

# Precautionary forest management: a case study from Western Australian legislation, policies, management plans, codes of practice and manuals for the period 1919–1999

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## Summary

All available official policy documents (190) for the period 1919–1999 relating to forest management in Western Australia were examined. This period is defined by the proclamation of the *Forests Act of 1918* in 1919 and the *Forest Management Plan 1994–2003*. Our objective was to locate and compile definitive statements on 14 topics concerning the protection of forest values or precautionary forest practices.

The study demonstrated the progressively increasing complexity of forest management over 80 years. Early emphasis was on re-establishing forests after logging and protecting them from wildfire. Nature conservation was officially addressed for the first time in the 1930s, becoming a dominant value by the 1970s and 1980s.

Statements from the 1920s onwards show a protective and prudential approach to conservation values within forest management. Our study indicates that strategic planning in forest management in Western Australia has a strong precautionary foundation, well in advance of the formulation of the precautionary principle.

*Keywords:* state government; legislation; forest policy; forest management; forest administration; code of practice; values; conservation

## Introduction

This study examined the hierarchy of departmental documents published by, or governing, the Forests Department and the Department of Conservation and Land Management (CALM) from 1919 through to 1999, and includes Western Australian legislation and departmental policies, management plans, codes of conduct and guidelines. The *Forests Act of 1918* was proclaimed in 1919 and this Act represented the initiation of management of Western Australia's forests by professionally-trained foresters (Bradshaw 1999). The *Forest Management Plan 1994–2003* (Lands and Forests Commission 1994) was the current forest management plan at the end of the study period and this represents the culmination of eight decades of policy development.

The aim of the study was to search for, and compile, all statements relevant to precautionary forest management practices or to avoiding damage or despoliation in forest management. We aimed to build a forest management history that shows, through direct quotations from departmental publications, the protection of

certain forest values. The 14 values or practices we focused on are:

- Disease Management,
- Nature Conservation,
- Fire Management,
- Forest Regeneration after Logging: Jarrah,
- Forest Regeneration after Logging: Karri,
- Water Quality and Production,
- Visual Amenity,
- Rooding,
- Rehabilitation,
- Soil Management,
- Insect Pests and Weeds Management,
- Apiculture,
- Feral Animal Management, and
- Wildflower Management.

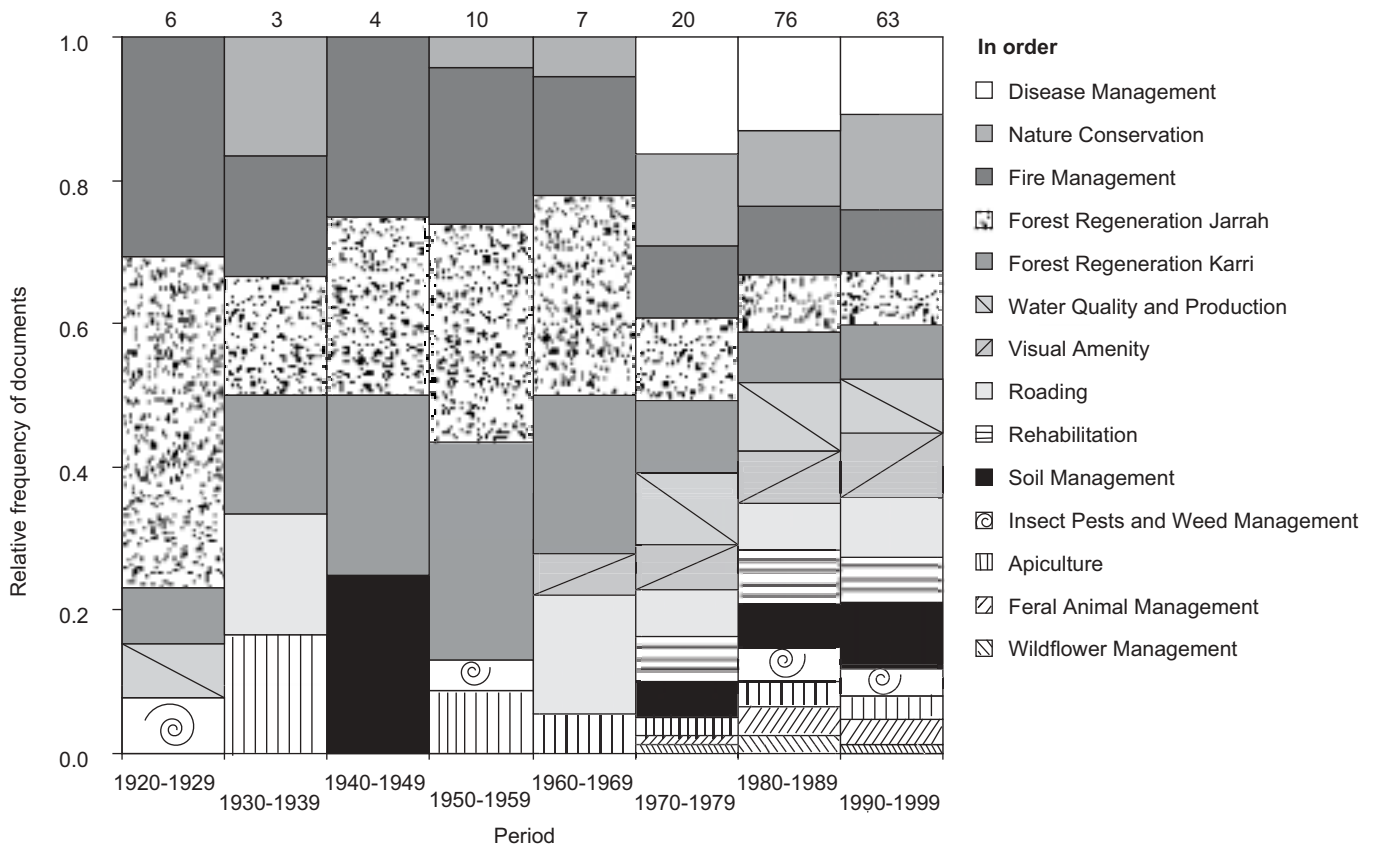
These are listed from the category containing the largest number of documents through to the smallest category. They show a historical development of policy and practices from 1919 through to 1999.

