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MARCH 2000

WA forests TODAY



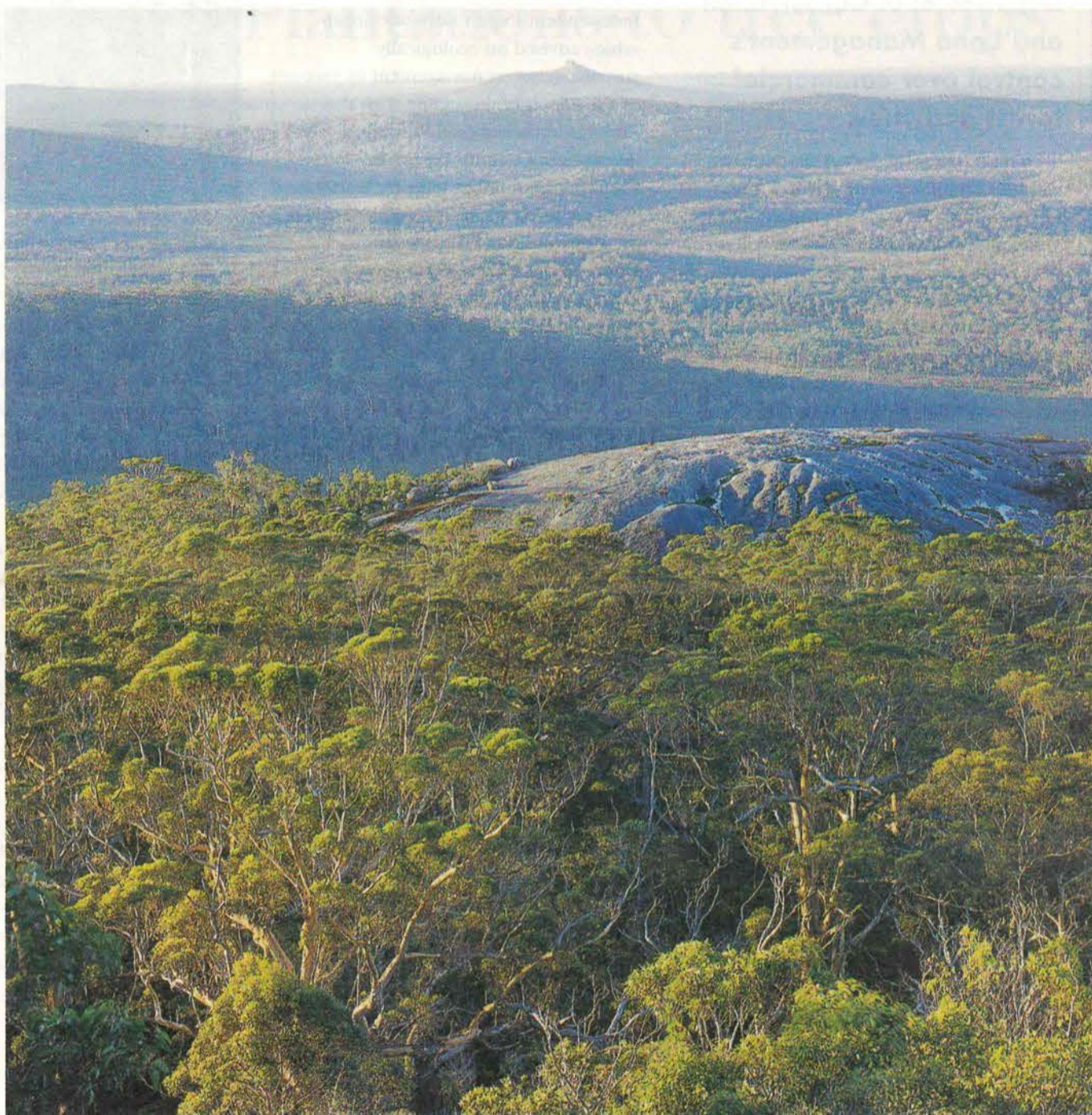
State Government of Western Australia



Department of Conservation and Land Management

Growing for tomorrow

Western Australia's native forests continue to be a home for native plants and animals, a unique attraction for tourists and locals and an important source of drinking water. They are also an important source of timber, a sustainable resource that is more environmentally friendly than alternative materials and one that provides jobs across the south-west.



There are opposing views in the community about how forests should be managed and the State Government has had to make hard decisions to balance competing demands.

The Government is taking steps to ensure Western Australia's forests are conserved for today and for future generations to use and enjoy, in line with the internationally accepted principles of sustainable development.

Changes proposed by the Government will create a new framework for managing conservation lands, including State forests. For the first time, all native forests will be part of the conservation estate.

State forests will be under the control of a Conservation Commission of Western Australia and managed by a Department of Conservation. A Forest Products Commission will be responsible for harvesting and selling the State's forest resources.

Forest initiatives

These initiatives are the result of the Government's decision to accelerate the restructure of the forest industry that was set out in the Regional Forest Agreement signed last year. The Government's forest management strategy includes:

- Setting aside more than 1 050 000 hectares of a diverse range of forest ecosystems in reserves such as national parks, nature reserves and conservation parks. Other reserves exist alongside roads, rivers and streams to increase protection of wildlife habitats.
- Twelve new national parks are being created, protecting forest blocks requested by the community, such as Hawke and Sharpe.

► 89 700 hectares of new reserves are being added to the Mt Frankland, Mt Lindesay and Mt Roe National Parks, making a continuous reserve of 213 000 hectares. This photograph shows less than 5% of the reserve.

- Altogether, 70 per cent of existing old growth jarrah and 86 per cent of old growth karri will be in reserves. This covers an area of almost a quarter of a million hectares.
- No more logging can occur in areas of karri-tingle old growth forest and karri-tingle forest that has been selectively logged in the past.
- Between now and 2003, no logging will occur in sensitive areas of karri old growth in 16 forest blocks identified by the community. These blocks are Beavis, Burnett, Carey, Dawson, Deep, Gardner, Giblett, Jane, Keystone, Northcliffe, Ordnanee, Sharpe, Swarbrick, Thomson, Wattle and Wye.
- No old growth karri forest will be logged after 2003.
- Sotico (formerly Bunnings Forest Products) will significantly reduce the production of woodchips from native

- forests for the remainder of the log supply contracts to the end of 2003. Instead, Sotico will drastically increase production and export of plantation woodchips from 50 000 tonnes in 1999 to 750 000 tonnes in 2002.
- An independent panel of experts is being appointed to review sustainable forest management and timber yields from native forests.
- Plantations on cleared farmland are being established at a rapidly increasing rate—faster than any other State in Australia. This year CALM will produce 45 million seedlings, most of which will be planted on farms to help combat salinity and create a timber resource for the future.
- A commitment to create new tourism opportunities in the south-west. Work is already underway on a \$1 million forest drive near Pemberton and

- \$2 million has been allocated for a nature-based tourism icon in the karri forest near Manjimup and Nannup.
- A new approach to public consultation is being introduced, to give people a chance to be involved in decisions about forest management at a State, regional and local level.
- A comprehensive strategy to use jarrah in high value products is being developed in line with the Government's commitment to helping the timber industry to do 'more with less'. From 2003, the annual production of karri sawlogs will be 50 000 cubic metres—one quarter of the level set in 1994. CALM's logging plans for 2000 and indicative plans for 2001–2003 have been released. The indicative plans were released for public comment and an independent consultant was appointed to collate and report on submissions.

