PROCEEDINGS OF A WORKSHOP

"MULTIPLE USE" MANAGEMENT ON STATE FOREST

Held at CALM Headquarters, Como

Friday, 20 September 1991

SPONSORED BY

LANDS AND FOREST COMMISSION

LANDS AND FOREST COMMISSION

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INTRODUCTION

Introductory comments by the Chairman of the Lands and Forest Commission, The Hon Barry Hodge

Good morning ladies and gentlemen.

My name is Barry Hodge. I am Chairman of the Lands and Forest commission - the sponsor of today's seminar which is focussing on "Multiple Use Management of State forest".

On behalf of the Commission I welcome you to the seminar which is the seventh of a series of seminars and workshops hosted either by the Lands and Forest Commission or the National Parks and Nature Conservation Authority.

Those of you present today from the Department of CALM may be reasonably aware of the role and function of the Lands and Forest Commission, but I think that not many others would be more than vaguely aware of the Commission's existence. I will take just a few moments therefore to provide you with some background.

The Lands and Forest Commission was created by the Conservation and Land management Act 1984. This was the legislation that created the new Department of CALM, established the National Parks and Nature Conservation Authority, the Forest Production Council and the Lands and Forest Commission.

The Lands and Forest Commission consists of three members and one deputy member. The present members are myself Chairman, Mr Ray Perry, Dr Syd Shea and the Deputy Member Associate Professor Jennifer McComb.

The function of the Commission as prescribed in section 19 of the Act is:

- to have vested in it State forest and timber reserves;
- to develop policies and achieve the purposes to which the land is vested;
- to consider proposals for land exchanges and changes in boundaries, or changes in purpose in respect of land vested in it;
- to submit management plans to the Minister in respect of land vested in it;
- to monitor the carrying out of management plans by CALM;
- to provide advice to the Minister on matters on which advice is sought;
- to cause study on research to be undertaken for the purposes of developing policies to achieve or promote the objectives of multiple use forests and timber reserves.

That last function is very relevant to the topic chosen for today's seminar.

The Commission has always played an active role in scrutinising CALM's forest management plans, but in recent times in conjunction with the National Parks and Nature Conservation Authority, it has began taking a higher public profile by sponsoring a series of public seminars, workshops and field trips relating to various aspects of forest management.

CALM is in the process of drafting two new strategy documents - a Nature Conservation Strategy and a Forest Strategy.

The input from the various seminar workshops and field trips will be incorporated into the review process.

Today's program consists essentially of two parks. There will be a series of speakers to provide background to the topic under discussion - multiple use management in forests, followed by workshopping of two aspects of the topic.

The first two speakers - one from CALM and one from the Conservation Council, will present background and perspective on the philosophy of multiple use management in forests.

This will be followed by a series of ten speeches of 5 minutes duration in which each speaker will outline one of the values required by society from public forests in WA.

Later, workshop participants will be assigned to workshop groups to address two specific questions about multiple use management in Western Australia.

MULTIPLE USE IN FORESTS - CALM'S PERSPECTIVE

Paper for a Workshop at Como on 20 September 1991
by
Roger Underwood

1. *Historical*

Western Australia's native forests have always been used for numerous purposes. The first European settlers "inherited" a multiple use forest (the Aborigines used it for fibre, food, ceremonies, shelter and timber; and the forest performed numerous environmental functions). Following settlement, other uses were progressively added, including pastoralism, mining and water supply. Forest uses such as timber harvest greatly intensified; non-forest uses such as agriculture and urban development, commenced.

The forest "inherited" by the State's first forest management agency (the Forests Department) in 1919 was already a multiple use forest. It was being used for the production of timber and minerals, for recreation, for sheep and cattle grazing and for water supply. Nature conservation was also provided for, with forested parks and reserves being set aside.

Over the last 70 years, multiple use of forests has continued. Whether you like it or not, it is a fact of life.