## Methods

For the purposes of this study, the concept of 'precautionary' embodies 'an awareness of the need to protect forest values, thus displaying foresight and care', a general meaning rather than a specific meaning referring to the 'precautionary principle'. Precaution involves anticipating the risk of forest damage and attempting to avoid or minimise damage by careful planning and management.

The basis of this literature review was the collection of forest management documents in the library of the Department of Conservation and Land Management of Western Australia. Each publication was carefully read and statements meeting the following criteria were extracted for the compilation.

- The quotation must be a definite statement.
- The quotation must state important goals or strategies.
- The quotation must prescribe or proscribe.
- The quotation must be concerned with the protection of forest values.



**Figure 1.** Relative frequency of documents for each forest value or forest practice category for each decade, with total number of documents per decade (on top line of figure)

As a result of these criteria, the statements extracted contain a strong emphasis. They include such words as *will, are, shall, is* or *must*. Discretionary statements with a less definite wording such as *should* or *may* have been excluded, with the exception of statements that provide supplementary explanations for definite statements.

The statements are presented in separate categories of forest values or forestry practices, and are in reverse chronological order from 1999 to 1919. Certain statements have relevance to more than one section but have been placed in only one section to avoid duplication. For example, statements on regeneration burning have been included in the Forest Regeneration after Logging category but not in the Fire Management category. The reader is advised to be alert for such linkages and to check whether statements have been included in a different category.

To indicate that the quotation is part of a longer or bigger paragraph the convention of brackets has been used to show an ellipsis. We have, of course, avoided misrepresenting the substance of the matter quoted, but to gain a fuller understanding of the information the reader is advised to refer to the original documents. We have included several statements that summarise a history of forest management to provide a context for a new policy statement. We have also included the headings of paragraphs or sections from which the quotations were selected, to provide further contextual information.

Once we had completed the compilation of statements, we counted the number of documents included in each of the categories of

forest values or practices for each decade. We also counted the number of words for each category per decade.

### The focus of forest management

Figure 1 essentially summarises the history of the focus of forest management in Western Australia as represented in departmental policy documentation. It shows a history of policy development as well as historical responses to external and internal issues and developments.