A new direction for forest conservation

Two bills before the Western Australian Parliament introduce significant changes to improve the way the State's forest resources are managed, setting out a structure that ends the Department of Conservation and Land Management's control over commercial forest activities.

A new Forest Products Commission will take on these responsibilities, and report to the Minister for Forest Products. The Forest Products Commission will have similar commercial functions and accountability to existing Government trading enterprises.

For the first time, the entire terrestrial conservation estate—including State

forests—will be vested in one body, to be known as the Conservation Commission. The Commission will engage and manage its own staff and will audit the implementation of management plans by the new Department of Conservation, which will replace CALM.

The Department of Conservation will be an integrated agency responsible for conservation, recreation, forest management and fire control. This is in line with the recommendations of the Independent Expert Advisory Group which advised on ecologically sustainable forest management as part of the RFA. It is also in line with the findings of the national Resources Assessment Commission inquiry into the forest and timber industry in 1992.

New forest management plans will be prepared by the Conservation Commission through the agency of the Department of Conservation, with the joint participation of the Forest Products Commission.

The draft management plans will be



▲ Proposed Margaret River National Park.

released for public consultation, and will also be assessed by the Environmental Protection Authority.

If the EPA considers a plan acceptable, it will recommend Ministerial conditions for its implementation, in the same way the Authority does now. These conditions will be set by the Minister for the Environment and a plan can only be implemented according to these conditions.

Two initiatives announced in December by the Minister for the Environment will contribute to the development of the new forest management plans: the development of a jarrah strategy and the appointment of an independent expert group to review sustainable management and timber yields from native forests.

The development of a jarrah strategy will include the following changes in jarrah forest management over the next few years:

- areas of particular community attachment will have a strong emphasis on local community involvement in decisions regarding management and harvest operations;

- enforced value-adding requirements including regular value adding audits for all jarrah supply contracts and a capacity to terminate contracts for failure to meet value-adding requirements;
- consideration of the development of a competitive tendering process to encourage greater use of lower value jarrah sawlogs;
- lower value timber cut—but not to be sold under existing contracts—to be offered for sale by public tender; and
- limits on using native timbers for purposes such as railway sleepers or structural timber.

The appointment of a five-member taskforce to review sustainable management and timber yields from native forests is part of the State Government's commitment to ecologically sustainable forest management and will build on previous studies of Western Australia's forests and sustained timber yields.

Community groups, scientific organisations, voluntary conservation groups, the timber and other forest industry groups, indigenous organisations, local government authorities and other government agencies have been asked to comment on the draft terms of reference for the review.



◀ Jarrah regrowth forest at Dwellingup.

How much of the original forest remains?

The 1998 State of the Environment Report shows that, of the original forest area, 65% of the jarrah forest, 82% of the karri forest and 42% of the wandoo forest remains today. The reduction in forest results primarily from clearing to create farms and townsites.

How much of the forest is old growth?

There are 347 000 hectares of old growth in the south-west forest, of which 232 800 hectares (67%) are in RFA reserves. A further 9500 hectares of karri and karri tingle old growth forest, that previously would have been logged, also has been set aside following the State Government's acceptance of the recommendations of the Ferguson Committee report on karri and tingle forest management.

Another 12 600 hectares of old growth forest are in other informal reserves. As a result, 86% of the remaining old growth karri and 70% of the remaining old growth jarrah will be excluded from timber harvesting.

Who decides whether an area is old growth or not?

Old growth forest is determined according to the nationally-agreed definition of "ecologically mature forest where the effects of disturbances are now negligible".

How much forest is reserved?

Of the public forest managed by CALM, 39% of the jarrah forest, 48% of the karri forest and 68% of the wandoo forest is set aside in reserves. More than 1 050 000 hectares of a diverse range of forest ecosystems are reserved in national parks, conservation parks, nature reserves and other reserves.

Who decided how much forest should be reserved?

A report called Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia was released in 1997. It was produced by representatives from Commonwealth and State forestry, conservation and scientific agencies and signed by all State and Territory Governments, as well as the Commonwealth.

The National Reserve Criteria aim to protect 15% of pre-1750 biodiversity ecosystems and at least 60% of remaining areas where the ecosystem is vulnerable. They also aim to protect 60% of old growth ecosystems, increasing to 100% where old growth is rare or depleted; and 90% or more of high quality wilderness that meets minimum area requirements.

The final decisions on areas of forest to be reserved in WA were made by Federal and State Ministers after considering community submissions and technical assessments.

Why are informal reserves included in the reserve system?

The inclusion of some reserves along roads, rivers and streams is endorsed by the nationally agreed criteria, developed by Australia's most eminent forest ecologists and accepted by all State and Territory Governments. The vegetation surrounding streams and rivers is also one of the areas of maximum biodiversity in the forest.

▶ Facing page, far right: Hawke block will become a 2878 hectare national park—one of 12 new forest national parks announced last year.

Woodchips switch to plantations

The State Government's new direction in forest management has accelerated the transition to a plantation-based woodchip industry. Plantation woodchip exports will rise from 50 000 tonnes last year, to 750 000 tonnes in 2002.

At the same time, Sotico, formerly Bunnings Forest Products, will reduce native timber woodchip exports from 630 000 tonnes in 1999, to 270 000 tonnes by 2002.

This follows negotiations with Sotico's customers to vary the current sales contract to allow native forest woodchips to be replaced by chips from plantation timber. The chips will be produced from bluegum plantings in the south-west.

The Government will end logging in

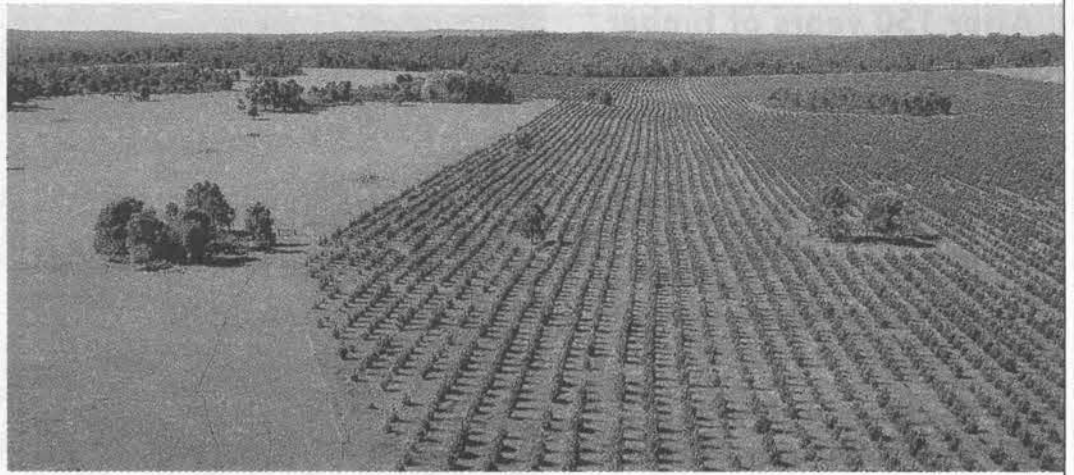
old growth karri forests from 2003 and then reduce the allowable karri sawlog cut to 50 000 cubic metres a year—less than a third of current levels. This means there will be less harvesting of marri, the major source of native timber woodchips, because the sawlog harvest determines the area cut, not the demand for woodchips.

