System (ISO 14001:2004) maintained. This provides assurance that Forests NSW is continuing to meet and exceed the environmental, social, economic and sustainability requirements of these standards.

Securing seedling supply

Stage 2 of the Blowering Nursery containerisation expansion program near Tumut was completed. The \$1.5 million program will allow the nursery to grow an additional five million seedlings. Containerised seedlings have many environmental and operational benefits including safer and more flexible nursery operations. (See page 21 for more details).

Timber mill contracts building strong regional communities

Dongwha Holdings announced in February 2011 that it had acquired Willmott Timber (in receivership) in Bombala and confirmed the long-planned \$68 million sawmill development will be operational by the end of 2012. The construction and operation of the sawmill will provide further employment opportunities for local residents. The development is supported by a 20-year wood supply agreement with Forests NSW. Two tenders for harvest and haulage timber contracts valued at up to \$14 million have been let for the forestry industry in Monaro region. These contracts for 460 000 tonnes a year of mechanised harvesting and 485 000 tonnes a year of log haulage will supplement existing agreements in place in the Bombala area.

In 2010 Visy completed the \$375 million mill expansion at Tumut. Forests NSW has committed to establishing 20 000 hectares of additional plantations by 2014, underpinning agreement on changes to the Timber Supply Agreement. The agreement includes changes to stocking levels and plantation management regimes. Visy Pulp and Paper directly employs 250 people in the Tumut region with many more indirectly engaged in support services.

Other agreements entered into during the year were:

- \$20 million, ten-year supply agreement with Penrose Pine Pty Ltd for 35 000 tonnes of logs from Moss Vale and Tallaganda State Forests; and
- \$32 million, five-year supply agreement with South East Fibre Exports for 150 000 tonnes a year of low quality log products.

Forestry advocacy

A new single representative body for forestry in Australia has been formed with the merging of two former associations into the Australian Forest Products Association. Forests NSW is a member of the new association, which brings together the softwood and hardwood forest growers and processors from across Australia.

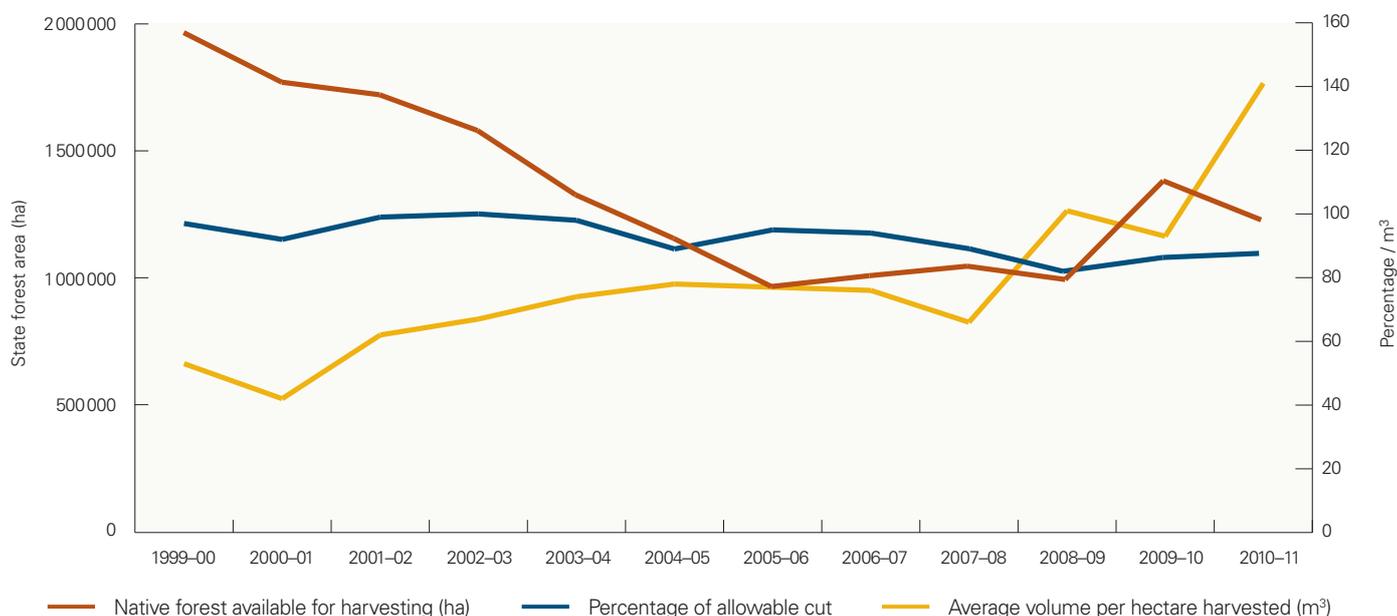
Forests NSW has also joined with other state-based forestry agencies and associations to form the Australian Forest Education Alliance to develop and promote a national forest education web resource for schools.

Developing a sustainable organisation

Over the last three years a comprehensive staff development program has proved successful in raising the capabilities of both office and field-based staff. Emphasis has also been placed on succession planning to ensure that critical operational roles are resourced. The program continued this year with 44 staff participating in Leadership, Management and Supervisor Development Programs. For more details on training undertaken see Indicator 8 on page 38.

A Performance Development Scheme is now in place for a majority of public servants. This scheme provides staff with the opportunity to review their yearly performance with their manager and to set a work plan for the year ahead.

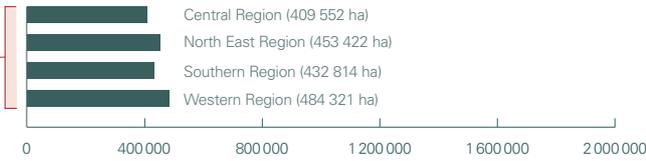
Forest sustainability



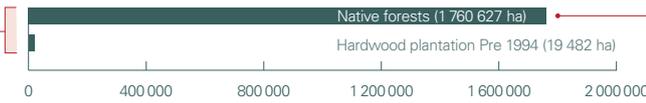
Note the increase in average volume per hectare harvested is directly correlated to a smaller area of native forest harvested and an increase in the volumes harvested from softwood plantations.

NSW State forests 2 201 798 hectares

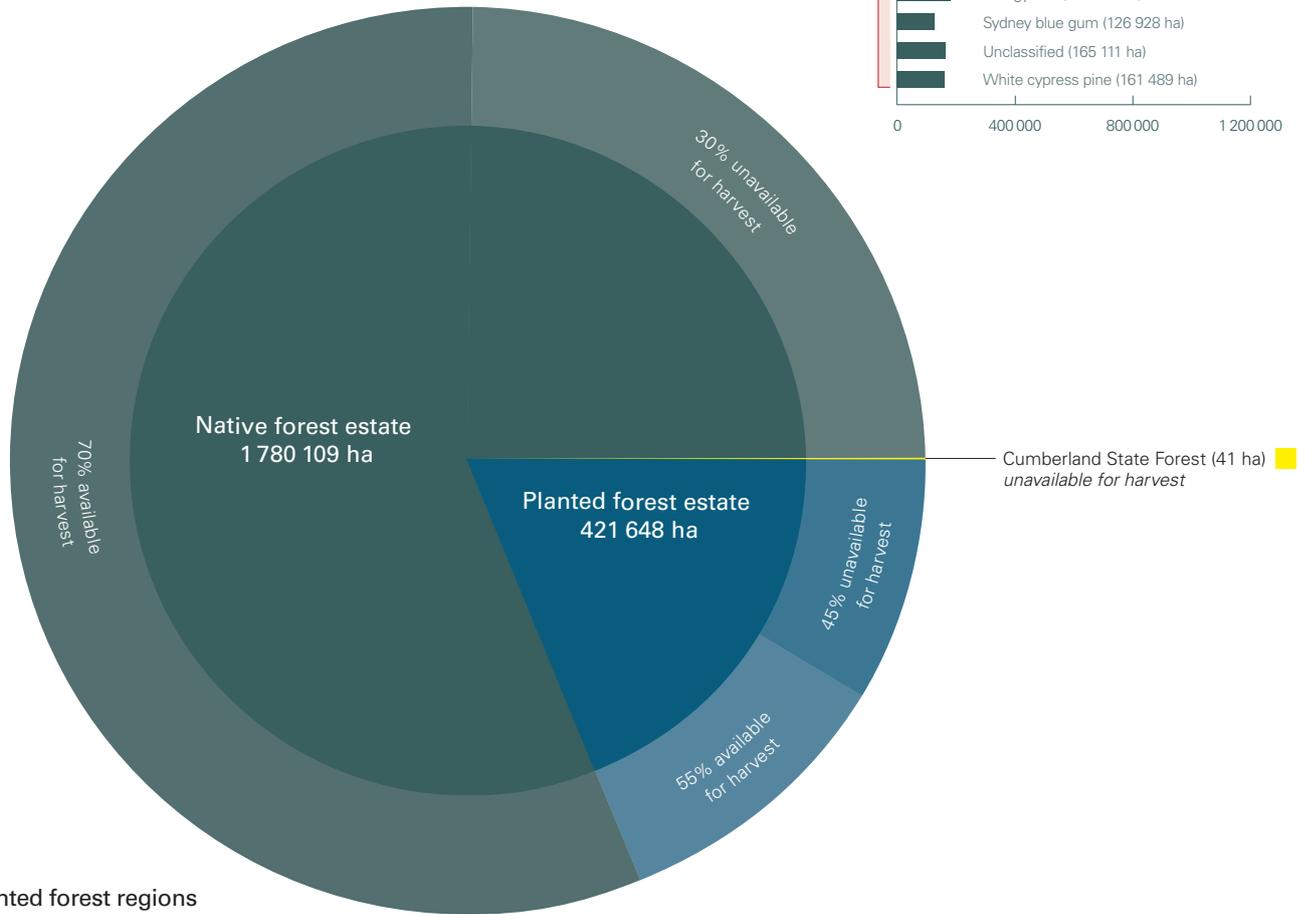
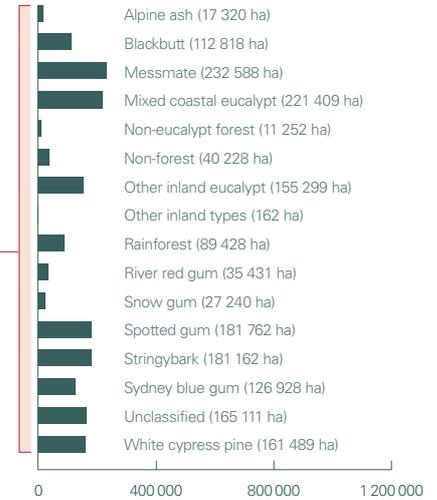
Native forest regions