From the 1920s through to the end of the 1960s, the predominant focus was on forest regeneration of jarrah (*Eucalyptus marginata*) and karri (*E. diversicolor*), and fire management. The proportion of documents relevant to these three forest practices is significantly less from the 1970s when the policy of ‘multiple use’ was introduced and other forest values or forest practices were more specifically addressed (Forests Department 1975). From the 1970s, the following forest values or forest practices were addressed continuously (Fig. 1):

- Water Quality and Production,
- Rehabilitation,
- Soil Management,
- Feral Animal Management, and
- Wildflower Management.

Legislation in the 1930s, 1950s and 1960s reveals that Nature Conservation was addressed earlier but this also grew in a

**Table 1.** Word count of documents for each forest value or forest practice category

Subject	Period							
	1920–1929	1930–1939	1940–1949	1950–1959	1960–1969	1970–1979	1980–1989	1990–1999
Disease Management	0	0	0	0	0	10531	55509	25256
Forest Regeneration after Logging: Jarrah	6429	67	548	4486	8370	8864	18658	18073
Nature Conservation	0	357	0	343	117	4541	26634	20009
Fire Management	3883	957	171	5564	7352	10539	40279	32741
Water Quality and Production	328	0	0	0	0	4752	25477	9050
Forest Regeneration after Logging: Karri	2073	67	571	4580	10016	8428	15736	12343
Visual Amenity	0	0	0	0	71	1380	15539	9055
Rehabilitation	0	0	0	0	0	2320	23279	6435
Soil Management	0	0	1048	0	0	1881	12681	5759
Roading	0	57	0	0	484	1007	12284	9020
Insect Pests & Weeds Management	58	0	0	67	0	0	5303	2280
Feral Animal Management	0	0	0	0	0	64	4466	3215
Apiculture	0	55	0	298	142	340	3162	2812
Wildflower Management	0	0	0	0	0	220	2125	744

significant and sustained way from the 1970s to the 1990s. However, policy consideration of two other forest values/practices, Visual Amenity and Roding, started a decade earlier in the 1960s.

The number of words produced in each decade for the study period is shown in Table 1. The results are similar to the number of documents per decade, in our discussion. However, the statistics are understated because when a new edition of a code or annual report was issued the wording was sometimes similar to the previous editions. In these instances we have included only the original edition, but have added a direction, under a heading for the new edition, to refer the reader to the earlier edition.

The amount of material finally compiled is substantial, amounting to 619 996 words. This particularly reflects the volume of material published from the 1970s to the 1990s.

### The precautionary approach: examples from the study

The broadening of policy and plans in the 1970s to specifically address values and practices also reflects changes in community values, with increased awareness of other forest values. It also reflects a change in view of forest values — from the resource-focused management of the forests to a specifically multiple-faceted focus. Nonetheless, as our discussion shows and as Bradshaw (1999: 261) notes, forest regeneration was always viewed as a conservation practice ‘relative to the alternative of forest “mining” or clearing for agriculture’.

Figure 1 demonstrates policy responses to specific issues. In the 1970s, Disease Management became a new and significant category and this reflects the identification in 1965 of *Phytophthora cinnamomi* as the causal agent of jarrah dieback

disease and the need to address its management (Podger *et al.* 1965). In the 1930s Roding was addressed because of the transition from log hauling via tramways to road haulage (Forests Department 1969). Insect Pests and Weeds Management were addressed in the 1920s and 1950s in response to particular problems with the pinhole borer (*Atractocerus kreuslerae* Pasc.) and bullseye borer (*Phoracantha acanthocera* (Macleay)) (Abbott 1985). Apiculture differs, with policies issued in the 1930s and the 1950s through to the 1990s, indicating early consideration of other forest values besides regeneration. Soil legislation was issued in the 1940s as part of increasing awareness of soil conservation issues (Burvill 1979) but, as with other categories, there were no specific policy documents on Soil Management until the broadening of forest values in the 1970s.

Changes in policy treatment of forest values and practices reflect historical responses to particular issues. Table 1 shows other variation: the ‘boom period’ of the 1980s for development of policy on all forest values and forest practices, reflecting the interest of the public in environmental matters and the high profile of native forests in environmental campaigns by activists (Bradshaw 1999). This variation also indicates the interplay between the Department and the community.

