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WA FACTS ABOUT FORESTS

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

The management of Western Australia's native hardwood forests is firmly based on balanced and ecologically sustainable use. This means that the way in which we use our forests for all their values - including wildlife habitat, water, heritage, tourism, recreation and timber production - requires that all the ecological processes that drive the forests remain healthy.

While I appreciate that some interest groups in the community will never be satisfied with the balance of ecologically sustainable uses that have been decided,

I have been concerned that the debate surrounding forest management has not taken into account the full story of how our forests are managed to preserve all their values and processes. That is why I have asked for this brochure, which provides the facts about our forests, to be produced.

K. J. Minson

Kevin Minson MLA
MINISTER FOR THE ENVIRONMENT
October, 1994



South West forests protected and secure

WA's forest areas are set aside by Parliament under the Conservation and Land Management Act. In the forest regions of the south-west, CALM manages 2 450 000 hectares of land on behalf of the public. Any changes to this area must be approved by both Houses of Parliament.

Parliament has legislated to provide a conservation reserve system throughout the forest. This reserve system includes National Parks, Nature Reserves and Conservation Parks. The Government's Forest Management Plan for the south-west native forests, approved in March 1994, also sets aside other areas of high ecological, cultural and aesthetic value so that their special values are protected.

Thirty-three per cent of the jarrah forest and 46 per cent of the karri forest are included in the conservation reserve system and road, river and stream zones from which timber harvesting is excluded.

Surrounding the reserve system are forests which are managed on a sustainable basis for different uses including timber and mineral production, tourism and recreation, water catchment protection and wildlife conservation. No more is harvested than is grown, and every hectare of forest harvested for timber is regenerated.

Tourism and recreation in our forests

The south-west forests are among the State's most popular attractions with more than 3 million visits estimated each year.

Forest management ensures appropriate facilities are provided for visitors including

camping areas, picnic sites, walk trails, roads and information centres. CALM's 1994-95 budget for recreation and tourism projects in forest regions is around \$4.5 million.

Timber harvesting is planned to minimise the visual impact near frequently-visited areas

and facilities originally built for timber harvesting, such as roads, are now being used for forest tourism. Many of today's popular recreation sites are regrowth forests once cut for timber - the regrowth karri forest at Boranup, for example, is now a National Park.

We don't log native forests for woodchips

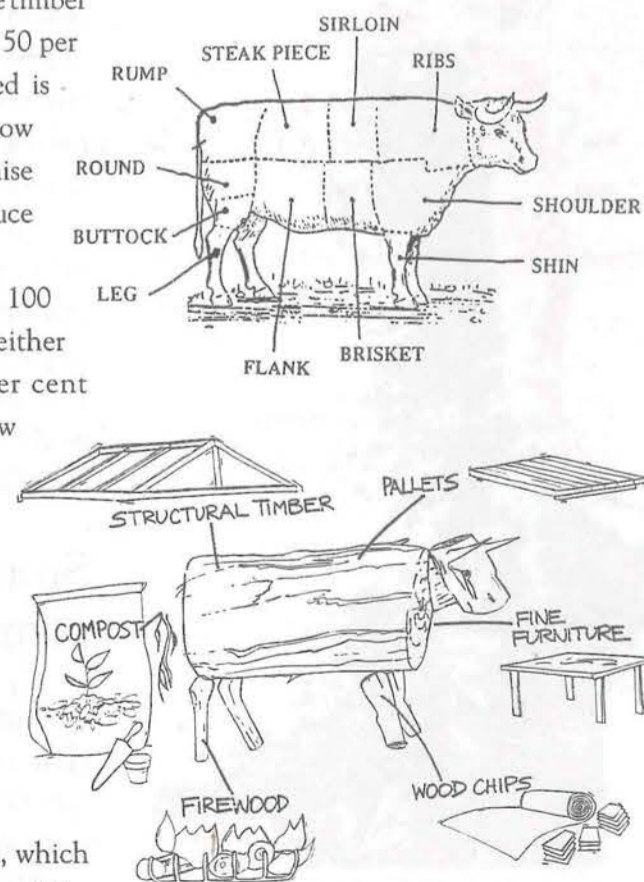
WA's native hardwoods traditionally have been used for structural timber, but in the past 10 years there has been a major change towards the production of high quality wood products. For example, 10 years ago less than 10 per cent of jarrah timber was converted into high value timber products whereas today more than 50 per cent of the jarrah timber produced is used for high value products. It is now mandatory for sawmillers to maximise the quality of the products they produce from native hardwoods.