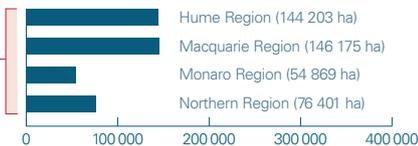
Native forest estate



Broad forest types



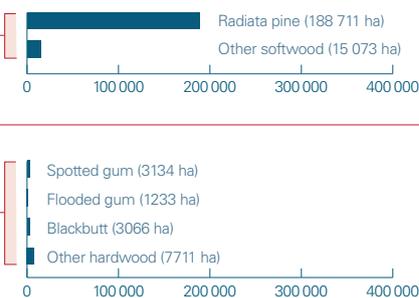
Planted forest regions



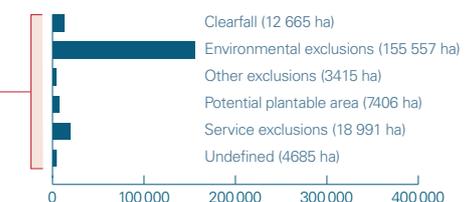
Planted forest estate



Planted forest species



Unplanted areas as at 30 June 2011



Taking on the forces of nature

Managing risks from natural events such as fire, storm and flood damage, pests and diseases are challenges Forests NSW faces on a regular basis.

To mitigate these challenges, Forests NSW has a robust risk management process in place with comprehensive planning controls and strategies. These strategies ensure that Forests NSW regions have the operational flexibility to maintain the flow of log products to the majority of their customers.

Damage from these natural events is usually localised, but this year was different with extreme weather conditions experienced right along the east coast of Australia – moving inland in some areas.

Deep low-pressure systems resulted in many areas recording the wettest months for more than 20 years and a number receiving their highest rainfall on record.

On the north coast, three low-pressure systems brought extensive flooding in October, January (from the same system which caused the disastrous floods in south-east Queensland) and in June.

The severe and frequent wet weather events and associated ground moisture conditions caused considerable delays to harvesting operations. This forced Forests NSW to invoke the force majeure clause in contracts where committed volumes under wood supply agreements could not be maintained.

The bad weather story, although not as severe, can also be told for the south coast, Riverina and south-western slopes.

Major storms around Tumut in November and December brought rainfall in many areas that exceeded the design

capability of the road network resulting in bridges, culverts and roads being washed away.

Temporary access was restored to some harvesting operations and where possible, harvesting was moved to other areas, allowing for continuation of log supplies to customers.

The damage to Forests NSW infrastructure from these storms is estimated at \$900 000 and will take two to three years to fully repair.

The December storm brought with it damaging hail, which had severe repercussions for Forests NSW commercial production nursery at Blowering Dam. Considerable damage to containerised seedlings was sustained when germinating pine seedlings were washed from their containers. Plus many standing seedlings were either cut down or partially damaged by the hail.

To offset the stock losses, the area to be planted this year was reduced by 1000 hectares.

In March, the rains affected the tableland forests with forests around Bombala receiving up to 243 mm of rain falling in a 24-hour period. On the coast, forests recorded up to 500 mm. Similar damage to that sustained in the Tumut area also occurred around Bombala, with the total damage to Forests NSW infrastructure in that region estimated to be around \$630 000.

With climate variability becoming a fact of life, managing risk from natural events will become an increasingly important and challenging part of Forests NSW business.



Photo by Michel Dignand

Site tailored forestry

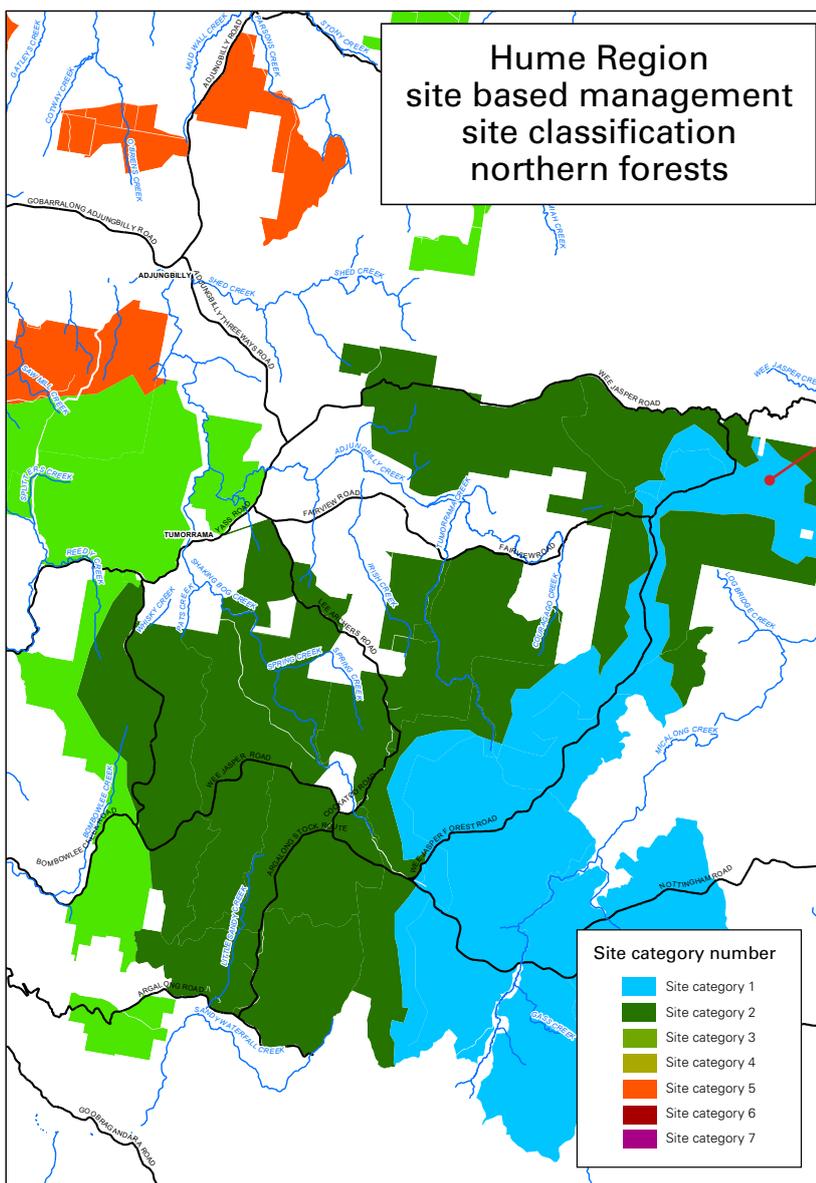
Planted Forest Branch has developed a new strategy to maximise the potential of the existing plantation estate. The strategy was developed after taking a close look at Planted Forests' business (including risks, market outlook and government policy) and will provide focus for staff and guide management in the medium term. Forests NSW manages softwood plantations of close to 200 000 hectares over 85 per cent of which is the one species; radiata pine. Clearly not all pine trees are the same nor are the sites where they are planted. This inherent diversity within the plantation estate creates both challenges and opportunities for management that can be positively exploited using the Site Based Management system, which forms an important tool in implementing the new approach.

Each site, with its own combination of soil, rainfall, exposure, topography and so on, fundamentally defines how the trees will

grow and respond to the range of silvicultural treatments. Site Based Management is neither new nor unique to forestry and the intent can be defined with the old adage 'horses for courses'. The system provides a prescriptive and standardised approach to tailored plantation management to improve the operational and commercial performance by:

- assessing and identifying similar management zones within plantations;
- analysing and applying particular silvicultural practices within management zones; and
- the development of silvicultural practices that are consistent with the business objectives, market requirements, social expectations and environmental conditions.

Site classification is applied across a plantation and specific management treatments are chosen depending on characteristics of the particular site



In this example the plantation classified as Site Category 1 is a higher elevation plantation (> 900 m above sea level) where periodic heavy frosts and snow fall can result in poor seedling survival or tree damage during the length of the rotation. Based on the likelihood of these events occurring, specific management is used to minimise the risk of impact in this management zone. For example, fewer trees are planted in this zone, relative to other zones, as research indicates this reduces the potential for snow being held by trees' crowns and causing crown damage and/or toppling of the tree. In highly stocked stands, toppling can result in a 'domino effect' with trees falling into each other.

Site Based Management can influence other significant issues, such as:

- Improved environmental and operational compliance – systematic management through common operational practice for common activities;
- Reduction of overall level of costs within the business - e.g. potentially reduce chemical usage, which has both financial and environmental/social benefits; and
- Providing a framework to consistently and effectively deploy research and development findings.

Planted Forests will be keenly pursuing the implementation of this new strategy across its business in the next twelve months.

Appendices

Indicator 1 – Social responsibility

Objective: Maintain voluntary activities in non-operational business areas

	2007–08	2008–09	2009–10	2010–11
Sponsorships and donations	\$122 375	\$57 485	\$29 250	\$38 258

Note the decrease since 2008–09 reflects a smaller budgeted amount corporately and a move to target sponsorship more effectively as per Forests NSW sponsorship guidelines.

Community volunteering programs	2007–08	2008–09	2009–10	2009–10
Days	424	372	464	724
Participants	252	175	101	228
Programs	10	9	5	4

Conservation Volunteers Australia projects included:

- Walking track works to the recreation facilities at Nethercote Falls in Nullica State Forest
- Closure of illegal trail-bike and 4WD tracks in Newnes State Forest to aid ecologically endangered communities
- Works on the Wootton Historical Railway Walk in Wootton State Forest and the Tumut State Forest Recreation Trail
- Weed removal and track maintenance in Bellingen State Forest in conjunction with the Never Never Catchment Group
- Improvements to visitor amenities and weed control in Bruxner Park Flora Reserve in Orara East State Forest.

