



Certification No 8289
 Certified 11 July 2001



Auditing a first grade karri sawlog.

Environmental Management Services

The Commission operates under an Environmental Management System certified under ISO 14001. It is committed to the development of a long-term viable timber industry that provides positive environmental outcomes for the State. To this end, it works in close cooperation with other government agencies and has been an active contributor to the Forest Management Plan during the past year.



Commission staff audit in progress.

The Commission's activities play an essential role in protecting Western Australia's land, water and biodiversity assets. Our range of environmental services include:

- reducing rising groundwater and salinity
- improving water quality
- providing corridors to link remnant vegetation
- providing buffers to protect sensitive ecosystems such as wetlands and rivers
- providing renewable energy sources
- providing carbon sinks to offset greenhouse emissions

The Commission's focus is to ensure products are grown, extracted and developed in an environmentally sustainable manner.

Certification

During 2002/03 a full certification audit was successfully completed on the Commission's nursery at Manjimup.

Implementation of the Regional Forest Agreement

The Commission is responsible for the implementation of four of the commitments made under the Regional Forest Agreement (RFA) between the Western Australian and Federal Governments signed in May 1999.

The following have been completed:

- development of a Memorandum of Understanding for a Forest Industry Structural Adjustment Program; and

- review of timber harvesting documents with a view to improve understanding by field operators and field staff.

Substantial progress has been made in relation to:

- legislative review and competitive neutrality review regarding wood-based businesses; and
- pre-logging fauna assessment.

Australian Forestry Standard Certification

During 2003, the Commission began actively working towards certification of its forest operations in line with the Australian Forestry Standard (AFS).

The AFS was approved by the Standard Development Board in 2002 and was published as an approved Final Standard by Standards Australia as AS4708 (Int). The standard was developed by Commonwealth, State and Territory Governments in partnership with the National Association of Forest Industries, Plantations Australia and Australian Forest Growers.

The AFS joins a number of global forest certification schemes that provide the basis to certify forest management practices against agreed criteria, and to determine whether the forests are being managed in a sustainable fashion. The AFS takes into account Australian conditions.

Once achieved, the certification will compliment the Environmental Management System and provide even greater assurance to potential customers that forest operations managed by the Commission are sustainable.

Auditing

Internal and external quarterly audits are conducted to ensure the Commission monitors environmental impact, has objectives to manage this, is effective in implementing its environmental systems, and monitors and reviews its performance.

The following incidents were identified during auditing:

Work area	Level 1 (low impact)	Level 2 (medium impact)	Level 3 (high impact)	Number of audits
Share Farms	26	5	2	3
Plantation Propagation	6	3	5	3
Arid Forests	3	2		1
Commission Plantations	23			2
Corporate Executive	16	1		3
Native Forests	18	8		2
Total	92	19	7	

Five of the 'Level 3' incidents above related to procedures at the Commission's Manjimup nursery. These were identified and addressed during the certification process. They included an Environmental Management Plan for chlorine gas, procedures for hydrocarbon spills, licences for diesel, LPG and dangerous goods, records for Environmental Management System meetings and containment around a diesel storage area.

Two of the 'Level 3' incidents in Share Farms were plantation wildfires and responses involved site cleaning and replanting.

Meeting the silviculture challenge

Silviculture - the regeneration, growing and tending of trees - is one of the Commission's key functions. Natural regeneration, supplemented by an appropriate planting regime, is the primary outcome of the Commission's silvicultural program in all previously harvested forest areas.

In 2002/03, the Commission:

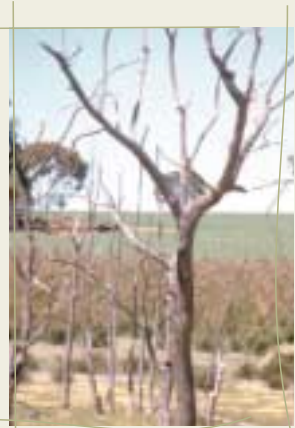
- Completed regeneration on 1,237 hectares of harvested karri forest and prepared 1,350 hectares of harvested karri forest for regeneration.
- Treated 1,966 hectares of previously harvested jarrah forest for regeneration and non-commercially thinned 747 hectares of forest.

National Action Plan for Salinity and Water

The National Action Plan for Salinity and Water Quality (NAP) has indicated the Commonwealth Government will inject funds into the fight against salinity and the decline in water quality in WA. The Commission is currently seeking over \$30 million from the NAP and is continuing to work closely with community organisations, State agencies and the Commonwealth Government to secure funding for strategic tree farming initiatives. Central to the fight against salinity is the Commission's newly released Infinitree™ tree farming program,



Marking a jarrah tree as a 'habitat tree' for preservation.