2. *CALM's view*

CALM "likes" and practices the concept of multiple use of forests. There are three reasons for this:

In the first place, we are more or less required to like it. The original CALM Act specified that multiple use management must be undertaken on State forests. There was therefore a legal requirement for us to practice it. The most recent amendment to the Act requires that management plans for State forests must specify the purpose or purposes for which it is to be managed. This implies to us that multiple uses must be provided for.

Secondly, the community demands it of us. Via various other Acts of Parliament, we are legally required to provide for minerals, logs, water supply, power supply and road corridors, and we are required to protect endangered species. Recreationists want areas of forest in which to recreate; farmers want to cut posts and strainers and graze sheep; beekeepers want areas for beekeeping; shires want gravel; wildflower pickers want to pick wildflowers; townspeople want to collect firewood; tourist bureaux want tourism; academics want areas for research; schools want camps and study centres. Miners want bauxite, coal, gold, tin, silica and mineral sands. The army wants training areas.

Obviously, the people of Western Australia are far from being homogeneous or single minded about our forests. They comprise numerous interest groups, each with a special requirement of the forest and of the forest managers. Nevertheless, very few of these people want <u>exclusive</u> use of the forest. Mainly they are happy to share, so long as they get what they want, when they want it. In other words, by and large they are happy to be part of a multiple use system, provided it serves their needs or special interests.

Thirdly we can see no way of providing for all the legitimate uses and demands <u>without</u> applying the multiple use philosophy.

Even if we were starting to plan forest management in WA tomorrow on a completely white canvas, I believe we would be forced into adopting the concept of multiple use in south-west forests.

3. *What are the problems with multiple use forestry?*

(i) As demands grow and become more diversified, the capacity to make adequate provision for all demands is reduced. This is inevitable if world and regional populations continue to grow, but the forest area is reduced or static. [Forest managers cannot control this inexorable and fundamental problem by themselves.]

(ii) Some uses are absolutely incompatible. For example, if people want undisturbed forest in which to have a spiritual experience, they won't get it in an area being mined for bauxite or dammed for water supply.

(iii) Some uses are incompatible at a particular time or place - eg, the values associated with mature trees may not be available on a recently harvested site, but will return in time.

(iv) Some uses are unacceptable. For example, State forests should not be seen as ideal areas for football grounds or rubbish dumps.

Two special problems face Australian forestry at the moment with respect to the practice of multiple use forest management. The first is that many uses of the forest tend to be regarded as legitimate only if they occur "somewhere else". This is the "Not In My Backyard" syndrome. Incidentally, this type of opposition to forest uses is not restricted to logging which gets most of the media attention. It applies to many popular forms of recreation (especially the motorised varieties), most forms of mining, road and powerline construction and commercial developments of nearly every sort.

The second is that multiple use native forest tends to be seen as the bottom of the land use continuum, not near the top, where it actually is. (See Figure 1).

Finally, it is almost impossible to provide optimum satisfaction to all special interest clients in a multiple use system. Some sub-optimisation nearly always results. [This occurs across the whole spectrum of multiple use, not simply in State forests. Sub-optimisation of both nature conservation and recreation is an international problem in National Parks management.]

4. *How are these difficulties resolved?*

The difficulties of multiple use can be resolved in three ways:

(i) "Hard zoning" - ie, classifying areas of forest into different tenures where some specified uses are permitted and others are disallowed on the basis of legislation. Examples of hard zoned forests in WA are those in Nature Reserves and National Parks, the approved uses of which are spelled out in the CALM Act.

(ii) "Soft zoning" - this involves the use of management plans to classify areas where certain uses are permitted and others are not, or where the specified times at which nominated uses can occur are laid down.
eg, the Southern Forest Region Management Plan prescribes for undisturbed forest to be retained to provide specialised habitat on selected sites, or to protect sensitive areas.

(iii) Integrated management - involves the use of prescriptions which modify uses, so that no values are permanently lost or drop below unacceptable levels.
eg, CALM's jarrah silviculture prescription which provides for the harvest of timber, but specifies constraints to ensure values such as biodiversity and stream quality are unimpaired.