Western Australia continues to lead the nation in establishing new plantations, with 75 000 hectares planted by CALM, private companies and farmers over the past three years (more than 90 million trees). Even so, demand for plantation sawlog timber from local sawmills will exceed supply for at least 15 years until the new maritime pine plantings begin to produce sawlogs.

In just a decade, more than 100 000 hectares of bluegum have been planted on already cleared farmland.

More than 8000 hectares of maritime pine and about 5000 hectares of mallees have also been planted since the mid-1990s.

◀ Planting bluegums.



▲ Targeting land that has already been cleared for agriculture.

Plantations to tree crops

Plantations in Western Australia used to be planted in large blocks on public land converted from native forest and woodland, or on repurchased farmland.

There are 72 000 hectares of these pine plantations providing structural timber, pallets and small logs for panel products like medium density fibre board and particle board.

By the 1980s, opposition to clearing native forest for pine plantations had become a major environmental issue. However, the decision to buy farms instead, and turn them into plantations provoked strong opposition from farmers and local government.

Plantation establishment slowed, but more trees had to be planted to fight rising water tables and increased salinity across the State's agricultural region, caused by

overclearing native vegetation.

The capacity of tree crops to reduce water table levels significantly has been demonstrated in trials with several different species.

CALM saw the potential of using the increasing world demand for wood fibre to pay for the establishment of trees on farmlands. Tree crops could fund an otherwise unaffordable landcare program.

The objective of CALM's tree crops on farms program was to develop a major commercial industry, on privately-owned land in partnership with farmers, on a scale that would help rehabilitate degraded land and river systems, and protect biodiversity.

The tree crops on farms program has shown the potential for such an industry and stimulated private investment in tree planting schemes.



Review confirms new opportunities

An independent review of CALM's plantations operations has confirmed that the State has many unique plantation opportunities, offering very positive economic and environmental outcomes.

The review was carried out by the Melbourne-based consultants Forestry Pacific Pty Ltd (Forpac) as part of the State Government's commitment to new directions for forest management and timber industry development.

The review found opportunities for Western Australia to establish plantation timber processing industries such as:

◀ Maritime pine, one of the major species being planted on agricultural land to control salinity.

- bleached kraft hardwood pulp, for which there may be enough wood supply and market opportunity within 10 years;
- sawn radiata pine, which was constrained by log supply after 2003;
- medium density fibreboard, which needed an increased log supply to achieve its full export potential;
- particleboard, which had already demonstrated its competitiveness by its export performance; and
- laminated veneer lumber, which had excellent prospects of supplying markets in the United States and Japan.

The Forpac report found that the growth of new industries was constrained

by the supply of plantation timber.

It did not support previous public criticism that a stockpile of sawlogs existed in CALM's softwood plantations. Instead it indicated that CALM's data base, growth simulation, yield scheduling and monitoring were professionally and competently performed and provided a basis on which yields could be responsibly committed to industry.

There was potential to use plantations to replace the structural timber currently supplied from native forests, but the review emphasised that the market place would decide on the form of substitution.

Why do we log native forests at all?

Wood from native forests is a renewable resource with unique ornamental properties that can sustain job-rich industries. It is more environmentally friendly than alternative materials such as concrete and steel.

Why not replace native forest logging with plantations?

WA leads the nation in establishing new plantations. Today, plantations and on-farm tree crops cover almost 226 000 hectares.

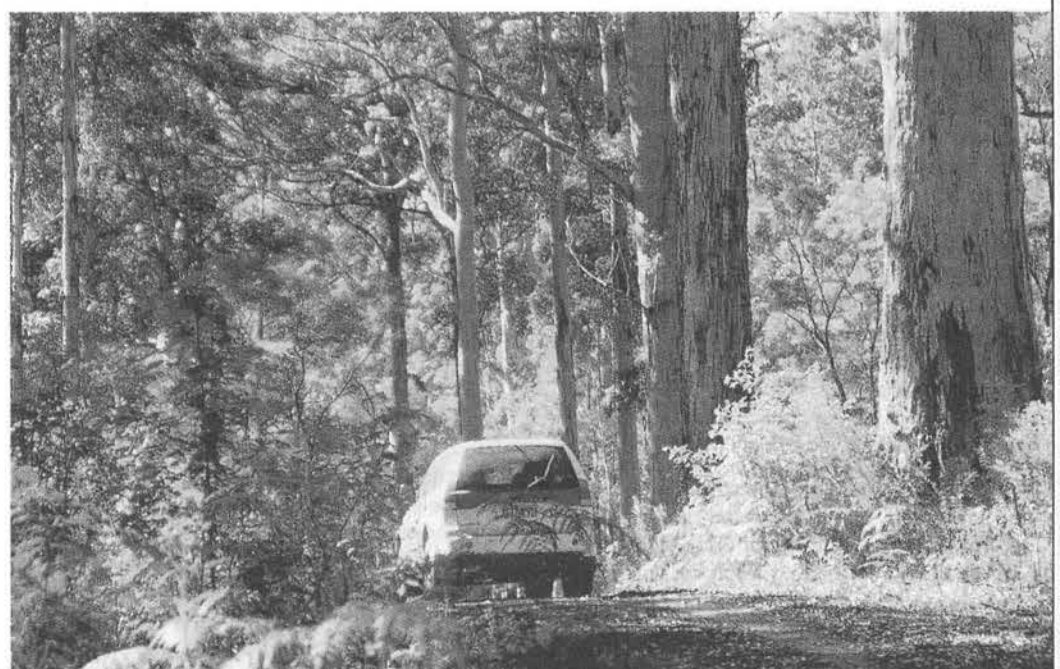
However, there will be a period of transition until sawlogs from these plantings are available in large quantities to start replacing native timbers. Sawlogs from older plantations are fully committed to local sawmilling companies. Even when plantation sawlog production increases,

native timber will still be in demand because of its distinctive colour, grain and strength.

The Government believes that WA can have both a sustainable native forest-based timber industry producing high value products and a plantation-based industry producing structural and board products as well as wood fibre for the production of paper pulp.