Through these projects, the Communities in Forests program achieved:

- Closure of 8500 metres of illegal tracks
- Repair or maintenance of almost 13 km of walking track
- Poisoned 2.5 hectares of woody weeds
- Installed over 60 wooden bollards and removed 50 unsafe steps as well as installing signage and painting picnic tables.

Indicator 2a – Public participation

Objective: Maintain opportunities for stakeholder participation in planning. Actively engage and involve our neighbours in management of the community's forests

Meeting / Forum subject categories	2009–10		2010–11	
	Hours of staff time associated with engagements initiated by others	Hours of staff time associated with engagements initiated by Forests NSW	Hours of staff time associated with engagements initiated by others	Hours of staff time associated with engagements initiated by Forests NSW
Bushfire / HRB management	1122	421	268	33
Business and joint venture partner	178	182	72	10
Catchment management	67	46	30	14
Cultural heritage management	299	684	51	34
Education	171	32	60	60
Employment conditions and terms	72	731	2	5
Strategic & supplementary planning	10	150	24	0
External audit	307	2	9	56
Flora and fauna management / Conservation / Environmental	382	186	74	31
Forestry / Forest practices	11	54	51	9
Local emergency management	299	90	4	7
Local Government	133	110	30	0
Occupational Health & Safety	58	707	5	9
Other	77	53	290	199
Pest animal / Weed / Disease management	504	155	151	72
Plantation establishment	35	69	2	14
Recreation / Tourism	719	265	62	23
Regional planning / Regional forest agreement	156	95	23	35
Supply management (incl. haulage and processes)	382	1047	111	141
Timber harvesting / Road construction / Maintenance	302	318	5	33
Total	5284	5397	1321	783

Note that the figures provided for 2009–10 were estimates sourced from each of the eight operational regions and Community Programs at Cumberland State Forest, while 2010–11 figures are based on figures entered into electronic timesheets. It is probable that this year's data under-reports the hours committed as staff could omit engagements attended, but still complete timesheets. The 2009–10 figures have been amended, as they were incorrectly allocated to categories in last year's report.

Indicator 2b – Public participation				
Objective: Be responsive to neighbours' and stakeholder concerns and professionally conciliate any issues				
Community liaison	2006–07	2008–09	2009–10	2010–11
Ministerial correspondence handled ¹	99	383	411	214
Registered complaints	25	8	17	26
Official complaints	n/r	n/r	2	1

¹It takes about three hours to prepare a written response to a piece of public correspondence through the Minister's office.

Complaints relating to legislation, codes, licences, standards or operational plans are registered in the Forests NSW Non-Conformance & Improvement Reporting system. In addition to complaints the system registers and tracks actions relating to significant operational breaches and improvement suggestions. The process for responding to letters of inquiry or complaints addressed to the CEO or the Minister are handled in a separate system.

Official complaints are usually handled through the DTIRIS Complaint Handling Procedure, however the one complaint reported was resolved locally.

Indicator 3 – Recreation and tourism				
Objective: Maintain opportunities for events and partnerships				
Permits for organised recreational activities	1998–99	2008–09	2009–10	2010–11
Bow hunting / archery	60	3	2	10
Bushwalking	23	5	8	7
Car and bike rallies / events	44	32	40	48
Eco tourism / 4x4 tours	54	21	7	14
Education / outdoor education schools	27	27	11	9
Fossicking	n/r	116	152	320
Horse, trail and endurance rides	32	24	24	28
Mountain bike rallies	30	51	38	42
Orienteering / mountain runs / triathlon	37	22	26	24
Other	22	181	126	10
Training / exercises	152	35	34	56
Area zoned primarily for recreation (ha)	n/d	6164	6090	3392
Area zoned primarily for visual aesthetics (ha)	n/d	n/d	31 109	30 886
Expenditure on recreation ('000)	n/r	\$2437	\$2547	\$2408

Note that more information on recreation in NSW State forests is available at www.forests.nsw.gov.au

Fossicking has increased partly because permits are now issued to individuals rather than groups, therefore actual number of participants may not have increased.

Objective: Provide safe, professional and efficient forest-based recreation and tourism services for the people of NSW		
Facilities provided at designated 121 recreational sites	2009–10	2010–11
Camping area	93	45
Caravan site	16	16
Fireplace / BBQ	84	61
Picnic area	103	65
Rubbish collection	48	32
Toilets	62	58
Water (not for drinking)	87	40
Wheelchair accessible toilets	11	8

Figures have dropped compared to last year as a result of a reduction in the area of State forests, with 147 540 hectares transferred to other tenures in the south-west of the State.

Indicator 4a – Research and education		
Objective: Cost-effective research services from NSW DPI and within Forests NSW		
	Research ¹ (million)	Education (million)
1998–99	\$7.20	n/d
2005–06	\$6.90	\$4.21
2006–07	\$7.05	\$4.18
2007–08	\$5.20	\$2.90
2008–09	\$6.03	\$2.56
2009–10	\$5.37	\$2.47
2010–11	\$3.46	\$2.40

¹Includes expenditure on community service obligations, water quality monitoring and tree improvement program, but excludes pre-harvest flora and fauna surveys for the last three years. Expenditure on pre-harvest surveys is reported as part of Indicator 13 – Sighting of surveyed species.

Indicator 4b – Number of people participating in programs and receiving information through Cumberland State Forest				
Objective: Provide a strategic education program				
Activity participants	1998–99	2008–09	2009–10	2010–11
School – lower primary	1197	512	539	641
School – upper primary	1585	3168	3016	2901
School – secondary	753	376	352	648
School holiday activities	1008	438	404	441

In addition staff from Cumberland State Forest participated in three events: Science in the Suburbs, which ran for two days and was attended by 1100 students; Science in the City over five days attended by over 5000 students and the Catchment Connections one day event with 220 students attending. Regional staff facilitated a small number of school and university groups to inform students on forest management. A state-wide indicator of Forests NSW commitment to education is shown through the Education category in Indicator 2.

Indicator 5 – Regional employment		
Objective: Provide opportunities for employment in forests-dependent industries		
State forests-dependent sector	1997–98	2008–09
Apiary	302	354
Eco-tourism	88	39
Forest management	1566	888
Grazing	165	489
Harvesting & haulage	1132	1131
Other ¹	136	54
Primary processing ²	4328	4325
Total	7717	7280

¹Includes plantation establishment contractors, gravel extraction and employment related to other forest products removal.

²Processing undertaken at a site where the input is raw material supplied by Forests NSW.

NSW forestry employment ¹	Individuals
Distribution	1446
Forest management & harvesting	5124
Primary processing	5343
Support	831
Total	12744

¹Derived from 2006 Census data.

Employment numbers for the State forests-dependent sectors are no longer collected. There have been decreases in the number of forest management jobs in the Riverina and south-west associated with the NSW Government red gum and south-western cypress decisions based on the Natural Resource Commission reports. Conversely harvest and haulage jobs associated with softwood plantations around the State increased during 2010–11, with further increases planned for the Monaro Region.

Indicator 6a – Other forest products				
Objective: Maintain access to State forests for apiary, grazing and other products appropriate to forests				
Forest product	1997–98	2008–09	2009–10	2010–11
Advanced plants sold to public (number)	5491	168422	65980	58026
Apiculture (sites)	3843	2583	3804	2723
Bark (tonnes)	1109	17	52	0
Broombush (tonnes)	1977	3338	3198	2653
Charcoal (tonnes)	119	1188	1731	1647
Communication sites	126	159	171	144
Craft timber (m ³)	33	7	7	0
Didgeridoos (number)	n/r	n/r	n/r	100
Fencing material (m ³)	n/r	n/r	n/r	845
Film / documentary (permits)	3	6	8	0
Firewood (tonnes) ¹	75615	50902	27691	28475
Forest maps sold to the public (number) ²	5491	6038	5887	3920
Gravel / sand / rock (tonnes) ³	69495	60802	84767	91166
Grazing (hectares)	768946	608193	529712	393605
Misc. native plants & parts (number)	1219	2060	1991	6571
Nursery seedlings to public (number) ⁴	1148000	658131	762870	519945
Other structures (permits)	227	175	137	92

Appendices

Indicator 6a – Other forest products <i>(continued)</i>				
Objective: Maintain access to State forests for apiary, grazing and other products appropriate to forests				
Forest product	1997–98	2008–09	2009–10	2010–11
Powerlines / cables / pipelines (km)	2886	n/r	n/r	n/r
Research (permits)	215	81	135	41
Seed (kg)	969	167	93	58
Skimming poles (number)	n/r	n/r	n/r	8000
Wood blocks (number)	0	79	500	0
Total revenue ('000)	n/r	\$6235	\$5802	\$5037

Note that some values have been derived using conversion factors due to multiple units of measure used.

¹Additional firewood sales are reported as part of commercial timber sales in Indicator 22.

²Includes maps sold via www.shop.nsw.gov.au

³The 2008–09 figure may under-report gravel sales as some were made in cubic metres and not converted. The 2009–10 figure has been updated.

⁴Does not include plantation stock sold to external plantation owners.