But just as a steer doesn't yield 100 per cent high value cuts of steak, neither do trees and forests yield 100 per cent high quality timber. No matter how sophisticated timber technology is, there always will be a proportion of the log that will not make the grade.

Woodchips are a by-product of timber harvesting operations which are sawlog driven. They are produced from the off-cuts of sawlog production and parts of the tree, such as branches and logs, which are so degraded they cannot be used for

sawn timber production. If this material was not sold to the pulp and paper industry, it would be burned.

No logs suitable for sawn material are woodchipped.



Forests meet the n

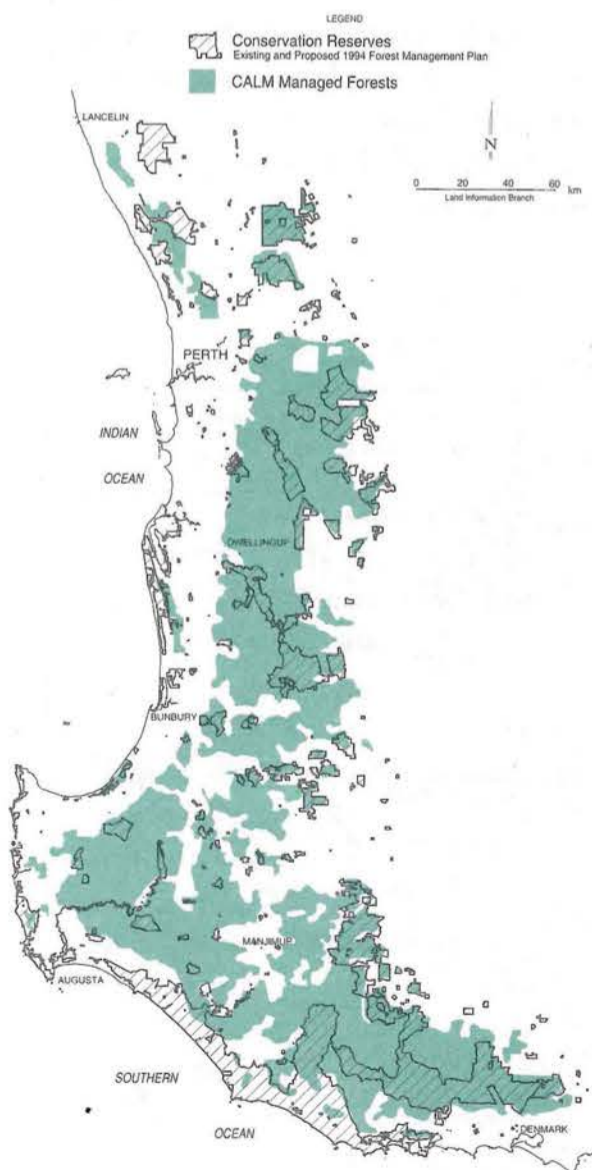
How does forest management protect water supplies?

About 60 per cent of Perth's fresh water is supplied from forested catchments. The forests also supply water to towns and communities in the wheatbelt, other parts of the south-west and as far away as the Goldfields. Not one stream in a fully-forested catchment is saline even though forests have been used to provide timber for 150 years. The quality of the water that flows from forested catchments is maintained by ensuring that the forests are regenerated and by providing reserves along all streams and rivers.

National estate and forest management

The 1975 Australian Heritage Commission Act established a Commonwealth Government body, the Australian Heritage Commission, to identify natural or man-made places considered to have heritage significance, place them on a register and advise the Commonwealth Government on their protection.

Conserving our forests South West of Western Australia



The status of areas placed on the National Estate is not the same as areas which are reserved in national parks. National Estate listing may result from many different characteristics varying from wilderness status to unique soil types.

In 1991 CALM and the Australian Heritage Commission undertook a joint study of National Estate values in the southern forest of WA. The study coincided with a review of the Government's 1987 Forest Management Plans. The CALM-AHC study identified 46 separate National Estate values in the southern forest.

In 1992 CALM and the AHC reached an agreement which met the requirements of the Australian Heritage Commission Act while at the same time enabled other legitimate forest uses, such as timber harvesting, to continue. The essence of the agreement was that, provided that the particular National Estate value being considered was adequately represented in the reserve system, the impact of other forest activities, such as timber harvesting, on that value was considered acceptable. For example, forest wilderness has a representation in the reserve system of 85 per cent and old growth forest 55 per cent.