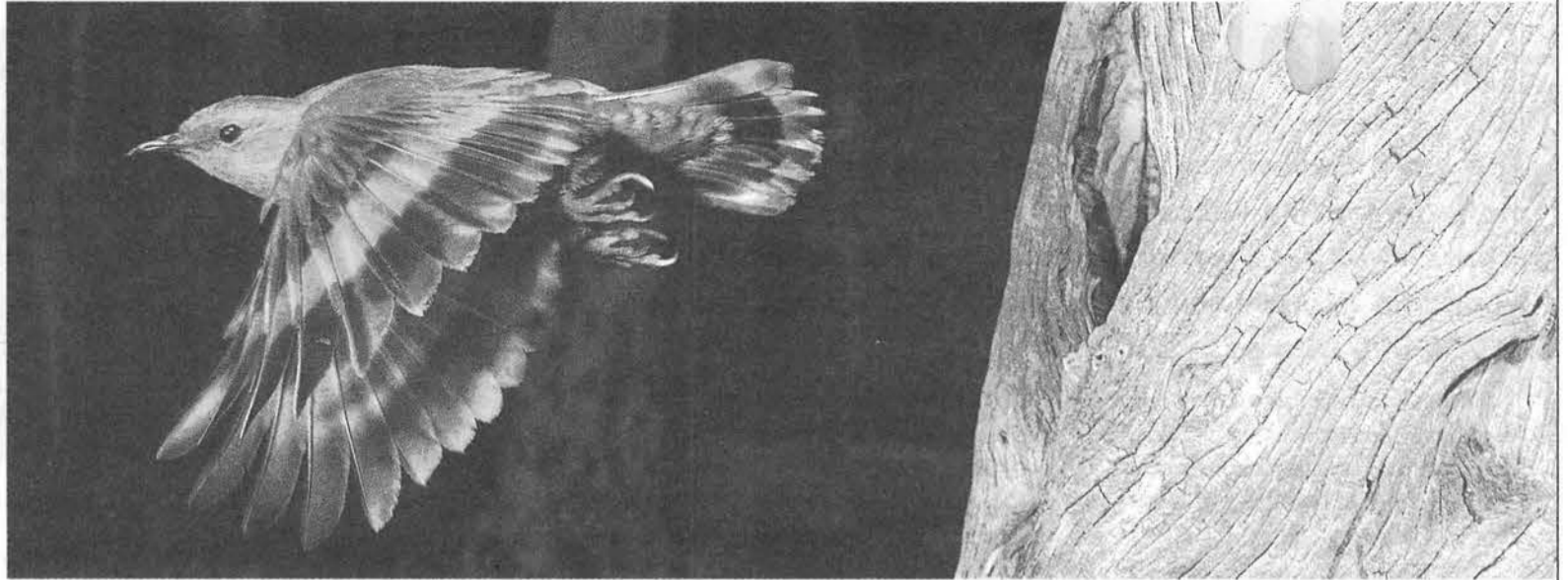
Are royalties for native forest logs lower than for plantation logs?

No. The royalty for equivalent grades of jarrah and karri logs are equal to or higher than those for pine logs, but the recovery rate of sawn timber from pine logs is higher than for native forest logs (because of natural faults in native forest wood), which means the buyers of pine logs pay far less royalty per cubic metre of sawn timber produced.



Forests for wildlife

After 150 years of timber harvesting, the south-west forests retain one of the most complete suites of fauna and flora of all the major Australian ecosystems. Animals and plants now extinct or under threat in other parts of Australia thrive in our forests—these include the woylie, tammar wallaby, chuditch, brushtail possum and numbat.



▲ *Rufous treecreeper.*
▼ *The tammar wallaby has been removed from the endangered species list as a result of fox control.*

There have been no recorded extinctions of any plant or animal species as a result of timber harvesting in Western Australia.

As part of the RFA, comprehensive research was carried out at both ecosystem and species level. Mapping of 312 vegetation complexes and 27 forest ecosystems was carried out. There were 153 000 records of 3244 plant species documented and a new database for fauna involving 76 000 records of 796 species was completed. These data, which were integrated and stored in CALM's geographical information computer system, ensured that the new reserves proposed last year were targeted to areas of highest conservation value.

Reserving areas to ensure conservation of biodiversity is a critical conservation strategy, but the value of reserves is lessened if the surrounding areas are not managed sympathetically. In the forest, the reserve system is surrounded by State forest, and while this is available for multiple uses including timber harvesting, it is also managed for conservation.

Areas that are harvested are distributed over the landscape and restricted in size to ensure there is a mosaic of forest at different stages of development surrounding the reserve system.

Measuring diversity

Key species are monitored to measure the success of biodiversity conservation techniques. Birds, in particular, are useful because they are the best studied and most completely known of all organisms. For habitat they rely on plants, for food they rely on insects, plants and other animals. Birds also use all parts of the forest (ground, understorey, and canopy). It follows that they are a good indicator of the health of the forest.

If the jarrah and karri forests were being mismanaged, we could expect to see extinctions, contractions in range, or falls in the number of many bird species. The graph of extinctions according to regions shows that this is not the case. Only two bird species have become extinct from the original forest area: Lewin's rail, a waterbird that

occurred in swamps (not subject to timber production); and the noisy scrub-bird, last recorded in the 1880s in areas subsequently cleared for farming. Neither of these extinctions can be attributed to logging or prescribed burning.

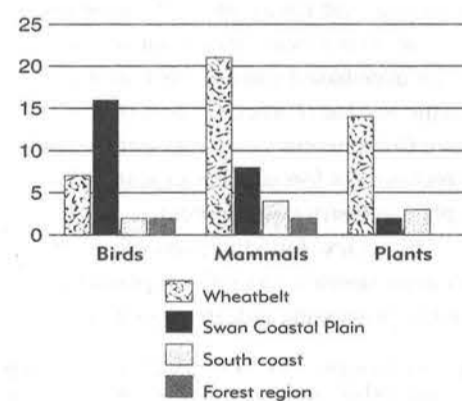
When it comes to plants and mammals, the forest is also a safe haven. No species of plant has become extinct in the forest as a consequence of timber harvesting.

Two mammal species—the bilby and the boodie—once extended across the continent from the eastern edge of the jarrah and wandoo forests to New South Wales. After its release in Victoria in the 1860s, the fox spread across much of mainland Australia and arrived in the jarrah forest in the late 1920s. The bilby became extinct in New South Wales and South Australia soon after the fox arrived there, and was last recorded in the jarrah forest in 1933. This was several decades before the eastern jarrah forest was logged. Its extinction cannot be linked to logging.

The boodie was last recorded in 1906 near Lake Muir and probably disappeared because its habitat was cleared for farming.

CALM has plans to reintroduce both species in the eastern jarrah forest, as well as large nature reserves in the wheatbelt, once fox numbers are controlled and sufficient animals are produced from captive breeding programs.

Extinctions of bird, mammal and plant species by region



Is the forest cut for woodchips and charcoal?

Jarrah and karri forests are harvested for sawlogs. The area of forest harvested is determined by the sawlog requirement. Parts of trees or whole trees that cannot be used for sawn timber, as well as offcuts that would otherwise be left on the forest floor as waste and eventually burnt, are used to produce woodchips in the case of karri and jarrah, or charcoal in the case of jarrah. Karri trees have a high level of defect because of the presence of gum veins and separated growth rings. If they were all left during timber harvesting, karri and jarrah regeneration would be suppressed.