All three of these approaches are adopted in WA.

For example, a comprehensive system of hard zoned conservation reserves has been established where urban development, some forms of recreation, logging and mining are not permitted, without approval of Parliament.

Extensive reserves of State forests have also been set aside where we try to meet and sustain a very wide range of uses and values. This is attempted by a combination of soft zoning and integrated management prescriptions.

The starting point for planning all this in State forests is a broad classification of forest uses as incompatible or conditional. The matrix is shown in Figure 2. In this approach some uses may dominate at some times, but not at others, and no single use is regarded as overriding. In fact, the overriding requirement is to conserve biodiversity and to ensure that, on a whole-of-forest basis, all uses are sustained in the long term.

As an aside to all this, CALM is also developing and promoting, in conjunction with farmers, a new category of multiple use forest: tree plantations on farms. Here the overriding goal is timber production, but these new forests have many ancillary values and uses to the farmer, to the community and to the environment.

In conclusion

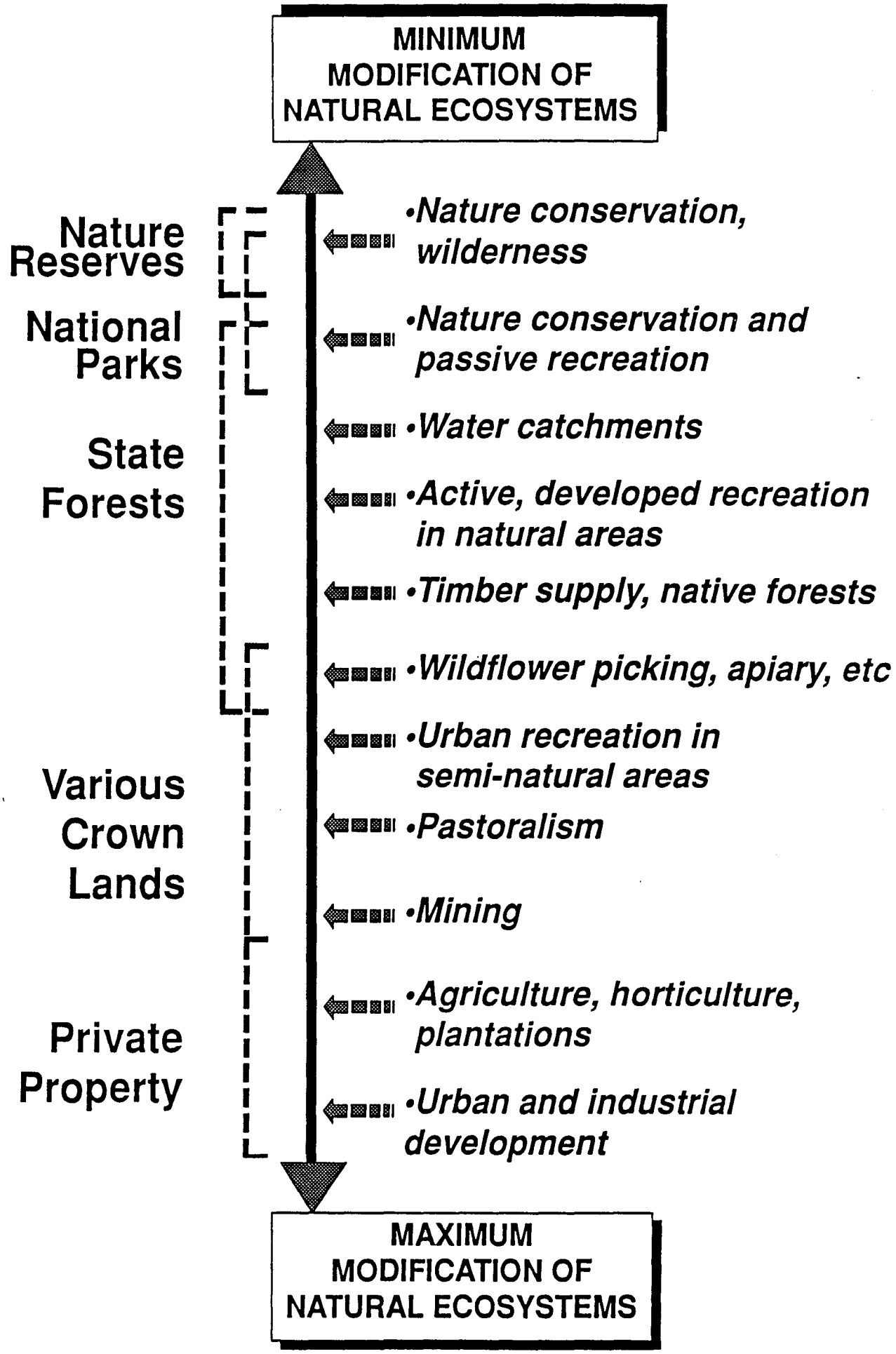
CALM practices multiple use forestry because it is required of us by Government, and because, overall, the community expects and demands it of us. Even if we wanted to convert the entire forest to a nature reserve and toss out all the miners, timber cutters, beekeepers, water supply people and recreationists, we wouldn't be allowed to do so. Any other extreme change would also be unacceptable.