Quotations selected show that conservation values were addressed in general terms before specific policy treatment. One of the unfortunate consequences of the adoption of Principle 15 at the United Nations Conference on Environment and Development (held in Rio de Janeiro in 1992) was to convey the impression that a precautionary approach was novel. Indeed, Deville and Harding (1997) suggested that earlier examples of acting with precaution are *ad hoc* and lack ‘institutionalization’ in environmental decision-making. We believe that the great volume of material identified during our study demonstrates that forest

management in Western Australia was underpinned by a precautionary approach for many decades before this.

The precautionary principle has generated much controversy and has been extensively criticised (e.g. Holm and Harris 1999; Foster *et al.* 2000). This suggests that a precautionary approach, rather than adherence to a principle that is controversial, may represent a more robust procedure for taking uncertainty into account.

### Incorporating conservation values

An early awareness of other forest values besides forest regeneration is shown in official documents. In 1927 forest officers were instructed in the *Foresters' Manual* on the importance of fire management as a protective duty:

Of almost equal importance is the proper use of controlled fires in silvicultural and protective operations. The extent to which controlled burning is desirable and necessary is completely set out in the following pages [...]. (Forests Department 1927: 24)

Documents from the 1950s show the development of an all-encompassing, protective fire management policy. The 1956 *Foresters' Manual* on fire control (Forests Department 1956a: 8) contains sections on 'Hazard Reduction' and 'Risk Reduction', the first mention of these concepts in policy documents, indicating that fire management was viewed as a precautionary practice. Prescribed (fuel reduction) burning was introduced as a policy in 1954 (McCaw and Burrows 1989).

The encompassing and protective policy emphasis can be seen in the directions given to departmental officers in the 1956 manual, in which they are directed 'to use prescribed burning and intelligent planning to the fullest extent possible to reduce the danger of severe uncontrolled fires', together with 'well developed fire-fighting organisation' and training, and 'to think in terms of costs and collateral values on every operation involving fire protection' (Forests Department 1956a: 5). The 1956 manual also shows the conceptual placement of fire management in a protective system, as officers are directed to 'make certain that those areas are burned before the main danger period as they constitute a weak link in the protection system and can lead to the escape of a fire that otherwise was confined' (Forests Department 1956a: 14).

In the 1970s, departmental documents specifically identified other forest values, together with forest regeneration, requiring protection in forest management. In 1973 departmental officers were instructed on the important connection between fire management and forest conservation values in fire control:

Of equal importance is the proper use of controlled fires to regenerate and protect the forest and its associated flora and fauna and to guard adjoining communities from wildfire. (Forests Department 1973: 3)

And the General Hardwood Working Plan released in 1971 places importance on specific forest values, such as catchment protection and flora and fauna conservation:

The initial survey has indicated that of the 3.3 million acres of jarrah forest, approximately 1.62 million acres are of sufficient quality and site productivity to warrant intensive multiple-use management, primarily for future timber production. The remaining area is considered more suited to extensive management for *such vital purposes* as catchment protection, salinity control, flora and fauna conservation and public

recreation, as well as timber production. (Forests Department 1971: 8–9) [Emphasis ours.]

### Setting a strategic focus

As early as 1926 the Department had a long-term approach to forest management. The objects of forest management in the 1926 working plan for the Mundaring Working Circle stated an emphasis on the importance of managing the forest for future water supply:

To manage the forest so as to maintain a well regulated supply of pure water in the creeks and springs on the reservoir catchment areas. (Stoate 1926: 15)

In 1950 the Department directed officers to appreciate:

that present timber values are not the only guide and that considerable thought needs to be given to the area under consideration, as decisions made today may have far-reaching affects [*sic*] in the future. (Forests Department 1950: 15)

Similarly, in 1986 the Department presented a long-term management perspective through a mission statement providing for the use of the natural environment without detracting from possible future use. It recognised a responsibility:

To provide for the use of the natural environment without detracting from possible future use [and] to provide and regulate the supply of renewable resources on a sustained yield basis in a manner that minimises impact on other values. (CALM 1986a: 8–9)

This mission statement anticipates the concept of ecological sustainability, which was given formal status in the Brundtland Report in 1987 (World Commission on Environment and Development 1987).