Before any log is converted to woodchips or charcoal, any contracted sawmiller or craftsman has the opportunity to buy that log in the forest or at the processing plant. WA woodchips are used to produce high quality writing paper, and jarrah charcoal is an

essential resource for the production of high quality silicon which is used to produce high value products such as computer chips, engine blocks, artificial hip and knee joints and solar cells.

Why is clearfelling still being allowed?

As part of its review of karri and tingle forest management, the Ferguson Committee explored the issue of occupational health and safety for forest workers and regenerating the karri forest after harvesting. The Committee recommended that the technique known as 'clearfelling' be continued as it was less hazardous than other systems such as cutting only selected trees. Also, clearfelling enables the harvested area to be regenerated by using fires to create nutrient-rich ashbeds. The forest species then regenerate from fallen seed or can be replanted with karri seedlings.

How big are the clearfelled karri areas?

The Government has accepted recommendations from the Ferguson Committee and will halve the maximum clearfell area to 40 hectares. However, in practice the average clearfell-patch size is likely to be around 13 to 15 hectares.

Is old growth karri and karri tingle being cut faster because it won't be allowed after 2003?

No. The Government's new direction in forestry management means that an additional 9500 hectares of karri and karri tingle old growth forest that would have been logged is now earmarked for conservation. This area is in what were identified by the Ferguson Committee as 'sensitive' forest areas. This is as well as the extensive area of

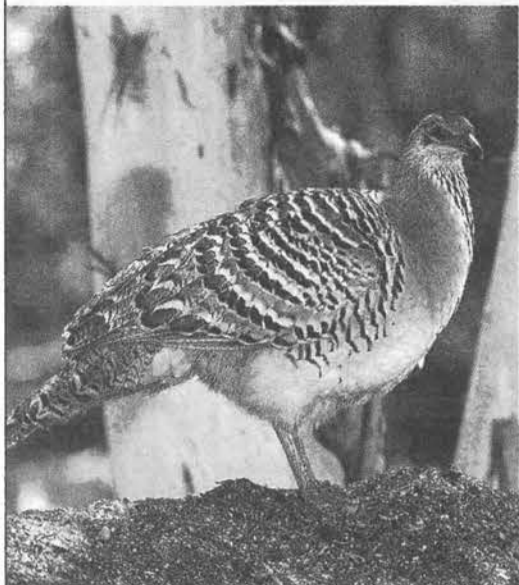
old growth forest already in reserves. Also, the cut cannot exceed the level set by the Minister for the Environment.

Why isn't selective logging used in karri forests?

The harvesting of one or a few select trees for sawlogs originated in Europe, where it was applied in forests which had shade-tolerant trees. In WA, many eucalyptus trees do not regenerate and grow vigorously near large mature trees. Regenerated trees in a selection cut karri forest are also difficult to protect from fire, and from damage when adjacent mature trees are harvested during successive cutting cycles.

The different characteristics of the jarrah forest allow a wider range of management systems to be used, from selective logging through to the creation of small patches of regeneration.

Back from the brink



Western Shield, CALM's leading nature conservation program, is safeguarding the animals of the south-west forests. Launched in 1996, it is now the biggest wildlife conservation program ever undertaken in Australia. Western Shield, winner of the prestigious national Banksia Award for fauna conservation in 1998, aims to bring at least 13 fauna species back from the brink of extinction by controlling foxes and feral cats, on almost five million hectares of land.



Trap success rates for medium-sized mammals in the jarrah forest of Kingston Block, near Manjimup, reflect a seven-fold increase since baiting began in 1993.

Kingston is the site of a long-term study into the effects of timber harvesting and prescribed fire on native animal species. Two years after logging was carried out in the block, all species have maintained or returned to their former levels.

In Battalling block, near Collie, monitoring has shown an increase in woylie capture rates from less than one per 100 traps in December 1990, just before fox baiting, to nearly 70 per 100 traps in October 1998.

Monitoring at Julimar Conservation Park, north of Mundaring, which was extensively harvested for timber before it was reserved, has shown that chuditch numbers have increased nearly five-fold since fox control made their reintroduction possible in 1992.

Other endangered native animals such as the numbat, noisy scrub-bird and ring-tailed possum are also beginning to thrive after being reintroduced into forest inside and outside reserves.

Already, three forest-dwelling mammals—the woylie, quenda and tammar wallaby—have been removed from the State's Threatened Fauna List as a result of successful conservation management under the Western Shield program.

An important element of the program's success is the cooperation and support of local communities. Many private landowners and Land Conservation District Committees have helped with fox-baiting by laying baits on their own land where it is next to conservation reserves and State forest. All publicly-owned forest is baited four times a year.

As well as Government funding, the baiting program in the forest is sponsored by Alcoa Australia, Cable Sands and Iluka Resources.

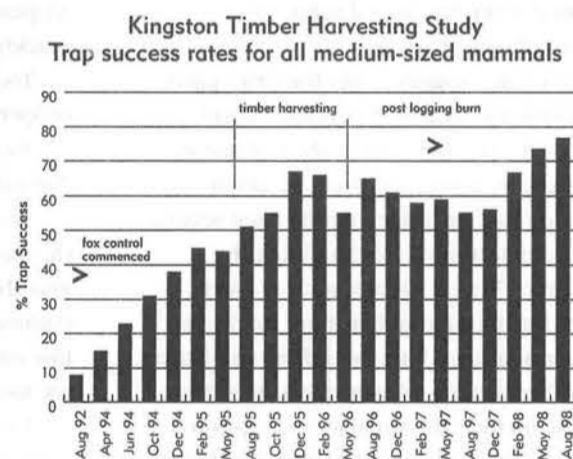


Introduced predators have been making a meal of Western Australia's wildlife, contributing to the extinction of 10 species of native mammal, and forcing dozens more to fight for survival.

The main weapon in the fight against the fox and feral cat is use of the naturally occurring poison 1080, found in native plants called gastrolobiums or 'poison peas'. While our native animals have evolved with these plants and have a high tolerance to the poison, introduced animals do not.

Western Shield makes use of this natural advantage.

In the south-west forests, scientific research and monitoring has shown that where fox numbers have been reduced by baiting, there has been a dramatic increase in native animal numbers.



◀ Left from top: Malleefowl, pigmy possum and numbat.

▶ Right: The red-tailed black cockatoo remains widespread throughout the forest region, but it has disappeared from areas where farming has resulted in overclearing of the original forest and woodland.



Couldn't tourism replace the timber industry?

The south-west economy depends on a wide range of industries including mining, agriculture, viticulture, native forest timber, plantations, tourism, beekeeping and wildflower picking. All of these industries can expand and prosper without conflicting with one another.

Doesn't logging cause the extinction of plants and animals?

No species of plant or animal has become extinct or is threatened by timber harvesting in WA.

◀ 147-year-old karri forest in Carey Block, west of Pemberton. This even-aged stand was regenerated naturally, probably following a wildfire.

What about water quality?

No south-west forest stream has become permanently saline as a result of logging.

Shouldn't old growth be protected for tourism?

There is now a wide range of old growth and other forests available for tourism, including the old growth identified by the Ferguson Committee and that reserved under the RFA.