At the same time, we do have some fundamental difficulties in making the concept actually work, especially as populations and therefore demands and therefore conflicts keep expanding. We also have special difficulties satisfying some sectional interest groups. Mostly these arise where people expect us to practise multiple use on every hectare of forest at every moment. This cannot be done. If you accept that multiple uses must be accommodated, then you must take a whole-of-forest approach and a long view.
In my opinion, the 3-pronged approach which has evolved in WA is a good one, and does in fact provide what is required of it. I think that we can still improve the hard-zoned reserve system in the light of the most recent research, and I think that we can further refine our management plans and make our silvicultural prescriptions more sophisticated and site-sensitive. These are the sort of professional enhancements which it is our obligation as managers to constantly devise and try to implement.

There are also major social and human concerns which persist and need to be dealt with somehow. I am well aware of the view of some people that timber cutting should be phased out of native forests. I am also aware of concerns at the other end of the land use continuum about the pressures on forests and woodlands for urban development. I regard these problems as political, not departmental. It is up to the community as a whole to find solutions. CALM cannot do so alone.

Despite these difficulties, I believe it is essential we persist with an integrating, rather than a splintering approach to forest management, and the multiple use concept is an essential part of this.

THE MULTIPLE LAND USE CONTINUUM IN SOUTH WEST W.A.



COMPATIBILITY BETWEEN LAND USES AND RESERVE CATEGORIES

LAND USE	RESERVE CATEGORY				
	NATURE RESERVE	NAT PARK	CONS-ERVATION PARK	MARINE PARK	STATE FOREST
NATURE CONSERVATION	/	/	/	/	O
RECREATION	O	O	O	O	O
CATCHMENT PROTECTION	/	/	/	N/A	/
TIMBER OR FISHERY PRODUCTION	X	X	X	/	/
WATER PRODUCTION	X	O	O	N/A	/
PUBLIC UTILITY	X	O	O	O	O
MINING (See Text)	O	O	O	O	O

KEY
- / COMPATIBLE WITH OBJECTIVES FOR RESERVATION
- O CONDITIONAL TO SPECIFIC TIME, AREA OR USE CONSTRAINTS
- X NOT COMPATIBLE WITH OBJECTIVES FOR RESERVATION
- N/A NOT APPLICABLE.

[EXTRACT FROM FOREST REGIONAL PLAN 1987]

AN ECOLOGICAL PERSPECTIVE ON MULTIPLE USE MANAGEMENT PHILOSOPHY

Paper presented by Mary Frith

Need For A Common Goal

I want to give an ecological perspective on multiple use management philosophy.