### Taking a prudential approach

As early as 1926 officers were directed in the working plan for the Mundaring Working Circle to take a careful approach when planning fire management. For example, a 'whole of forest' approach was to be taken with fire control measures, which could vary according to the conditions of the forest. Complete protection was to be afforded to:

Areas treated and regenerated, except that, where the crowns of the young crops have reached a sufficient height to be beyond damage by a light surface fire, instructions may be given by the Conservator for controlled early burning under such stands.[and] Areas treated and awaiting final treatment pending seed years. (Stoate 1926: 25)

The remainder of the forest was to be burned systematically by light controlled fires: 'approximately one-third of the country not afforded complete protection will be burnt each year'.

In 1927 foresters were instructed to proceed carefully with silvicultural treatment:

When in doubt, it is better to err on the light side. It is always possible to go back and cut trees which should have been destroyed, but the converse is not possible. (Forests Department 1927: 20)

By 1956 conservation management had become critically important in the management of the forests. In its General Working Plan, the Department recognised that, in earlier working plans, a limited understanding of the forests had led to an over-conservative policy resulting in:

some 2 million acres of virgin forest being left to the ravages of fire, with the mistaken belief that it could remain as a static reserve for the future [...] The appalling losses in this zone have only been brought to light over the past 2 years by the application of modern assessment, based upon the study of air photographs, and the need for development, protection and utilisation of this forest is so strong that mere considerations of the theoretical productive capacity of the whole State Forest must be relegated to the background. (Forests Department 1956b: 9)

In 1975 the Department's forest policy showed an emphasis on a flexible approach to multiple-use management of forest land:

The aim will be to make the most judicious use of the land for some or all of the resources or related service over areas sufficiently large to provide latitude for periodic adjustments in use to conform with changing public needs and the development of the forest itself. (Forests Department 1975: 12)

This careful approach to forest management extended to other practices such as roading. For example, in the 1977 General Working Plan, the Department sought to 'Keep road construction and maintenance to the level necessary for catchment protection' (Forests Department 1977a: 49). In the 1981 handbook for bauxite mining in the jarrah forest, the planning principle for roading in forests was: 'to aim for the minimum number of well surfaced, low profile roads, consistent with fire protection requirements' (Forests Department 1981a: 43). Such 'conservative' policies are clearly an essential first step in conservation management.

### Acknowledging uncertainty

Policy statements also show an acknowledgement of uncertainty in forest management. In 1981 the logging and silvicultural guidelines for the northern jarrah forest acknowledge a limitation in the current understanding of forest management:

These guidelines are not regarded as 'the last word'. Nor is it expected that they can be universally applied. They are, however, *the latest state of the art*, based on the best information to hand at the moment. (Forests Department 1981b: 1) [Emphasis in original.]

And in 1983 a prescription for rehabilitation after bauxite mining shows that the best possible result was the departmental aim:

Because there is no past experience to draw upon in the management of forests regenerated after mining, and because of uncertainty as to how these stands will develop, this prescription is regarded as interim, and will [be] subject to regular review. Nevertheless, it is the best 'State of the Art' and must be strictly adhered to. (Forests Department 1983: 7.1)

### Incorporating developments in knowledge

Policy documents show that the Department worked to incorporate developments in knowledge into policy and practices. In 1976 the forest policy acknowledges that changes in fire protection will eventuate with developments in knowledge:

Fire protection will continue using the most advanced techniques of fire prevention, detection, suppression and prescribed burning, and these techniques will be amended as knowledge is expanded in both technical and environmental fields. (Forests Department 1976: 13)

A general working plan issued in 1977 shows the application of informed decisions for evaluating and developing forest values:

The selection of a priority or dominant use for an area with the practice of secondary uses which in some circumstances may not significantly interfere with the primary aim, but in others may impose a restriction on output from each competing use. This necessitates a social ranking of use priorities which can usually be done satisfactorily with limited data and experienced value judgment. The Forests Department has adopted this approach for the future management of State forests and timber reserves. (Forests Department 1977a: 31)

A forest policy document from 1977 shows the application of knowledge and experience in the formation of values:

A number of alterations to fire protection policy have resulted from decades of fire research and practice, which give greater emphasis to conservational, environmental and aesthetic values. These include:[...] attempts are not made to burn a high proportion of any one area. Prescriptions are set at limits which will ensure unburnt pockets comprising about 20–40% of the area. This policy was adopted in the light of research into the ecology of many forest animals; particularly the swamp dwellers. (Forests Department 1977b: 22–23)