The Tree Top Walk at Walpole, which attracts more than 300 000 visitors each year, is based on an area of about 12 hectares of forest in Walpole-Nornalup National Park. Tourists can see thousands of hectares of old growth forest along the Great Forest Trees Drive in Shannon River National Park, and hikers can experience old growth forest along the Bibbulmun Track.

Regrowth forests are also an important part of nature-based tourism in the south-west, including Lane-Poole Reserve, forest around the Gloucester and Diamond Trees, The Cascades, One Tree Bridge, Big Brook Dam and Boranup forest.

When will CALM be split?

Legislation to amend the CALM Act was introduced into State Parliament on November 25, 1999. The legislation is among the Government's priorities for the autumn session of Parliament which began on March 14, 2000. It is proposed the new Conservation Commission, Forest Products Commission and Department of Conservation will officially begin on July 1, 2000.

Adding value

Western Australia's native forest timber industry has been progressively restructuring to meet the need to reduce timber harvest levels, use smaller regrowth logs, and develop new products based on the unique ornamental values of native forest timber.

The 1987 Timber Strategy was a prime-mover behind the change of emphasis from green sawn structural timber to high value end uses and led to major investments and the development of new technology, both by CALM and private companies.

One of the first steps in the value adding process is drying timber in a way which is efficient, but which also avoids cracking. New kiln drying technology has been developed, including a solar kiln by CALM, that is suitable for small industry units. Other innovations such as techniques that allows smaller logs to be used for high value products, have also been introduced.

Today, more than 60 per cent of jarrah sawn timber is now value added with some mills adding value to 90 per cent of their sawn jarrah.

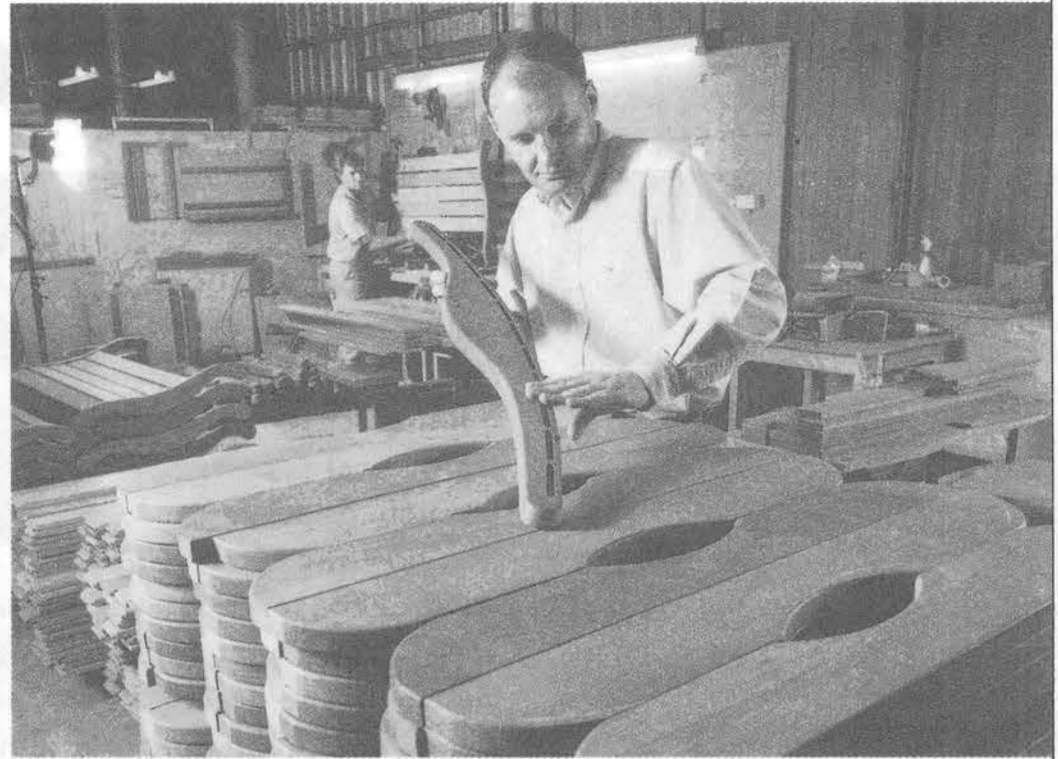
Nearly all sectors of the industry have invested significantly in new machines and new kilns to produce high value products from jarrah.

CALM research has also led to new ways of kiln drying karri, which is finding increasing favour among fine furniture makers for its rich, red hues.

Marri, a tree that has traditionally been difficult to use for high quality products because of the presence of gum veins, is increasingly being used for high quality furniture which actually features the veins and other marks once considered defects.

Many Western Australian furniture companies have begun to develop high quality furniture products for local and international markets.

There has also been substantial investment in training. For example, the School of Wood at the Forest Heritage Centre in Dwellingup, a joint initiative of CALM and the Finewood Industry which is sponsored by a number of local companies, now has 26 trainees undertaking a two-year diploma course.



Helping the change

The State Government's new direction in forest management will herald further changes. As part of the 'doing more with less' strategy, the State and Commonwealth Governments have introduced a financial package to help the industry speed up the restructuring already underway.

The package includes \$38.5 million in State and Commonwealth funds to

▲ *Finely crafted outdoor furniture components at Jensen Jarrah, Busselton.*

help introduce new milling technology, new kilns and new manufacturing facilities. An example may be the new manufacturing and value adding facility planned for Nannup on the site of the old Bunnings mill.

Up to \$12 million will be made available to help those companies wishing to exit the industry and for training and worker assistance.



Burning questions

Hot dry summers and accumulations of flammable vegetation mean that fire has helped shape forest ecosystems for millions of years.

Historical evidence suggests that the drier parts of the jarrah forest and nearby woodlands burnt every 3-4 years. This is supported by the oral history of indigenous people, as well as recent research which has found that fire history dating back several centuries can be determined by examining the stems of grass trees. Wetter forests, such as karri, probably burnt less frequently but more intensely.

It is not surprising, then, that forest flora and fauna have evolved a diverse array of adaptations to survive. For plants, these include the capacity to resprout after fire, or to regenerate from seed stored either in the soil or in thick, protective, woody capsules. Many species depend on fire at certain intervals and at certain times of the year to regenerate.

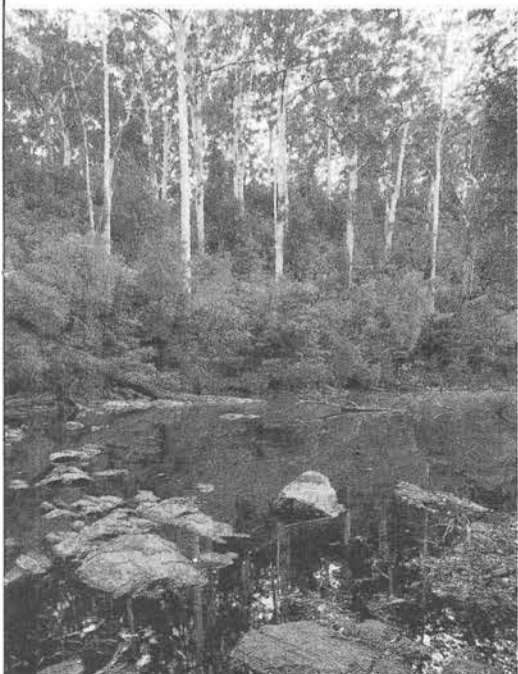
◀ *A low intensity prescribed burn in jarrah/banksia woodland north of Perth.*

Animals have equally diverse behavioural adaptations to survive during fires or to recolonise quickly after fire when the vegetation regenerates.