Salinity ravaged land.

which will reverse the affects of salinity, water logging and wind erosion.

Salinity mitigation

Much of the low to medium rainfall zones within WA's agricultural area are threatened by salinity, which is caused by rising saline groundwater tables. Strategically located trees will assist by drawing groundwater down and reducing the risk of saline waters reaching the surface. This will help prevent further salinisation of remnant native vegetation, water supplies and productive agricultural land.

During the Commission's 2002 Share Farming activities, 1,399 hectares of tree farms* were established in salinity-affected regions.

*As trees are established during the winter and the planting season straddles two financial years, the establishment figures are quoted on a calendar year rather than a financial year basis.

Carbon investors

International agreements, particularly the 'Kyoto Protocol', establish targets to reduce global greenhouse gas emissions. As growing trees can reduce the amount of carbon dioxide (CO₂) in the atmosphere by storing it in their cells, many large emitters of carbon dioxide are now seeking opportunities to invest in tree farms that will help 'offset' emissions. The BP Refinery in Kwinana has been investing in the Commission's program since 1999. Additional investment is still being sought from the corporate sector (both nationally and internationally) and from the Commonwealth Government via grants under the Greenhouse Gas Abatement Program.

Carbon sequestration

The Commission's plantations estate has already locked up (or sequestered) considerable amounts of carbon dioxide and these quantities will continue to increase as the plantations estate expands. Protocols for the measurement of sequestered CO₂ continue to evolve, but the Commission has estimated the following volumes (based on current procedures) of sequestration in plantations planted on previously cleared land, since 1990:

Twelve months to 31 December 2002
= 259,000 tonnes CO₂

1 January 1990 to 31 December 2002
= 1 146 000 tonnes CO₂

**As trees are established during the winter and the planting season straddles two financial years, the establishment figures are quoted on a calendar year rather than a financial year basis.*

Clearfelling at Pinjar plantation to help recharge groundwater at Yanchep caves.



Calculating the carbon sequestration levels of a young Maritime pine tree.

Yanchep limestone caves

Unique stygofauna inhabiting Yanchep's limestone caves are under threat from a drying climate and human impact. The Commission clearfelled the 200 hectares of plantations closest to the caves to enhance groundwater recharge. The surrounding 6,000 hectares of plantations have also been heavily thinned since 1999 to help increase water levels. The Commission continues to work in close partnership with other government agencies to define strategies that will re-establish the water levels. Other measures such as burning and controlling water abstraction are also being considered by other agencies.

A northern jarrah forest suffers a lightning-induced wildfire - the worst in 30 years. In the foreground - the Cooke plantation of Maritime pine, east of Armadale.



WA sandalwood sustainability

Research has shown the near extinction of the woylie (*Bettongia pencillata*) and other small to medium weight range marsupials and rodents may be the most significant factor in the reduction of WA sandalwood recruitment in its natural distribution.

Predation by foxes and feral cats has seen the collapse of a relationship between native seed dispersing animals and WA sandalwood.

Through the Commission's ongoing 'WA Sandalwood Enrichment' program, an increased number of seeds reach germination every year. For every tree that is harvested, 12 new WA Sandalwood seeds are buried in the same area, to mimic the function of the woylies.

The Commission has also adopted an improved mechanical harvesting technique to vertically extract the trees so that everything from the roots to the small branches of the crown can be processed. This technique ensures the maximum utilisation of the trees.

Introducing treejacking

Best practice environmental management in native forests requires that rivers, streams and sensitive reserve areas remain unaffected by the felling of trees. The process of treejacking was introduced in 2002 and allows the safe felling of trees at 180 degrees to their lean. The process aids in the removal of trees that would otherwise risk disturbance of these reserve areas.

Treejacking also permits increased resource utilisation and reduced operating costs, as well as improved long-term silviculture, fire and safety management. The trialling of treejacks in the Manjimup area enabled the retrieval of approximately 1,500 tonne of karri sawlogs (worth approximately \$90,000). It is expected the treejacking process will greatly increase the utilisation of available karri resources.

Fire management strategies

Severe fire conditions were experienced during the 2002/03 season, leading to the loss of some forest assets. A six-fold increase in lightning fires was recorded, in what was the fourth successive year of drought conditions.

Commission staff performed fire emergency duties in close partnership with DCLM staff and were involved in the suppression of approximately 300 wildfires. Commission staff also assisted with protection and regeneration burning operations in jarrah and karri forests.

A total of 519 hectares of plantations were affected by wildfire. This comprised 285 hectares of pine plantations in the South-West, and 153 hectares of pine and 81 hectares of Tasmanian bluegum in agricultural regions.



Commission staff auditing a truck load of karri sawlogs.