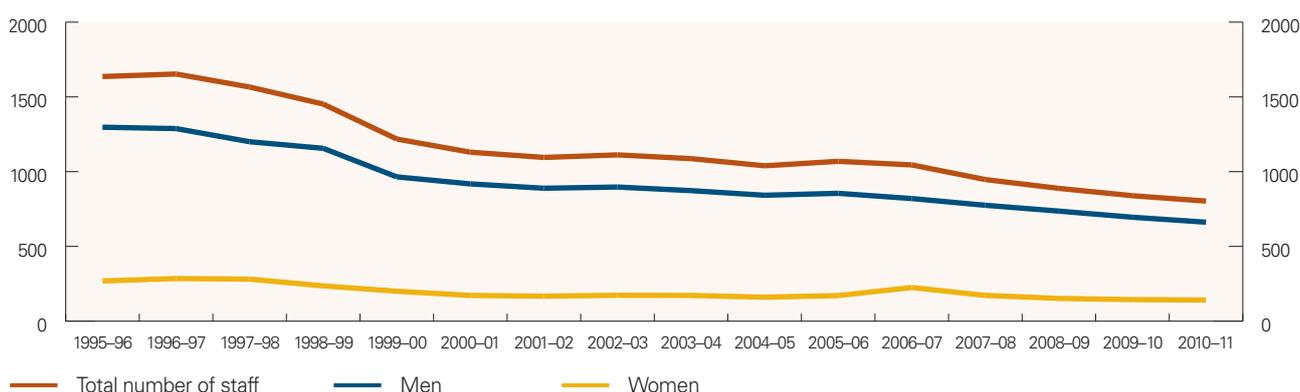
Indicator 6b – Other forest products									
Objective: Cost-effectively provide sufficient stock for Forests NSW planting program									
Commercial nursery sales	2002	2003	2004	2005	2006	2007	2008	2009	2010
Forests NSW seedlings	4.2	5.3	4.8	6.6	5.3	6.2	10.5	12.2	12.0
Forests NSW cuttings	0.8	0.5	1.3	0.9	1.3	0.8	0.7	1.2	0.1
Private seedlings	1.4	0.8	0.5	2.1	2.4	2.2	1.3	0.5	0.4
Private cuttings	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	6.6	6.7	6.6	9.6	9.0	9.2	12.5	13.9	12.5

Indicator 7 – Quality of management							
Objective: Maintain staff levels for effective and efficient operations							
	Men	Women	People from racial, ethnic, ethno-religious minority groups	Persons with disability	Aboriginal and Torres Strait Islanders	Total staff	Expenditure on human resource management ¹ (million)
1999–00	79%	21%	4%	6%	2%	1 218	n/r
2005–06	80%	20%	7%	7%	2%	1 069	\$1.34
2006–07	78%	22%	5%	5%	2%	1 045	\$1.10
2007–08	82%	18%	4%	5%	2%	943	\$1.74
2008–09	83%	17%	4%	5%	2%	888	\$4.10
2009–10	81%	19%	3%	4%	2%	839	\$2.71
2010–11	82%	18%	4%	5%	3%	803	\$2.39

¹Includes voluntary redundancy payments.

Note that total staff figure is a calculation of full-time equivalent employees excluding casuals, while the percentages are based on voluntarily provided information.

Staff numbers



Indicator 8 - Training					
Objective: Operations implemented safely and effectively by appropriately trained staff and contractors					
Training categories	Total	2009–10		2010–11	
		Contractors	Staff	Contractors	Total
Assessors	2	0	1	0	1
Authorised officer	106	0	108	0	108
Business skills	170	1	112	3	115
Computer skills	14	0	35	0	35
Contractors	5	0	0	0	0
Environmental and cultural	5	168	0	382	382
Fire medical and fitness	136	0	83	0	83
Fire resources protection	82	0	514	0	514
Forest management	84	18	35	13	48
Health and safety awareness	128	315	334	335	669
Health and safety compliance	311	138	340	163	503
Management and leadership	1	0	15	0	15
Plant and animal management	1	0	7	0	7
Plant skills	10	149	26	238	264
Plantation establishment	1	0	0	0	0
Safe driving and licensing	89	58	84	68	152
Technical skills	91	84	89	153	242
Tertiary and trade certificates	3	0	0	0	0
Workshops	24	0	13	0	13
Total	1263	931	1796	1355	3151
Expenditure on training (million)	\$1.85				\$2.68

During 2010–11 focus for staff training has been on:

- Fire resource protection as well as health and safety awareness and compliance; and
- Native Forest Branch in the area of contractor administration and management.

Indicator 9 – Health and safety

Information associated with the indicator 'Health and safety' is found on page 15

Indicator 10 – Management of cultural heritage					
Objective: Identify and protect all significant cultural heritage sites					
	2001–02	2005–06	2007–08	2009–10	2010–11
	Number				
Agreements for co-management of land	3	4	3	3	3
Partnerships	19	11	10	9	6
Hectares					
Area managed for Aboriginal cultural heritage	176	4234	5034	5004	1385
Area managed for non-Aboriginal cultural heritage	n/r	n/r	n/r	3619	3612
Land with recognised native title	0	0	30782	30782	30782
Agreements for co-management of land ¹	1730	55022	53279	53279	53279
Number					
Gazetted Aboriginal places ²	n/r	n/r	n/r	1	1
Aboriginal sites ³	n/r	n/r	n/r	5004	3029

¹Co-management refers to informal management processes and structures that provide Aboriginal people with varying degrees of input into the management of an area of land. There is no transfer of title, no rent is paid and no legal rights are provided to Aboriginal people involved in the process.

²Under section 90 of the National Parks and Wildlife Act 1974 and recorded in the Aboriginal Heritage Information Management System.

³This figure is taken from the Aboriginal Heritage Information Management System maintained by NPWS and to which Forests NSW contributes.

The drop in area and number of sites managed by Forests NSW for Aboriginal cultural heritage relates directly to State forest revocations in the south-west of the State.

Appendices

Indicator 11a – Extent of forest type

Objective: Maintain area of native forest for the sustainable supply of timber

147540 hectares under Forests NSW management was transferred to other tenures during 2010–11, through the implementation of the *National Parks Estate (River Red Gum Reservations) Act 2010* and *National Parks Estate (South Western Cypress Reservations) Act 2010*. Forests NSW no longer supplies the region's timber processors from these forests and the NSW Government provided structural adjustment funding for affected timber processors.

A total of 912 hectares was added to Forests NSW legal estate, most of which was a purchase in Western Region.

A table providing a breakdown of Forests NSW forest estate can be found on page 31 as part of a series of tables. Native forest types are included and are defined in New South Wales Research Note No. 17.

Indicator 11b – Extent of planted forest type

Objective: Increase capacity of plantations to meet sustainable supply of timber

Plantation type ¹	1999–00		2010–11	
	%	Area (ha)	%	
Softwood (<i>Pinus</i> spp)	57	203 784	48	
Hardwood (<i>Eucalyptus</i> spp)	14	15 144	4	
Total planted area	71	218 928	52	
Retained vegetation and infrastructure	21	155 557	37	
Land for future planting	8	20 072	5	
Other exclusions	n/r	27 091	6	
Total planted forest estate	100	421 648	100	

Note that additional details are available on page 31.

¹This figure includes all State forests, but excludes joint ventures on private property managed by Forests NSW.

Indicator 12 – Native forest structure

Objective: Ecosystems maintained over a range of successional growth stages

Native forest region	Central	North East	Southern	Western	Total	Percentage
	Area (hectares)					
Growth stage						
High conservation old growth	30 744	58 460	2 232	0	91 436	5%
Mature	129 015	236 445	172 909	552	538 920	30%
Not assigned	33 061	18 245	12 765	483 723	547 795	31%
Rainforest	43 282	37 354	8 621	32	89 289	5%
Regrowth	89 180	47 876	168 815	15	305 885	17%
Young regrowth	84 269	55 042	67 472	0	206 784	12%
Total area	409 552	453 422	432 814	484 321	1 780 109	100%

Note that growth stage assessments were undertaken as part of the Coastal Forest Agreement process and have not been updated during 2010–11.

Indicator 13 – Sightings of surveyed species

Objective: Threatened species at risk from forestry operations identified and adaptive management applied

Threatened fauna species sightings	1997–97	2007–08	2008–09	2009–10	2010–11
Arboreal mammals	268	989	601	361	696
Bats	93	183	1 065	168	125
Frogs	204	324	175	217	88
Ground mammals	195	22	117	186	79
Non-raptor birds	110	402	1 058	1 049	802
Raptor birds	86	133	85	12	0
Reptiles	n/r	0	4	4	1
Total	956	2 053	3 105	1 997	1 791
Threatened flora species reported	n/r	8	6	18	24
Threatened fauna species reported	n/r	n/r	n/r	50	47
Number of fauna surveys	n/r	2 754	1 591	1 884	1 182
Number of compartment traverses	n/r	n/r	431	538	529
Fauna sightings per survey	n/r	1	2	1	2
Expenditure on surveys ('000)	n/r	\$621	\$1 764	\$2 038	\$2 109

Kingdom	Species group	Status			
		Introduced	Protected	Vulnerable	Endangered
Fauna	Arboreal mammals	0	826	696	0
	Bats	0	340	125	0
	Frogs	0	3696	22	66
	Ground mammals	66	475	39	40
	Non-raptor birds	0	4115	800	2
	Raptor birds	0	4	0	0
	Reptiles	0	41	1	0
Flora		781	196	10473	3409

Note that vulnerable and endangered species are referred to as threatened species under the *Threatened Species Conservation Act 1995* and are summarised in the above table. If these threatened species are sighted, the presence of these species is taken into account in preparing the harvest plan. Protected refers to all Australian flora and fauna that are not threatened species. Introduced species are, for example, cats, goats, dogs, deer etc.

Indicator 14 – Pest animal and weed control

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

Treatment categories	1997–98	2008–09	2009–10	2010–11
Weeds	\$1 325 000	\$898 940	\$1 125 258	\$1 018 984
Pest animals	\$328 000	\$584 800	\$591 459	\$392 340
Total	\$1 653 000	\$1 483 740	\$1 716 718	\$1 411 324

Forests NSW continues to be a major contributor to a range of control programs including those targeting foxes, wild dogs, feral goats, feral pigs, blackberries, willow, serrated tussock, horehound, lantana and Paterson's curse.