### Minimising damage

Policy statements from the 1970s and 1980s show an increasing awareness in the Department of the impact of forest management and a need to minimise damage. A 1972 manual directs officers to place forest management in the context of 'the maintenance of a protective forest cover for water catchments and a general forest environment' (Forests Department 1972: 3). The forest policy released in 1976 clearly states a forest protection objective in the management of the State forests:

The Forests Department will manage the state-owned forests and timber reserves in Western Australia according to a policy that will ensure provision for the optimum social and material needs of the people. At the same time the policy will provide for the environmental well-being of the forests themselves. The policy involves the following objectives: [...] Forest Protection: To maintain and add to the areas of permanently reserved forests; to protect these forests from fire, insects and other harmful agencies; to maintain and improve the health and vigour of the forest area. (Forests Department 1976: 15)

In the 1980s, the Department places a strong imperative on officers to minimise the spread of dieback, in a logging manual: 'This decision to delegate authority must not be taken to imply any relaxation of hygiene standards for operations on CALM land' CALM (1987b: 11).

### Incorporating new concepts

Another approach used to track changing attitudes in policy and operations is to establish the first mention of new 'vogue words' in official documents. For example, the word 'stewardship' was first used in forest policy in 1975, indicating an early conceptual understanding of conservation management:

This statement will outline the current situation regarding those permanently dedicated State Forests and Timber Reserves which come within the stewardship of the Forests Department and formally establish management objectives according to the requirements that now exist. (Forests Department 1975: 2)

However, some terms were not used by the Department until international trends brought the words/concepts into usage. For

example, the first mention of ‘old growth’ is in a strategic plan in 1986 as an objective for hardwood establishment: ‘Objective 1. To regenerate all areas of logged old growth karri forest’ (CALM 1986b: 74).

The term ‘biodiversity’ appears only in the 1994 management plan (Lands and Forests Commission 1994), some 5 y after the neologism was first used (Wilson 1988). In contrast, the term ‘ecosystem’, coined in the 1930s (Tansley 1935), was first used in a mining operations handbook in 1981:

The overall objective for rehabilitation of bauxite mines in the western jarrah forest is ‘To regenerate a stable forest ecosystem, capable of maintaining or enhancing water, timber, recreation, conservation and/or other nominated forest values. (Forests Department 1981a)

Since the term’s first use in 1981, it has been frequently used in departmental documents.

The use of the term ‘ecosystem’ indicates an all-encompassing view of forest management. For example, a 1986 corporate objective states that a departmental imperative is to ‘Establish and maintain a system of secure reserves which protect viable representative samples of all the State’s natural ecosystems ...’ (CALM 1986a: 10). A 1988 strategic plan shows that a primary objective was to ensure that the conservation and land management responsibilities were underpinned by scientific principles by ‘Establishing long term monitoring of ecosystems and individual species, and of recreation requirements and effects’ (CALM 1988: 15).

The term ‘precautionary’ was not specifically used in policy documents examined, except in two early ones from 1927 and 1953, in conjunction with references to fire control or reforestation. For example, the 1953 *Foresters’ Manual* directs officers that advance burning is a precautionary measure:

Natural regeneration of the forest follows the opening of the canopy resulting from trade cutting, and treemarking therefore, is the first step in regeneration operations, apart from precautionary measures such as advance burning. (Forests Department 1953: 5)

The term ‘precaution’ came into general usage in the 1980s within the context of preventing damage and the spread of disease during forest operations and as an imperative in fire management. Officers are directed to take ‘special precautions’ in the construction of roads ‘to prevent erosion and siltation’ (Forests Department 1981b: 12). An imperative is also placed on the prevention of the spread of disease: ‘All standard hygiene precautions to minimise the spread of *Phytophthora cinnamomi* will be observed’ (CALM 1987c: 66). The management program for the Northern Jarrah Forest indicates the importance of precautions in departmental planning:

The Northern Jarrah Forest is highly flammable by world standards and the most severe fire the State has experienced in recent times occurred in this Region (Dwellingup fires 1961). It is pertinent that fire precautions are adequate to preserve life and property as well as conservation and other forest values. (CALM 1985: 27)