CALM also was able to use the joint study undertaken with the AHC to ensure that the reserve system was representative. For example, as a consequence of the study, CALM recommended that an additional 124 000 hectares of forest be added to the reserve system to increase the area represented by old growth forest and wilderness.

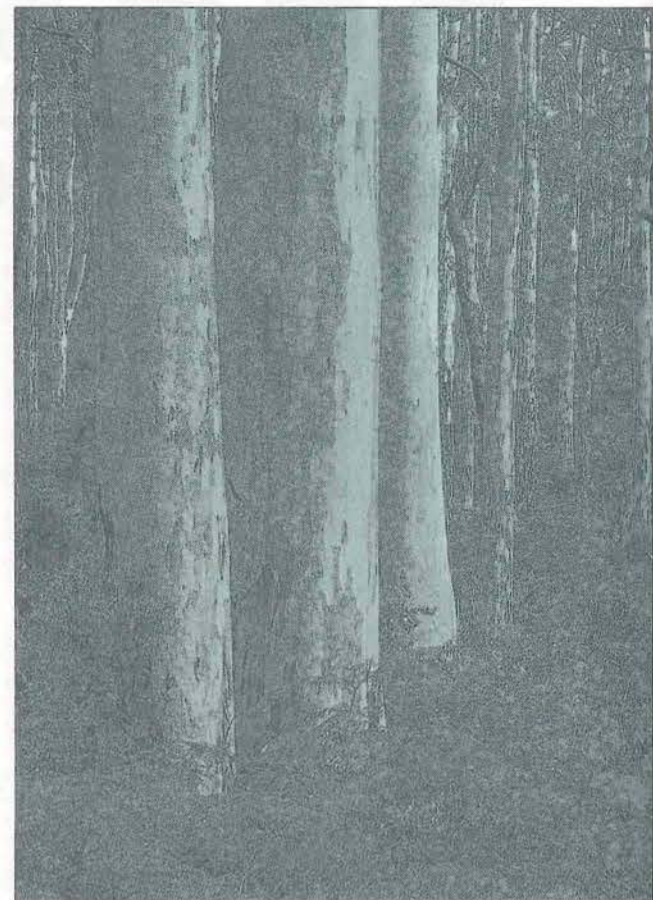
The agreement between CALM and the AHC recognises that timber harvesting can occur in areas listed on the Register of the National Estate provided the National Estate values are represented in reserve systems in other areas of the forest. For example, Hawke Block, which is listed on the Register, has 55 per cent of its area reserved from cutting and the National Estate values in the remainder of the area, which will be temporarily affected as timber harvesting progresses, are well represented through the reserve system in the region.

The CALM-AHC agreement was endorsed by the then Federal Minister for the Environment, Mrs Ros Kelly, who said: "The way in which the study was carried out and the conclusions reached in the report provide a model for resolving National Estate issues raised about other forest areas in Australia".

Sustaining the old growth component of the forest

The forest is constantly changing. The cycle of forest growth is dynamic: forests naturally regenerate, mature, die, then regenerate once more.

The 'old growth' or mature forest phase of



forest development for jarrah and karri trees begins at about 100-150 years. Contrary to what has been claimed, jarrah and karri trees rarely survive much longer than 300 years and the majority of the trees in old growth stands are less than 200 years old. If we are to sustain 'old growth' forests, we must have all the other stages of development represented in the forest.

Western Australian forests are managed so that all stages of the forest, including the 'old growth', are represented. This has been achieved by ensuring that the highest quality 'old growth' forests are represented in the reserves and other protection zones and by varying rotation ages and timber harvesting systems. There are 135 000 hectares of 'old growth' jarrah forest and 40 000 hectares of 'old growth' karri forest in conservation reserves. In addition, there is a further 18 000 ha of 'old growth' karri in road, river and stream reserves which are also excluded from timber harvesting.

In the jarrah forest, the existing structure of age classes, will be maintained. In the karri forest, there will always be more than 40 per cent of the forest in the 'old growth' stage of development.

Timber from plantations

Commercial tree plantations were first trialled in WA almost 100 years ago. Today there are more than 110 000 hectares of softwood and hardwood plantations.