Treatment categories	Associated with plantation establishment		General pest and weed control	
	Area (ha)	Expenditure	Area (ha)	Expenditure
Blackberry treatment	7 853	\$1 160 522	33 580	\$532 368
Other weed treatment	7 691	\$1 305 604	39 439	\$486 616
Rabbit control	7 726	\$80 825	0	\$0
Wild dog control	0	\$0	122 351	\$0
Other pest animal control	0	\$0	645 875	\$392 340
Totals	23 270	\$2 546 951	841 245	\$1 411 324

Species removed by licensed hunters	2007–08	2008–09	2009–10	2010–11
Feral cats	136	172	219	167
Feral goats	1 037	1 899	2 130	2 646
Feral pigs	1 081	1 478	1 924	2 278
Foxes	724	1 072	1 256	1 320
Hares	242	489	630	520
Rabbits	4 076	5 453	8 335	6 606
Wild deer	410	562	654	499
Wild dogs	55	72	84	69

Game Council NSW is the statutory body responsible for implementing the objectives of the *Game and Feral Animal Control Act 2002*. Game Council NSW provides a licensing system that enables game hunting licence holders to remove game and feral animals from declared State forests.

Removing game and feral animals from public land areas helps to contain existing game animal populations and exert downward pressure on feral animal populations in these locations.

Indicator 15 – Plantation health

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

Hardwood plantation ¹	2001–02	2007–08	2008–09	2009–10	2010–11
Agent	Percentage of area sampled				
Bell Miner Associated Dieback (BMAD)	n/d	n/d	0.1	0.1	0.1
<i>Creiis</i> and <i>Cardiaspina psyllids</i>	n/d	3.0	0.7	0.5	1.3
Frost damage	n/d	0.2	0.0	0.0	0.0
Herbivorous insects	5.8	3.0	1.8	1.0	1.2
Leaf and shoot fungi	2.4	2.0	0.0	0.0	0.1
Stem borers	0.1	5.0	11.0	11.0	11.0

¹ Post 1994 hardwood plantations.

Damage from *Creiis psyllids* and *Cardiaspina* was slightly higher than last year, but restricted to several plantations. Damage from herbivorous insects was also restricted to a few plantations, and there were only small areas of damage from leaf and shoot fungi. The area affected by Bell Miner Associated Dieback and stem borers remained static. A new emerging canker disease in spotted gum (*Corymbia*) plantations has recently been detected, with significant damage (including tree death) in several plantations.

Appendices

Indicator 15 – Plantation health (continued)

Softwood plantation	2000–01	2007–08	2008–09	2009–10	2010–11
Agent	Percentage of area sampled				
<i>Dothistroma septosporum</i> (needle blight)	2.0	1.0	1.0	0.8	1.0
Drought (<i>Diplodia pinea</i> {fungus} and <i>Ips grandicollis</i> {bark beetle})	0.5	15.0	4.0	4.0	1.3
<i>Essigella californica</i> (aphid)	n/d	47.0	32.0	21.3	9.0
Possum	0.2	6.0	6.0	0.9	0.1
<i>Sirex noctilio</i> (woodwasp)	0.0	1.5	0.8	0.1	0.2

Sirex woodwasp continues to cause tree mortality in several areas in Hume and Macquarie Regions, with slightly more damage than last year. Damage from *Essigella* pine aphid was significantly lower in all regions, due mainly to improved rainfall. Similarly, due to good rainfall, tree mortality associated with drought was relatively restricted to localised areas across the estate. Hailstorms caused localised damage in Macquarie Region, and wind damage occurred in several areas in Hume and Macquarie Regions. *Dothistroma* needle blight, however, was significant and widespread in Northern Region (northern tablelands plantations). Management intervention included chemical control of *Dothistroma* needle blight, biological control for *Sirex* woodwasp and salvage logging of wind-thrown trees.

Softwood planted forest area affected by processes and conditions impacting on forest health and vitality

Processes and conditions	Area (hectares)
Frost	135
Hail	681
Salinity	0
Snow	210
Wind	2294

Indicator 16 – Fire fighting and prevention

Objective: Manage through integrated and cooperative fire hazard management and wildfire suppression programs, resulting in 98% of fires in plantations kept to one hectare or less

Wildfire	2001–02	2007–08	2008–09	2009–10	2010–11
Percent of total State forest estate	3.50%	0.30%	0.06%	1.60%	0.003%
Expenditure (million)	\$2.7	\$1.8	\$1.0	\$2.4	\$0.1
Fuel management	2001–02	2007–08	2008–09	2009–10	2010–11
Hazard reduction (ha) ¹	58 893	32 474	24 988	35 069	36 931
Grazing (ha)	644 966	528 933	498 718	529 712	426 258
Expenditure (million)	\$6.1	\$9.8	\$9.6	\$8.3	\$5.7

¹ Includes pre- and post-harvest burning, which is excluded from the figures provided in the graph on page 19.

Increased soil/fuel moisture levels have had a profound effect on both bushfires and Forests NSW hazard reduction burning program. Excluding pre- and post-harvest burning, hazard reduction burning achieved 29 779 ha, which is 1.3% of total estate or only 3.5% of the burnable area (with one burn alone accounting for around 14 000 ha). Each region maintains a Fuel Management Plan, which guides fire management in that region.

Indicator 17a – Soil and water management

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

	1999–00	2007–08	2008–09	2009–10	2010–11
Expenditure on harvesting supervision and environmental compliance in native forests ('000)	n/r	\$5164	\$5561	\$5454	\$5184
Expenditure on harvest planning & pre-harvest surveys ('000)	n/r	n/r	3997	\$4755	\$5022
Area of native forest harvest operations (ha)	56 900	57 631	31 252	38 784	27 864
Area of softwood plantation harvest & thinning operations (ha)	14 000	14 659	13 342	13 491	14 068
Area of hardwood plantation harvest & thinning operations ¹ (ha)	n/r	n/r	n/r	n/r	875
Total Area harvested² (ha)	73 000	64 261	38 305	46 819	36 174
Area harvested of total State forests	2.4%	2.7%	1.6%	1.93%	1.64%
Soil and water non-compliance incidents self-reported	1255	318	28	143	135
Fines received in relation to soil and water	3	2	0	0	11

¹ Relates to all hardwood plantations. Prior to 2010–11 pre-1994 hardwood plantation areas harvested were incorporated into the native forest figure. No areas were thinned or harvested in post-1994 hardwood plantations during 2010–11.

² Excludes thinning operations in plantations.

Three separate IFOAs have been implemented in Western Region during the year. All native forest regions met soil and water pre-harvest survey commitments. Western Region now undertakes landscape scale monitoring, while Central and North East Regions are participating in trials. Landscape scale monitoring can provide species population trends, which are not available through pre-harvest surveys.

Indicator 17b – Soil and water management					
Objective: Protect water catchment values in socially strategic or environmentally sensitive locations					
	1999–00	2007–08	2008–09	2009–10	2010–11
Fully protected land (ha) ¹	290 700	183 752	183 752	177 635	178 366
Partly protected land (ha) ²	30 200	60 295	76 709	75 191	79 846
Total³	320 900	244 047	260 461	252 826	258 212

¹Includes Wetlands, filter strips reserved from harvesting and areas with extreme risk of erosion or water pollution hazard.

²Includes Forest Management Zone 'Catchment' and filter strips protected in areas where modified harvesting methods are permitted.

³Excludes substantial tracts of land otherwise zoned primarily for natural and cultural protection which also provide a catchment protective function.

Indicator 18a – Regulatory compliance					
Objective: Achieve a 100% external regulatory compliance rate with zero penalty infringement notices, prosecutions and fines					
Compliance items	1999–00	2007–08	2008–09	2009–10	2010–11
Number of compliance check sheets conducted					
1st tier supervision checks	5428	4013	3512	3287	2935
2nd tier supervision checks	420	643	463	449	436
3rd tier supervision checks	n/r	58	21	28	33
4th tier supervision checks	n/r	6	2	0	3
Number of audits undertaken by regulators					
NSW OEH audits	n/r	n/r	n/r	16	22
DTIRIS (Fisheries) audits	n/r	n/r	n/r	2	2
DTIRIS (Office of Private Forestry) audits	n/r	n/r	n/r	7	13
Number of Non-Compliance Incidents (NCI) recorded by Forests NSW supervision for corrective action relating to:¹					
Soil erosion and water quality	1255	318	28	143	135
Flora and fauna	469	89	93	93	103
Fish habitat and passage	1	0	0	38	67
Other NCI issues (e.g. safety)	314	689	434	319	72
Total	2039	1096	555	593	377
Number of fines (Penalty Infringement Notices) issued to Forests NSW by regulators relating to:					
<i>Threatened Species Conservation Act 1995</i>	0	2	1	5	1
<i>Protection of the Environment Operations Act 1997</i>	3	2	0	0	0
<i>Fisheries Management Act 1994</i>	0	0	0	0	11
Total	3	4	1	5	12
Number of prosecutions recorded against Forests NSW under the:					
<i>Threatened Species Conservation Act 1995</i>	1	0	0	0	1
<i>Protection of the Environment Operations Act 1997</i>	0	0	0	0	0
<i>Fisheries Management Act 1994</i>	0	0	0	0	0
Total	1	0	0	0	1

¹The guidelines for reporting non-conformances have changed over the last three years. A non-compliance that can be resolved within 24 hours and is not relating to systematic failures is no longer recorded in the Non-Compliance Incident Reporting system.

A significant unauthorised operation on State forest land was closed during the year with the recovery of value of timber and issue of warning letters. Fines were issued by the Office of Environment and Heritage under *Native Vegetation Act 2003* to the operators.

Forests NSW was fined \$5600 and ordered to pay costs of \$19000 by the Land and Environment Court in 2010–11. The offence relates to a post-harvest burn initiated on 20 April 2009. The burn crew were unaware that the area to be burned lay to the east of a Smoky Mouse exclusion zone and a low intensity burn entered the Smoky Mouse exclusion zone. Forests NSW identified inadequate operational burn plan preparation, poor communication, inadequate burn briefings and supervision as collectively contributing to the incursion. A number of measures have been put in place to avoid this type of incident occurring again.

Indicator 18b	
Objective: Ensure use of State forests occurs within the relevant rules, licences, regulations and the <i>Forestry Act 1916</i>	
Number of notices issued under the <i>Forestry Act 1916</i>	Number
Other	34
Penalty Infringement Notices (PINs)	16
Warning letters	20
Total	70

In this period 308 staff are authorised under the *Forestry Act 1916* to enforce regulations under the Act including littering and dangerous behaviours.