The use of the terms ‘caution’ and ‘cautious’ first occurs in departmental documents in the late 1970s and early 1980s with respect to preventing the spread of dieback and salinity. A 1977 planning document for the Northern Jarrah Forest states that the main objective is:

the retention of an adequate vegetative cover of deep rooted perennials. This means extreme caution with respect to the possible introduction of dieback, the earliest possible regeneration of cut over stands and the artificial revegetation of areas denuded in the past. (Forests Department 1977b: 32)

A 1980 land use management plan for the Northern Jarrah Forest states that the management objective for a timber production management priority area will be cautious:

Because of the sensitive nature of this area to salinity increases, current management will be cautious. These MPAs are located on catchments which may be utilised for water supply in the longer term. (Forests Department 1980: 12–13)

Although words with the root ‘sustain’ were first used in 1926, this usage was in the sense of ‘sustained yield of wood products’, within the traditional and long-established concept of ‘sustainability’. Working plans from 1929 and 1956, and a 1976 policy, show statements of this sustained yield management objective. For example, the stated management objective in the 1929 working plan for the jarrah forest is ‘to establish the sawmilling industry in the jarrah forests of Western Australia on a sustained yield basis’ (Forests Department 1929: 4). The 1976 policy document states that the objective for timber production is ‘To regulate the removal of produce from the native forests to a level that can be sustained by the forest growth’ (Forests Department 1976: 15). Legislation from 1984 also expresses the sustained yield concept:

in the case of indigenous State forest or timber reserves, to ensure the multiple use and sustained yield of that resource for the satisfaction of long-term social and economic needs. (Government of Western Australia 1984: 1915)

The concept of ‘sustainable use’ in terms of tourism or recreation was first used in 1984, with acknowledgement of sustainable tourism values seen in a forest recreation framework (Forests Department 1984). The 1987 management plans for the northern, central and southern forest regions and the Shannon Park and D’Entrecasteaux National Park show a broadening of the sustainable objective to include recreation, tourism and aesthetic values:

Protection of the natural values of the Parks is a fundamental concern of this plan. Thus, management and sustained use must not cause irreversible environmental damage or impairment of scenic beauty. (CALM 1987d: 43)

The concept of sustainability as embodied in ‘ecologically sustainable forest management’ was not used explicitly until 1994, though it was implied as early as 1986. For example, the departmental annual report for 1985/86 shows an implied ecological objective for timber management in the stated primary objective ‘To provide and regulate the supply of renewable resources on a sustained yield basis in a manner that minimises impact on other values’ (CALM 1986a: 9).

In 1986 a strategic plan for the Southern Forest Region also stated an ecologically sustainable objective in the strategic goal for managing wildflower picking in State forests and concurrently managing the spread of dieback: ‘To control wildflower picking on appropriate land so that sustained utilization is achieved without disease spread and soil disturbance [...]’ (CALM 1986b: 5).

In 1989, a silviculture specification shows an implied ecologically sustainable objective for managing the jarrah forest: ‘To

regenerate, protect and sustain the multiple values of the jarrah/marri forest on dieback affected areas' (CALM 1989: 1). An explicit statement of an ecologically sustainable management concept appears in the Department's vision statement and production objective published in 1994:

The Government's vision is based on the ecologically sustainable management of the State's publicly owned native forest estate which is maintained in perpetuity. (Lands and Forests Commission 1994: i)

Sustainability became a vogue word internationally following the publication of the Brundtland Report in 1987. From about then, it was realised that sustainable yield is only one part of true sustainability, as it emphasises economic values. Social values began to be emphasised in sustainable use of the forest for recreation and tourism. These two concepts, when combined with ecological sustainability (maintenance of viable populations of species and of ecosystem processes) and intergenerational equity, constitute a more holistic concept of sustainability. The statements cited in this paper indicate an early awareness in the Department of the sustainability of other forest values besides timber production.

## Conclusions

Our study shows that the key issue in the early decades, evidenced by the large proportion of material on regeneration, was forest growth after logging. Some statements, however, do show that conservation of other values was implicit in the regeneration of the forest. For example, biodiversity was not an explicit concept until the 1980s but the protection of conservation values was implicit in some statements on regeneration.

The total number of documents examined was 190, and most of the material extracted is available at the library of the Department of Conservation and Land Management. The compilation of statements should prove useful for forest historians. It provides a history in the Department's own words and contains a plethora of material awaiting scholarly study. We would welcome comments on errors of omission or inclusion.

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