In the past several years, CALM, private companies and farmers have planted more than 10 000 ha of commercial tree plantations each year. CALM has been appointed as the agent for overseas companies who are committed to establish 30 000 hectares of hardwood plantations on cleared agricultural land over the next 10 years.

Needs of many users

Regrowth Forest

Many of today's popular recreation sites in the south-west are regrowth forests once cut for timber. The regrowth karri forest at Boranup, for example, is less than 100 years old and is now part of Leeuwin-Naturaliste National Park. Waterbush and hazel form a dense understorey beneath the giant trees and, in spring, white clematis, purple hovea and coral creepers add vivid colours to the cool green of the forest.

The softwood plantations, which principally are State-owned, support a major industry producing a wide range of products, including furniture and structural grade timber, chipboard and medium density fibreboard. The hardwood plantations mainly will produce high quality wood fibre for paper products.

WA's plantation program will help satisfy the increased demand for timber products but it will complement, not replace, the timber industry based on native hardwoods. Native hardwood timber is increasingly being used for high quality purposes, such as furniture, for which there is an increasing demand. The plantation grown timber currently being produced is not suitable for this end use and the technology is not yet available to produce high quality ornamental wood economically from plantation grown timber.

Public consultation and independent reviews of forest management in WA

WA's forest management plans produced in 1987 and in 1992 both involved extensive public consultation. The draft plans were open for public comment for periods of three months and five months respectively and a total of 5000 submission on both plans were made.

The 1992 draft plan was reviewed by the Environmental Protection Authority, a Technical Advisory Panel, independent forestry experts, a Scientific and Administrative Panel and an independent Appeals Tribunal. This process resulted in changes to the draft plan, which became the Forest Management Plan (1994-2003) adopted by Government.

Since the 1970s, there have been more than 20 inquiries into forest management or forest industries in Australia. One of the most significant of these was the two-year national inquiry by the Resources Assessment Commission which handed down its report in 1992.

Justice Stewart, who was the Chairman of the Resources Assessment Commission, has publicly endorsed the CALM-Australian Heritage Commission model for incorporating national estate values into management stating that it was a pertinent example of how our forests can be managed in an ecologically sustainable way.

Forest Management and Dieback

Dieback, a disease caused by the introduced fungus *Phytophthora cinnamomi*, was first detected in the forest in the 1920s. The fungus was identified in the mid-1960s and since then management procedures have been introduced to help combat the disease and minimise its spread.

Dieback is not solely a forest disease and has caused severe damage on the south coastal heathlands. So far, the disease has infected about 14 per cent of the forest and strict hygiene procedures - including tight controls on logging - have been implemented to help prevent the fungus being spread further. It is spread when soil or root material infested with the fungus soil is moved.

Research into dieback is a high priority. Recent research has helped identify a fungicide to protect populations of rare and endangered plants and dieback-resistant strains of jarrah are being developed to help restore the worst-affected areas.

Are forest plants and animals protected?

After 150 years of timber cutting, the south-west forests retain one of the most complete suites of fauna of all the major Australian ecosystems. Animals now extinct or under threat in other parts of Australia still thrive in our forests - these include the woylie, tammar wallaby, chuditch, brushtail possum and numbat. Over the past 25 years, CALM and its predecessor have spent millions of dollars on biological surveys of flora and fauna in the forest. There have been no recorded extinctions of any plant or animal species as a result of timber harvesting in WA.

What has been established beyond any doubt is that feral animals, such as the fox,

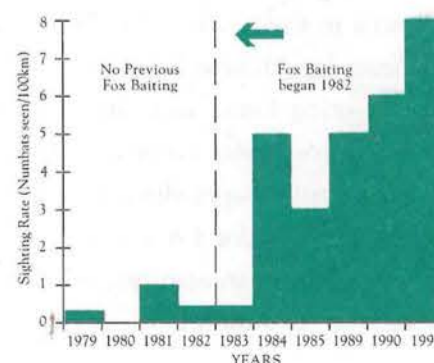
have a devastating impact on native fauna.

Research on the control of foxes has demonstrated that when foxes are controlled there is a dramatic increase in native animals such as the numbat, woylie and chuditch. Fox control is one objective of the 1994 Forest Management Plan. 'Operation Foxglove', which aims to control foxes in 500 000 hectares of native forest, is the biggest feral animal control program for the purpose of wildlife rehabilitation ever undertaken in Australia. It began in May 1994.

A number of other management procedures are undertaken to enhance the protection of animals and plants in the forest, including providing habitat trees, stream

and road zones and logging only small dispersed areas.