North East Region was involved in interagency response to unlicensed and unregistered recreational vehicle use on public land in part of the region and has actively promoted requirements across the remainder of the region. A significant unauthorised operation was closed during the year with the recovery of value of timber and issue of warning letters with PINs issued by OEH for *Native Vegetation Act 2003*.

Indicator 19 – Carbon sequestration in planted forests					
Objective: Maintain a positive contribution to Australia's net emission reduction program for carbon dioxide					
Planted forest type	2006–07	2007–08	2008–09	2009–10	2010–11
Softwood (CO ₂ -e megatonnes sequestered)	3.63	3.41	3.56	3.73	3.75
Hardwood (CO ₂ -e megatonnes sequestered)	0.56	0.62	0.56	0.55	0.54

Assumptions:

CO₂ sequestered (tonnes CO₂-e) = net plantation area x MTBI x CP x CCF where:

MTBI = SBI + CBI + RBI where:

SBI (Stem Biomass Increment) = TSVI x BD where:

TSVI (Total Stem Volume Increment) - softwood = 16.9m³/ha/year and hardwood = 13.3m³/ha/yr
 BD (Basic Density) - softwood = 0.42 t/m³ and hardwood = 0.55t/m³ (source AGO 2006)

CBI (Canopy Biomass Increment) = SBI x 0.1765

RBI (Root Biomass Increment) = (SBI + CBI) x 0.2

CP (Carbon Proportion) = 0.5

CCDF (Carbon to Carbon dioxide factor) = 3.667

Net plantation area = Net Stocked Area in State forest and Joint Venture plantations (refer Indicator 27)

Indicator 19 – Carbon balance in native forests					
Objective: Maintain a positive contribution to Australia's net emission reduction program for carbon dioxide					
Native Forest Carbon Balance					
Measured in millions of tonnes (megatonnes)	2006–2007	2007–2008	2008–09	2009–10	2010–11
Total standing volume CO ₂	914	911	920	949	794
Annual CO ₂ -e sequestered forest growth	10.92	10.89	11.00	11.34	10.47
Annual CO ₂ -e harvest storage in hardwood products	1.03	1.14	1.09	1.02	0.96
Annual CO ₂ -e harvest emissions	1.62	1.87	1.75	1.75	1.61
Annual CO ₂ -e fire emissions	6.83	0.98	0.51	3.43	0.82
Annual non-CO ₂ fire emissions	0.32	0.05	0.02	0.16	0.04
Annual Sequestration (megatonnes)					
Net CO ₂	2006–2007	2007–08	2008–09	2009–10	2010–11
	1.45	6.90	7.66	5.14	7.08

The assumptions used in this model are largely based on National Greenhouse Accounts (NGA) Factors and are the best available to date with changes incorporated since last year (for example basic density) resulting in higher values reported. The model provides estimates for the amount of carbon stored in State forests, forest products derived from State forests and emissions associated with harvesting and fire.

Note the large amount of emissions associated with fire in 2006–07. This acknowledges the sensitivity of forest carbon balances to fire. The net carbon emissions from bushfires are believed to be reduced through undertaking prescribed burns at intervals, as these burn less intensively.

Assumptions:

MODEL A

CO₂ sequestered (tonnes CO₂-e) = production area x MTBI x CP x CCF where:

MTBI = SBI + CBI + RBI where:

SBI (Stem Biomass Increment) = TSVI x BD where:

TSVI (Total Stem Volume Increment) native forest ave = 5m³/ha/yr
 BD (Basic Density) = 0.65t/m³

CBI (Canopy Biomass Increment) = SBI x 0.1765

RBI (Root Biomass Increment) = (SBI + CBI) x 0.2

CP (Carbon Proportion) = 0.5

CCF (Carbon to Carbon dioxide factor) = 3.667

MODEL B is based on Weighted Average Growth rates in the *AGO methodology 2006* (refer to table A1) for the estimation of GHG emissions and sinks for the broad forest types within State forest

Note that both methods were applied and the mean figure used. No adjustment for age-class made.

Indicator 20 – Energy consumption

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

Energy Use	Units	2010–11					% change from 09–10
		Totals	Total Energy GJ	CO ₂ -e Emissions (tonnes)			
				Scope 1	Scope 2	Scope 3	
Auto distillate (diesel)	Litres	3 357 928	129 616	9 060	-	687	-10%
Aviation gasoline	Litres	5 917	619	42	-	3	12%
E-10 petrol-ethanol blend	Litres	49 594	1 642	103	-	17	125%
Electricity	kWh	2 261 078	8 140		2 026	391	-2%
Green electricity	kWh	(62 724)	226	-	(56)	(11)	11%
Liquid petroleum gas	kg	14 354	369	22	-	2	-50%
Natural gas	MJ	292 544	293	15	-	4	-12%
Petrol	Litres	117 929	4 033	281	-	21	-59%
Total		6 036 619	144 937	9 523	1 970	1 114	-12%

Scope 1: Direct greenhouse gas emissions

Scope 2: Indirect emissions from the generation of purchased electricity

Scope 3: Indirect emissions from the extraction, production and transport of the specified fuel

Note that these figures do not include fuel used by contractors (reported under the *National Greenhouse and Energy Reporting Act 2007* as 10.9 million litres of diesel in 2009–10).

From July 2011 regular unleaded fuel was effectively replaced by ethanol-blended E-10 as the NSW Government's E-10 mandate came into effect. Introduced in 2009 the mandate is meant to ensure that 6 per cent of all fuel sold in NSW by July 2011 is the ethanol-blended E-10. Although ethanol-blended E-10 is still unsuitable for small plant, such as chainsaws and some vehicles brands used by Forests NSW, 2010–11 saw a 125% increase in the use of E-10. This represents 30% of all petrol consumed.

The reduction in the energy consumed is mainly as a result of a drop in diesel consumed by 13 988 litres and petrol by 5 753 litres, reflecting the impact of initiatives to reduce staff travel and a drop in staff numbers.

Indicator 20 – Fleet

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

Fleet	Fuel type	2000–01	2008–09	2009–10	2010–11
		Number			
Light vehicles	Diesel	573	374	392	406
	Petrol	239	66	60	55
	LPG	n/r	1	0	0
	Hybrid	n/r	1	0	0
	Total	812	442	452	461
Trucks and light plant	Diesel	139	172	92	92
	Petrol	11	0	0	0
	Total	150	172	92	92
Heavy plant	Diesel	86	52	47	43
	Petrol	0	0	0	0
	Total	86	52	47	43

This indicator reports the number of fleet in three categories by fuel type all owned by Forests NSW:

- Light vehicles (e.g. sedans, wagons, utes)
- Trucks and light plant NSW (e.g. trucks, tankers)
- Heavy plant (e.g. dozers, graders)

Indicator 21 – Material consumption and recycling

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

Percentage recycled or reused	2008–09 ¹	2009–10	2010–11
	%	%	%
Cardboard	83	75	90
Co-mingled containers	30	64	50
Computer components	96	94	96
Copy paper	81	81	87
Printer cartridges	59	76	81

¹ Percentages have been amended in line with the WRAPP Report.

Appendices

Indicator 21 – Material consumption and recycling (continued)

Potable water usage	2008–09	2009–10	2010–11
	kL	kL	kL
Nurseries	85 849	32 558	34 560
Depots & offices	16 682	8773	6105

This data is reported in more detail in our *Waste Reduction and Purchasing Policy Report* as part of our commitments under the *NSW Sustainability Policy*. As well as office-based material, such as paper and ink cartridges, Forests NSW also used a range of other materials, such as fertilisers and herbicides. Planted forests have undertaken a number of initiatives to reduce reliance on these chemicals. The most significant is the implementation of the site-specific management as described on page 33. A noteworthy initiative reported from Hume Region is a goat grazing trial in a 220 hectare plantation to assess the effectiveness of goats in controlling woody weeds, especially blackberry.

Indicator 22 – Volume of timber harvested

Objective: Meeting contractual obligations to customers

Product	1999–00	2007–08	2008–09	2009–10	2010–11
Sawlogs and veneer logs (m³)					
Native forest hardwood sawlogs	786774	608961	556244	524931	430347
Hardwood plantation sawlogs	55466	121452	114382	109136	94394
Cypress pine sawlogs	101881	50245	55175	58785	51915
Plantation softwood sawlogs	1 648 790	2 100 251	1 894 454	2 073 461	2 079 573
Plantation softwood veneer logs	70919	30569	26237	27316	35843
Native forest hardwood veneer logs	10600	6679	7513	8856	5842
Hardwood plantation veneer logs	2819	10510	9196	6251	5403
Total sawlogs and veneer logs	2 677 249	2 928 668	2 663 202	2 808 736	2 703 317

Poles, piles and girders (m³)

Native forest hardwood	28432	25154	28136	30015	32058
Plantation hardwood	5479	14286	10116	6971	10896
Total poles, piles and girders	33911	39440	38252	36986	42954

Round timber (m³)

Preservation plantation softwood	56422	87859	87054	98458	106099
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Pulpwood (tonne)

Native forest hardwood pulpwood	503546	531089	427871	488353	524911
Plantation hardwood pulpwood	82660	75067	83777	83553	68009
Plantation softwood pulpwood	636058	1 164 137	1 081 236	1 223 691	1 562 079
Total Pulpwood	1 222 264	1 770 293	1 592 884	1 795 597	2 154 999

Other

Commercial firewood	7575	25116	65213	97436	30450
Fencing/landscape/sleepers (m ³)			7798	11777	27536

The increased capacity at the Visy plant in Tumut can be seen in the jump in softwood pulp production.

The drop in hardwood sawlogs reflects difficult operating conditions through prolonged wet periods and the cessation of most harvesting operations in river red gum forests. The production of commercial firewood has largely ceased in the south-west of the state contributing to a 69 per cent slump in commercial firewood production on State forests. Non-commercial firewood and fencing materials are reported as part of Indicator 6 – Other products.