Today, fire management aims to protect people, property and conservation values from intense wildfires and to ensure that forest health and diversity are maintained.

The threat from a wildfire largely depends on the amount of live and dead vegetation that is available to burn. To prevent the build-up of flammable fuels, CALM carries out carefully planned low intensity fires at 6-10 year intervals. Other fires are used to regenerate fauna habitat.

Each year, about 10 per cent of the forest is strategically burnt. This results in a mosaic of forest patches burnt at different times of the year and different intervals, with some patches remaining long unburned. Great care is taken to minimise any adverse environmental effects of prescribed fires, including air quality in urban areas. An on-going fire research and monitoring program is used to refine forest fire management continually.



How is the area of forest available for logging determined?

For the past 15 years, the area of forest available for timber harvesting and the quantity of timber harvested have been determined by the Minister responsible, after extensive public consultation and reviews by the EPA and other independent bodies. CALM's role is to manage the forest according to documented Government policies.

The State Government announced that the CALM Act will be amended to allow changes in the administration of native forests which would: remove any perception of conflict of interest between forestry and conservation roles; provide for broader advice on forest

◀ *Karri forest near Warren National Park.*

policy; and ensure that commercial native forest timber production arrangements complied with competition policy principles.

Under these arrangements, all publicly-owned land which has conservation values and is managed by CALM will be vested in a new Conservation Commission of WA.

A Forest Products Commission will be responsible for the commercial native forest timber industry. A new Department of Conservation will be created which will be responsible for integrated forest management.

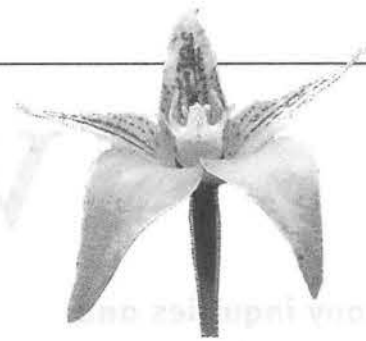
The new Department of Conservation will not retain royalties from native forest timber production and, as was the case before these changes, will not determine the level of harvest or the royalty paid for native forest timber.

Will the community have a role in decision making by the new agencies?

A new approach is being adopted in respect of public consultation and participation in preparing management plans for State forests. This will involve the community at various stages of the planning process including a 'whole of forest' approach as well as at the regional and local level. Independent facilitators will be appointed to help the community during the planning process.



Forests for people



◀ The Forest Heritage Centre, Dwellingup.



New initiatives

Twelve new national parks will be created near Mundaring, Pickering Brook, Collie, Nannup, Busselton, Margaret River and Pemberton as a result of the RFA.

There will also be a \$17.5 million injection into tourism infrastructure in the south-west. Special projects that will be funded include a major new tourist attraction in the Donnelly River Valley between Manjimup and Nannup.

New forest eco-lodge camping and chalet sites will be developed in conjunction with the private sector.

A million-dollar scenic drive in the Pemberton area will link existing tourist attractions in the forest, including Beedelup, Hawke and Warren National Parks, the 100-Year Forest and Big Brook Dam.

Tourism in Collie will also get a boost, with \$1 million to develop facilities in the new national park near Wellington Dam.

▼ The Tree Top Walk, Walpole, winner of WA Tourism Award 1999.

Western Australia's south-west forests are among the State's most popular nature-based tourism attractions—more than three million visits are made to the forests each year.

There are few regions in the world where people have access to 2.6 million hectares of forest within a five-hour drive of the capital city.

▼ The Bibbulmun Track, winner of WA Tourism Award 1999.



Recreation and tourism is a major land use activity in the forest and CALM has developed forest-based recreation and tourism sites worth more than \$36 million.

The challenge for forest managers is to ensure that recreation and tourism activities are sustainable and are not in conflict with conservation, or with other land uses. This is achieved through planning, including setting aside priority areas of high recreational values in formal and informal reserves throughout the forest.

Over the past few years there have been significant tourism facility developments in the forest. The Tree Top Walk and Ancient Empire, which is built around 12 hectares of old growth karri and tingle forest near Walpole, provides a unique visitor experience in a way that protects the forest. Since its construction in 1996, more than 500 000 visitors have enjoyed the Tree Top Walk.

Other recreation and tourism developments include the Great Forest Trees Drive in Shannon National Park, and the three forest lookout trees—Gloucester, Bicentennial and Diamond.

Recreation facilities in the karri regrowth forest surrounding the Big Brook reservoir near Pemberton and the Boranup forest near Margaret River are also very popular. Deep in the southern forests, the Perup Forest Ecology Centre and Wilderness Lodge offers a spectacular wilderness experience. The Perup Forest is home to most of the 27 native mammal species found in our southern forests and is the best single location in Australia for observing rare wildlife.

The Hills Forest, off Mundaring Weir Road, continues to provide a range of forest-based educational activities and adventures within easy reach of the city.

The Forest Heritage Centre at Dwellingup gives visitors an insight into Western Australia's forest heritage and how our forest can be used sustainably.

For those who enjoy solitude and the opportunity to walk through spectacular forest landscapes, the Bibbulmun Track extends 950 kilometres from Kalamunda to Albany.

For those who simply enjoy a picnic or camping in the bush, there are more than 200 picnic and camping sites throughout the forest.



Who will have the final say on forest management under the new system?

New forest management plans will be prepared by the Conservation Commission through the agency of the Department of Conservation, with the joint participation of the Forest Products Commission.

The draft management plans will be released for public consultation, and will also be assessed by the Environmental Protection Authority.

If the EPA considers a plan acceptable, it will recommend Ministerial conditions for its implementation, as the Authority does now. These conditions will be set by the Minister for the Environment and a plan can only be implemented according to these conditions.

▶ Proposed Wandoo National Park.



What about 'whole bole milling'?

This is when the whole tree, minus its crown, is transported to the mill where it is cut into different lengths according to defects in the bole and the products required.

The timber industry is currently trialling the process. Results so far suggest that up to 18% more sawn timber is recovered from felled trees under the whole bole method.

Isn't there going to be a conflict of interest if members of the timber industry have a role on the Forest Products Commission?

Appointments to the Forest Products Commission will be made on the basis of the member's expertise and commercial acumen

rather than as representatives of a particular sector or organisation.

The Government will not appoint anyone with active sawmilling interests to the Forest Products Commission. However, it will need to take advice from the industry and will do so through subcommittee structures.

The legislation contains procedures for addressing conflicts of interest in line with Acts that establish other Government trading enterprises. A very strong caveat on its operational objectives will be that the Commission, in endeavouring to make a profit, cannot operate in a manner that jeopardises the long-term viability of the forest resources industry or the ecologically sustainable management of publicly-owned native forests.