Numbat sightings in Dryandra Woodland



Fire and forests

Fire is as much a part of the south-west forest environment as sunshine, water and soil nutrients. Forest plants and animals have evolved alongside fire. They are adapted to it and many of them depend on fire for regeneration and survival. But the natural situation has changed as we have imposed a fire-vulnerable society into a fire-prone environment.

Forest wildfires - caused naturally by lightning or by accident or deliberately by arson - can pose severe threats to lives and property. They also can have a big impact on forest values such as aesthetics, recreation sites, water catchment protection, wildlife habitat and timber.

Since the disastrous forest fires that devastated Dwellingup in 1961, CALM and its predecessor have successfully implemented a fire management strategy that lessens the threat from wildfires and makes them easier - and safer - to control when they do occur.

Thirty years of research has shown prescribed burning - in which low intensity fires are used to reduce the build up of leaves and twigs on the forest floor - to be an effective and environmentally sound way of combatting destructive, high intensity wildfires.

Prescribed burns create a mosaic of burned and unburned areas. This patchwork effect ensures a variety of habitat for native animals. The season and frequency in which prescribed burns are carried out is varied between five to 15 years and during spring and autumn months. Only 60 to 80 per cent of each burn area is burned and many areas remain unburned for several decades. This promotes the biological diversity of the forest.

Fire also is used to regenerate habitat for native fauna and is used to regenerate areas cut for timber.

CALM also maintains an extensive fire detection network using lookout towers, rapid-response aircraft and a 400-strong fire-fighting crew and staff throughout the forest areas. These resources also are used to fight fires on private and other Government lands.

See for yourself... Explore WA's forests

People who want to find out more about sustainable forest management are encouraged to visit and explore the south-west native forests. A wide range of books and information leaflets on forest native plants and animals are available from CALM offices.

Organised forest tours, which cover timber harvesting and processing, also are run from several towns in the forest areas. Details are available from local tourist bureaux.

People visiting forest areas are urged to take note of signs where entry is restricted because of the risk of spreading dieback, or baits have been laid for fox control. Also, please only light fires in areas provided. No fires are allowed on total fire ban days.

WA Forests - at a glance

Forest of trees

2.45 million hectares of native forest and public lands in the south-west of WA are managed by the Department of Conservation and Land Management. When the 1994 Forest Management plan is fully implemented, this will include:

- ❖ 1.613 million hectares of State forest of which 370 000 ha are in special protection zones such as along streams and roads
- ❖ 387 300 ha of national parks
- ❖ 176 200 ha of nature reserves
- ❖ 275 100 ha of other reserves.

135 000 ha of 'old growth' jarrah forest are in conservation reserves.

40 000 ha of 'old growth' karri forest are in conservation reserves.

46 per cent of the karri forest and 33 per cent of the jarrah forest are in conservation reserves and road, river and stream zones and cannot be harvested for timber.

More than 500 000 hectares of native hardwood forests are on private land.

Forests for fauna

The jarrah forest is home for about 240 species of native animals including 29 mammals, 45 reptiles, 11 frogs, four fish and about 150 birds.

About 230 species of native animals live in the karri forest. These include 27 mammals, 32 reptiles, 15 frogs, 12 fish and 145 birds.

Forests for tourism and recreation

Each year people make more than 3 million visits to WA's native forests. Throughout the forest, more than 180 sites have been created especially for recreation activities such as picnicking, bushwalking, camping and so on.

Forests for water

Forest catchments supply about 200 000 million litres of water a year for domestic and industrial use in the Perth-Bunbury region.

Forests of gold and alumina

More than \$2300 million a year is earned from alumina mined in the jarrah forest. Gold worth \$215 million a year also is mined in forest areas. Every hectare of forest mined will be rehabilitated.

Forests for timber

More than 20 000 people are employed directly or indirectly by the timber industry.

WA's wood, wood products and furniture industry has a turnover of about \$850 million each year.

Planting for the future

There are 71 000 ha of publicly owned or managed pine plantations while a further 16 500 ha of pines have been established by the private sector.

Publicly owned or managed plantations of hardwood, mainly bluegums (*Eucalyptus globulus*), now extend over 18 800 ha. The private sector has established 19 300 ha of hardwood plantations.

Each year CALM and private companies plant about 10 000 hectares - more than 12 million trees - in commercial plantations and in on-farm tree plots.