Indicator 23 – Product mix of timber harvested

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

Sawlog product mix from hardwood forests (native and plantation)

Product	1995–96	2008–09
	%	%
Dry structural	21	7
Floorboards	22	48
Joinery / furniture	1	6
Decking & panelling	4	6
House framing	30	14
Pallets	12	9
High strength structural	2	2
Fencing / landscape	8	8

Sawlog product mix from softwood plantation		
Product	1995–96	2008–09
	%	%
House framing	71	73
Joinery / furniture	2	1
Decking / panelling	1	6
Floorboards / bearers / joists	3	3
Fencing / landscape	7	6
Other preservation	1	4
Unseasoned	14	7

Note that since the Timber Market Survey was outsourced to URS Forestry, this component of the survey is no longer available. These figures still provide insight into the changes in the sawlog product mix over 13 years up to 2008–09.

Indicator 24 – Carbon accounting ¹					
Objective: Create maximum number of National Greenhouse Abatement Certificates from compliant plantations					
	2004–05	2007–08	2008–09	2009–10	2010–11
Number of certificates created ²	166 005	694 935	660 382	622 567	604 696
Area of plantation accredited for carbon trading	n/r	26 864	26 756	27 467	32 429

¹Note this indicator is not related to Indicator 19, which reports estimates of net atmospheric carbon sequestration, carbon storage and emissions associated with State forests.

²Each certificate accredited represents one tonne of carbon dioxide removed from the atmosphere.

Indicator 25 – Forest management intent						
Objective: Maintain net area available for timber production, while conserving large areas for significant values and managing ecological functions						
	Land not available for harvesting (hectares)			Land available for harvesting (hectares)		
Forest management intent	1999–00	2009–2010 ¹	2010–11	1999–00	2009–10	2010–11
FMZ 1 Dedicated reserve	33 500	24 398	19 625	0	0	0
FMZ 2 Informal reserve – Special management	322 500	151 218	151 461	0	0	0
FMZ 3a Informal reserve – Harvest exclusion	199 000	272 507	220 245	0	0	0
FMZ 3b Special prescription	54 500	3 349	3 416	13 500	98 520	82 906
FMZ 4 General management native forest	387 500	84 647	84 915	1 368 000	1 156 823	1 073 047
FMZ 5 Hardwood planted forest ²	0	18 864	17 676	46 000	30 675	33 109
FMZ 6 Softwood planted forest ²	102 600	162 527	161 602	201 720	226 953	226 997
FMZ 7 Non-forestry use	8 000	4 419	4 167	0	0	0
FMZ 8 Land for further assessment ³	0	0	0	326 500	124 789	122 632
Total forest estate	1 107 600	721 929	713 673	1 965 720	1 637 760	1 488 125

¹2009–10 figures updated to correct overstatement of estate.

²Includes State forest (including pre-1994 plantations), joint venture and annuities.

³For consistency all FMZ 8 has been reported as available for harvesting, however the harvestable estimate provided that 41% of this area would not be available for harvest.

This estimate is derived by excluding all identified non-harvestable areas held on the corporate geo-database. For coastal regions, a further percentage is then removed from the harvestable area based on the net harvest modifier models. These modifiers have been developed from intensive harvesting studies that determined the relationship between mapped exclusions and actual exclusions identified in harvesting operations.

For planted forests estate the operation groups are used with Net Stocked Area, clearfell and Potential Plantable Areas all categorised as harvestable, while the bulk of non-harvestable area is made up of retained vegetation, usually native forest.

Indicator 26 – Plantation harvesting, establishment and survival								
Objective: Establish plantations which effectively maintain the timber supply strategy.								
Year	First rotation area of age-class (ha)		Total area of age-class (ha)		Cost of establishment ¹		Percent requiring restocking after one year	
	Softwood plantation	Hardwood plantation	Softwood plantation	Hardwood plantation	Softwood plantation	Hardwood plantation	Softwood plantation	Hardwood plantation
1995	2 548	770	4 279	824	n/r	n/r	n/r	n/r
2006	1 064	286	6 196	603	\$13 281 847	\$2 470 358	63%	n/r
2007	249	121	5 788	341	\$12 282 774	\$1 460 113	26%	n/r
2008	1 513	83	8 361	862	\$16 853 542	\$3 972 210	26%	n/r
2009	472	0	10 109	1 979	\$17 691 334	\$3 193 278	29%	87%
2010	263	0	9 590	1 104	\$14 452 421	\$2 781 995	22%	9%

¹Cost associated with site preparation, planting, post-planting fertilising and competition control.

Appendices

Indicator 26 – Plantation harvesting, establishment and survival *(continued)*

Note that third party investor plantings, joint ventures and fee for service areas included.

Reported figures for costs of age-class will increase where additional costs have been incurred, or may decrease where costs (e.g. seedlings) are reallocated. For example the intended areas were not planted with the 2007 age-class, due to adverse conditions, with costs transferred to the 2008 age-class.

The area requiring restocking after one year means that too many seedlings (>20 per cent) have not survived and replanting is undertaken to ensure the plantation is sufficiently stocked.

The area requiring refilling for hardwood has dropped significantly, reflecting better establishment conditions, particularly more rainfall.

Planted forests harvested and thinned areas			
		2010–11	
Category	Species	Harvested (ha)	Thinned (ha)
Softwood	Southern pine	146	487
	<i>Pinus radiata</i>	7474	5545
	Softwood other	417	0
Hardwood	<i>Eucalyptus grandis</i> (flooded gum)	332	0
	<i>Eucalyptus pilularis</i> (blackbutt)	247	221
	<i>Eucalyptus saligna</i> (Sydney blue gum)	62	0
	Hardwood other	13	0
Total		8690	6253

Indicator 27 – Mean annual growth in planted forests

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

Softwood plantation	2010–11
Annual Increment ¹ (m ³)	3 098 397
Net Stocked Area ² (ha)	203 784
Mean Annual Increment ⁴ (m ³ /ha/yr)	15.2
Hardwood plantation ⁵	2010–11
Annual Increment ¹ (m ³)	201 415
Net Stocked Area ² (ha)	15 144
Mean Annual Increment ⁴ (m ³ /ha/yr)	13.3

¹Annual Increment (AI) is the change in volume of the plantation Net Stocked Area in one year (AI=NSAxMAI).

²Net Stocked Area (NSA) is the area of the estate where trees are planted (i.e. does not include roads, environmental exclusion areas, areas awaiting regeneration etc) as at the end of the financial year.

⁴Mean Annual Increment (MAI) is an indication of the productive potential of an average hectare within the estate. The hardwood figure was calculated as part of the discounted cash flow valuation process. Both figures relate to total standing volume.

⁵Relates to post-1994 hardwood plantations only. All post-1994 hardwood plantations are managed under the Plantations & Reafforestation Act 1999. For pre-1994 hardwood plantations the relevant native forests licence conditions are usually applied.

Net Stocked Area by age-class groups as at June 30 2011				
Species	1–10	11–20	21–30	31–40+
	%	%	%	%
<i>Pinus radiata</i>	32	20	33	15
Other Softwood	40	18	21	21
<i>Corymbia maculata</i> (spotted gum)	3	97	0	0
<i>Eucalyptus grandis</i> (flooded gum)	9	91	0	0
<i>Eucalyptus pilularis</i> (blackbutt)	21	70	1	7
Other Hardwood	31	58	3	9
Total	32	25	28	15

Indicator 27 – Mean annual growth in planted forests (continued)

Standing commercial volumes by major species as at April 30 2011

Category	Species	m ³ (million)
Softwood plantations	<i>Pinus radiata</i>	42958
	Southern pine	1441
	Other softwood plantation species	13
Post-1994 hardwood plantation	<i>Eucalyptus dunnii</i> (Dunn's white gum)	706
	<i>Corymbia maculata</i> (spotted gum)	341
	<i>Eucalyptus pilularis</i> (blackbutt)	697
	<i>Eucalyptus grandis</i> (flooded gum)	312
	<i>Eucalyptus cloeziana</i> (gympie messmate)	113
	Other hardwood plantation species	104

Data and methodology has changed to align with valuation process compared with 2010.

Indicator 28 – Forest harvested and regenerated

Objective: 100% of surveyed native forests harvest area effectively regenerated

Native forest harvested	2007–08	2008–09	2009–10	2010–11
Estimated area in hectares				
Alternate coupe	1366	1162	1118	2147
Commercial thinning	7719	8861	4772	3873
Cypress release	15000	1800	7650	4212
Group selection	4437	2207	1226	10
Single tree selection	24438	13922	23733	17242
Total	52960	27952	38499	27484
Non-commercial thinning	4671	3300	285	380
Regeneration ¹ (%)	94	81	95	92
Expenditure on silviculture and inventory ('000)	\$4342	\$4321	\$4249	\$5255

¹Proportion effectively regenerated with commercial species.

While natural regeneration of commercial species is usually achieved, in a small minority of cases regeneration of commercial species may be insufficient. This is due to a number of factors including poor seed bank, unfavourable weather conditions and competition from weeds. Follow-up treatments such as hazard reduction burning, mechanical disturbance or enrichment planting are employed to regenerate these areas successfully. Note that cypress forests of Western Region are generally regenerated before harvesting.

Indicator 29 – Sustainable yield

Objective: Harvesting of wood products is within sustainable levels

Future Forests NSW combined woodflow statistics by timber quality class



Published in the *Forests NSW yield estimates for native forest regions*, November 2010.

Percentage of annually committed timber harvested

	1999–00	2007–08	2008–09	2009–10	2010–11
Forest type	Percentages (%)				
Hardwood high quality sawlog	98	90	91	79	68
Hardwood native and plantation pulpwood	100	80	75	76	79
Native cypress forest	97	96	93	100	91
Softwood preservation and sawlog	95	92	72	93	91
Softwood planted pulpwood	104	85	77	80	107

Indicator 29 – Sustainable yield (*continued*)

This table takes the Wood Supply Agreement commitments and compares it to actual harvested amounts. These commitments are based on predicted sustainable yield models, but take into consideration the operational implementation requirements of government and industry.

The percentage of high quality hardwood sawlog harvested is even lower, when compared to the limits in the NSW Forest Agreements.