Views and reviews

The many inquiries and reviews into the way south-west forests are managed have promoted public involvement in management planning and decision making.

Following the passing of the Conservation and Land Management Act in 1984, and the formation of CALM, a review of forest management was carried out.

Three draft Regional Forest Management Plans and a draft Timber Strategy were released for public comment in April 1987. An extensive public consultation process followed, and a summary of public submissions was published in December 1987.

From 1990 to 1991 there was a series of national inquiries and reviews that involved formal hearings, community workshops, discussion groups and written public submissions:

- The Resources Assessment Commission inquiry into forests and timber (RAC);
- The Ecologically Sustainable Development review in relation to forests (ESD);
- The National Forest Policy Statement involving State, Territory and Commonwealth governments (NFPS).

In 1991, a review of the 1987 Forest Management Plans and Timber Strategy

was carried out earlier than required to allow the findings of the RAC, ESD and NFPS to be incorporated into the Plans.

It also allowed for the incorporation of findings from a jarrah forest inventory and a study of National Estate values carried out by CALM and the Australian Heritage Commission.

The review was subject to assessment by the EPA. Public submissions were received and appeals were dealt with by an Appeals Committee in December 1992.

Meanwhile, a Draft Forest Management Strategy was released for public comment in February 1992, along with a draft assessment of National Estate Values for the southern forest region. There was

extensive public consultation during preparation of these drafts, and a summary and analysis of public submissions was published in 1994.

In 1994 the final version of the Forest Management Plan was approved by government and published.

In 1995 the Commonwealth Government initiated a regional forest assessment process, as foreshadowed in the NFPS. A draft Deferred Forest Assessment (DFA) report, identifying areas of forest that should be set aside from harvesting until Western Australia's RFA was signed, was published in September 1995. Several hundred submissions were received. The final DFA

was published in December 1995.

The Regional Forest Agreement (RFA) process began in July 1996, with comprehensive assessments being carried out into all aspects of south-west forests.

Consultation during the process included public meetings, meetings with stakeholder groups and public open days in Perth and across the south-west.

In 1998 the Comprehensive Regional Assessment (CRA) of Western Australia's South West Forests was released. An RFA public consultation paper was produced, and a 10-week public consultation period was held—30 000 public submissions were received.

In May 1999 the RFA was signed and published, along with a summary and analysis of public submissions.

An independent review of the State's plantation operations was announced in May 1999. The review was conducted by the Melbourne-based consultants, Forestry Pacific Pty Ltd, and their report was released in February 2000.

In August 1999, a group of independent experts was appointed to examine ways of improving the management of karri and tingle forests in the south-west. The group, chaired by Professor Ian Ferguson, undertook field surveys and extensive consultation with stakeholders and the community, including workshops in Walpole, Pemberton, Manjimup and Perth.

The Ferguson Report was released in December 1999.

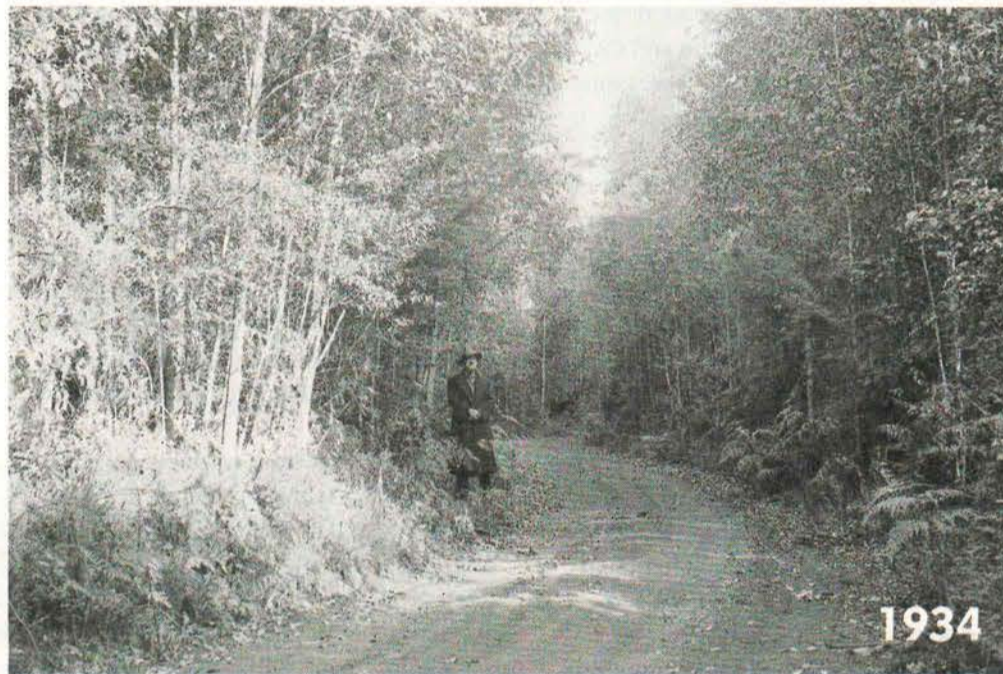
In December 1999, the framework for the development of a jarrah strategy was announced, to encourage even greater community involvement in decisions about forest management in Western Australia.

Plans to appoint an independent expert group to review sustainable management and timber yields from native forests were also announced in December 1999, and draft terms of reference sent to stakeholder groups for comment.

CALM will engage independent consultants to help strengthen the Department's public consultation processes still further.

A new framework is proposed to build on existing programs for community involvement in forest management, focussing on the development of forest management plans, medium-term integrated land use plans and close consultation with the community over operational plans.

Public consultation has been part of CALM's development of management plans not only for forests, but for national parks, nature reserves, marine conservation areas and wildlife recovery programs.



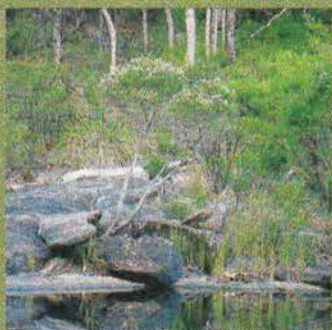
Is it sustainable?

The sustained yield of sawlogs at current log specifications calculated by CALM was independently verified by an Expert Panel (including a representative from the Environmental Protection Authority) in 1999.

The Panel, Dr Brian Turner, Professor Ian Ferguson and Mr Noel Fitzpatrick, concluded in their published report:

"We have been asked to confirm whether the scheduling has been carried out in an objective, professional and operationally realistic manner. We can attest that in our dealings with the CALM officers we have found that they have handled the data competently and objectively. Their scientific knowledge about the jarrah and karri forests was profound and this is reflected in the complexity of the models they have developed to simulate the state and changes of the forest over time.

"There is no doubt in our minds that the scheduling has been carried out in an objective, professional (scientifically appropriate) and operationally realistic manner."



Left top: This is Rainbow Trail, Pemberton, in 1934. The karri forest in this block was clearfelled and regenerated following a severe wildfire in 1930.

Left above: The same site in 1984, with 54-year-old regrowth.

Left: At the same location in 1999, the 69-year-old regrowth dwarfs a CALM forester.