Indicator 30 – Forest Certification

Objective: Maintain ISO 14001 & Australian Forestry Standard

Certification to the Australian Forest Standard (AS 4708:2007) and accreditation to Environmental Management System (ISO 14001:2004) was maintained by passing scheduled external surveillance audits in March 2010. North East Region, Northern Region and Corporate systems were audited to ensure Forests NSW continued to meet and exceed the environmental, social, economic and sustainability requirements of these standards.

Indicator 31 – Trading Profit (before tax)

Objective: Meeting profitability and dividend targets as agreed with NSW Treasury and increasing management efficiency

Year	1999–00	2007–08	2008–09	2009–10	2010–11
Value ('000) ¹	\$29541	\$14 499	-\$16389	\$19 738	\$33 746
\$'000 per employee	\$24.25	\$8.30	-\$18.50	\$23.53	\$42.02

¹Exclusive of forest revaluation, asset impairments, superannuation fund interest and significant items.

Indicator explanatory note

These social, environmental and economic performance and condition indicators align with the International Montreal Process Criteria, GRI 3 Sustainability Reporting Guidelines and business information requirements. The Global Reporting Initiative's framework sets out the principles and indicators organisations can use to measure and report economic, environmental, and social performance. An assessment of how Forests NSW meets these guidelines is published at www.forests.nsw.gov.au

Abbreviations and acronyms

AFS	Australia Forestry Standard (AS 4708:2007)
CO ₂ -e	'Carbon dioxide equivalent' the internationally recognised measure of greenhouse emissions
E-10	Petrol fuel mix with 10% ethanol
EMS	Environmental Management System (ISO 14001:2004)
FMZ	Forest Management Zone
GJ	Gigajoules
GRI	Global Reporting Initiative
HRB	Hazard Reduction Burn
IFOA	Integrated Forestry Operations Approval
JV	Joint Venture
kL	Kilolitre
LPG	Liquefied Petroleum Gas
M	Million
m ³	Cubic metre
megatonnes	Million tonnes
MVI	Market Value Increment
n/a	Not applicable
n/d	Not determined
n/r	Not reported as an indicator
No.	Number
NPWS	National Parks and Wildlife Service, part of Office of Environment and Heritage
NSW	State of New South Wales
OEH	Office of Environment and Heritage
OHS	Operational Health and Safety
REERM	Racial, Ethnic and Ethno/Religious Minority Groups
yr	Year

Places of business

Business hours 8:30 am – 4:30 pm (Mon–Fri)

Divisional and corporate offices

Corporate Office

Locked Bag 23, Pennant Hills 2120
121–131 Oratava Ave
West Pennant Hills 2125
(02) 9872 0111 Fax (02) 9871 5341
DX 4713 P/HILLS

Planted Forests Divisional Office

PO Box 100, Beecroft 2119
121–131 Oratava Ave
West Pennant Hills 2125
(02) 9872 0111 Fax (02) 9871 5341
DX 4713 P/HILLS

Native Forests Divisional Office

PO Box 4019
Coffs Harbour Jetty 2450
357 Harbour Drive
Coffs Harbour Jetty
(02) 6656 8800 Fax (02) 6651 2909

Regions

Hume Region

PO Box 291, Tumut 2720
Riverina Highlands Building
76 Capper Street, Tumut
(02) 6947 3911 Fax (02) 6947 2865

North East Region

PO Box 535, Coffs Harbour 2450
130 West High Street
Coffs Harbour
(02) 6652 0111 Fax (02) 6651 9891

Southern Region

PO Box 42, Batemans Bay 2536
Crown Street, Batemans Bay
1300 880 548 Fax (02) 4472 6557

Central Region

PO Box 168, Wauchope 2446
Maher Street, Wauchope
(02) 6585 3744 Fax (02) 6585 2392

Monaro Region

PO Box 83, Bombala 2632
Jonas Street, Bombala
(02) 6458 3177 Fax (02) 6458 3624

Western Region

PO Box 865, Dubbo 2830
Cnr Monash & Chelmsford Streets,
Dubbo
(02) 6841 4288 Fax (02) 6841 4771

Macquarie Region

PO Box 143, Bathurst 2795
Cnr Browning & William Streets
Bathurst
(02) 6331 2044 Fax (02) 6331 5528

Northern Region

Grafton Forest Technology Centre
Private Bag 9004, Grafton 2460
Trenayr Road, Junction Hill (Grafton)
(02) 6640 1660 Fax (02) 6640 1650

Retail nurseries

Cumberland State Forest

PO Box 100 Beecroft 2119
95 Castle Hill Road,
West Pennant Hills 2125
(02) 9871 3222 Fax (02) 9872 7590

Gunnedah

PO Box 542 Gunnedah 2380
Cnr Martin & Mullaley Roads,
Gunnedah 2380
(02) 6742 3126 Fax (02) 6742 0618

Narrandera

PO Box 33 Narrandera 2700
Lake Drive, Narrandera 2700
(02) 6959 1223 Fax (02) 6959 2460

Dubbo

PO Box 2047 Dubbo 2830
Wellington Road
Dubbo 2830
(02) 6884 5319 Fax (02) 6884 7487

Muswellbrook

PO Box 219 Muswellbrook 2333
New England Highway
Muswellbrook 2333
(02) 6543 2622 Fax (02) 6543 1154

Wagga Wagga

PO Box 5336 Wagga Wagga 2650
Olympic Way
Wagga Wagga 2650
(02) 6931 2600 Fax (02) 6931 3201

Commercial production nurseries *(no public enquiries)*

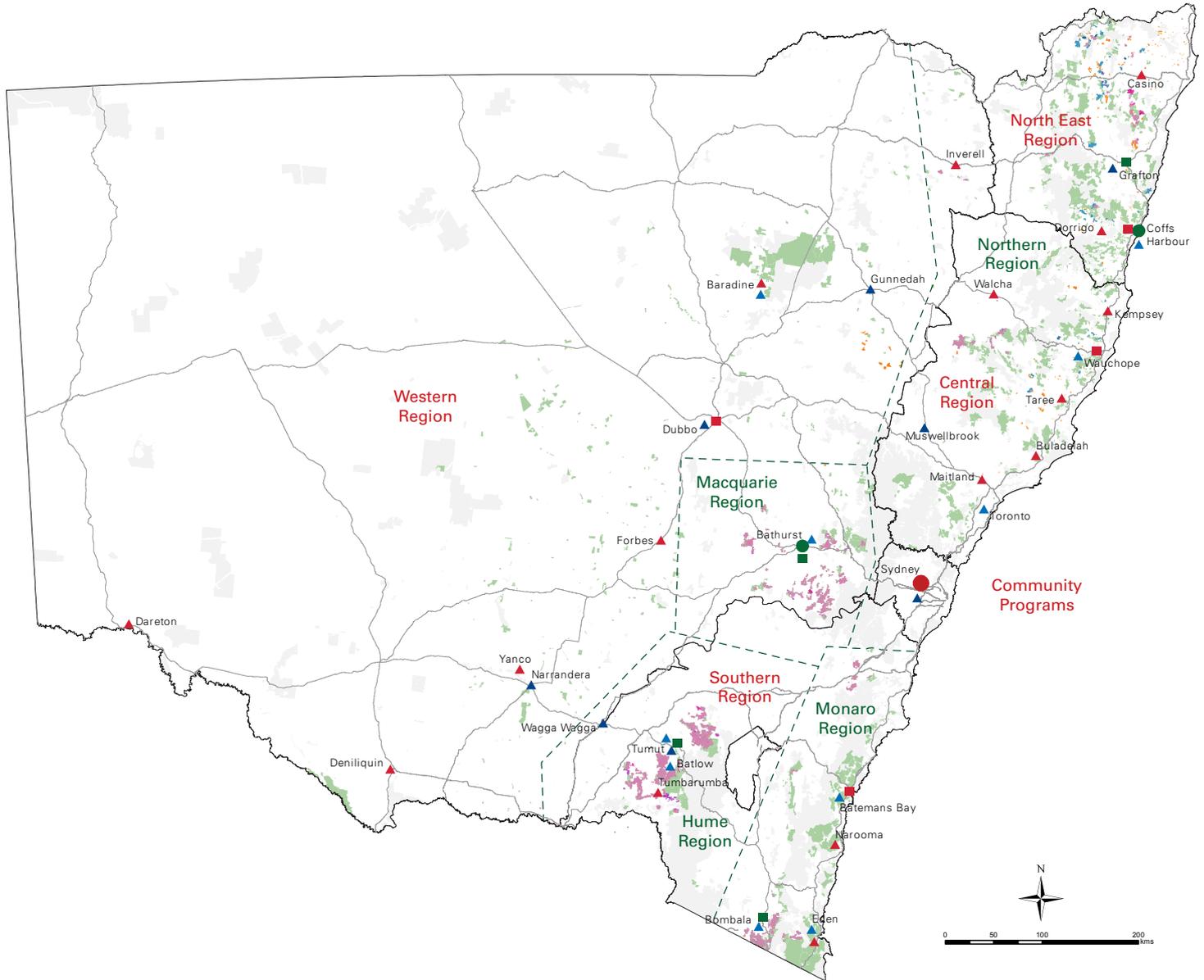
Grafton

Grafton Forest Technology Centre
Private Bag 9004, Grafton 2460
Trenayr Rd, Junction Hill (Grafton) 2460
(02) 6644 7001 Fax (02) 6644 7041

Tumut

PO Box 347 Tumut 2720
Blowering Nursery
Blowering Road, Tumut 2720
(02) 6947 6210 Fax (02) 6947 4890

Forests NSW estate and business centres



Forests NSW estate

- State forest – native
- Softwood plantation
- Hardwood plantation
- JV softwood plantation
- JV hardwood plantation

Private land

- JV softwood plantation
- JV hardwood plantation
- NSW National parks estate

- Native forest region boundary
- Planted forest region boundary

Office locations

- Corporate
- Divisional
- Regional – native
- Regional – planted
- ▲ Forest centre
- ▲ Nursery
- ▲ Workshop

See page 50 for places of business open to the public.