Fundamental to our discussion must be a common commitment to care for the total forest ecosystem, to ensure its survival in the long term. Because forests are so long lived and our society is geared to such short term goals, we have a difficulty. To overcome it, we must **become students of ecological processes rather than advocates of positions.**

Ecological Processes as Foundation

The health of the forest depends on its ecological processes.

Human management tends to simplify them sometimes to the point of degradation or even total collapse. We understand all too little of these processes and how we are changing them. When knowledge is limited we should be careful to respect the **precautionary principle** and not gamble with nature.

CALM's present management practices, designed in part to overcome mistakes of the past, often lead to alteration of forest composition and structure and hence the underlying ecological processes.

Mistakes of the past, including overcutting, have left us with an environmental debt which must be paid if we are to achieve true ecological sustainability.

Dispelling Myths

At this point I want to dispel a few myths.

1. "A healthy environment depends on a healthy economy"

   This is wrong. The relationship is there but the dependency is the reverse. If ecological processes falter or fail, the economy fails too. We have seen this happen in Eritrea, the Sudan, Eastern Europe and the Philippines in recent times. They are ecologically bankrupt. We already have an environmental debt. The land is our 'basic' capital. We need to invest more and draw less.

2. "Nature can take it"

   I hear unquestioning faith in the fact that ecological processes can cope with whatever we impose on them and still produce what we want. This is not so. The warning signs are there; symptoms like dieback, insect attack, declining production and species decline.

3. "No extinction of species can be related to logging"

We do not know. At best there is no record of logging related extinction. But extinction is a slow process and before the last individual disappears is a point of no return where numbers are so low that recovery is impossible. We know far too little of most species to recognise that point.

Agriculture and pastoralism have caused many extinctions and a sharp decline in the populations of many other species. When forests provide the last refuge for many remaining species there is little room for forest managers to be complacent.

4. "WA's forests are being logged on a sustained yield basis".

We are not logging jarrah on a sustained yield basis and CALM's own Timber Strategy illustrates this. (Figs 44, 48 and 51). However, sustaining the yield should be subordinate to sustaining the forest ecosystem. It is not what comes out of the forest but what remains that matters most.

Multiple Use: in theory and practice

Multiple use management seems good - the best of all worlds. It could be very desirable if it were based on the need to protect ecological processes and human values.

In commenting on theory I shall quote from CALM's Central Forest Region Management Plan (CALM 1987a) and the Timber Strategy (CALM 1987b).

CALM sets out six land use priorities in this order:

Nature conservation
Recreation
Protection (of water catchments and other forest values)
Production (zoned for water, timber and other products)
Mining (where this is imposed)
Public utility (also imposed - SEC etc)

'Priorities' implies the necessity of making choices and this is where people's value systems come into play.

It is easy to see that the first three listed priorities are compatible. But CALM stretches the imagination when it states that "State forests can provide **simultaneously** for sustained yields of timber, water, recreation and most forms of wildlife" (CALM 1987a, p. 9).

More accurate is the comment "Multiple use does not mean all uses can be practised at the same time in the same area. Some uses will never be compatible - for example, timber production and preservation of old growth forest..... Other uses may be compatible, but must be separated in time..... for example, timber production and recreation." (CALM 1987b, p. 28). Again, "The major uses ..... will be for water supplies, recreation, sustainable timber production and for wildlife conservation". Nature conservation has slipped to 4th position on the list - only mining and public utilities follow (CALM 1987a, p. 7).

But CALM describes State forest and timber reserve as "Areas to be managed for multiple use with the **primary use in most cases being sustainable timber production and protection of water catchments**" (CALM 1987a, p. 8). What has happened now to nature conservation and recreation? I detect a certain shift of values taking place.

CALM's intentions are good until subjugated to the commercial imperative. Let me give you an example which I think is typical of what I perceive to be happening when conflict arises.

About half of Bridgetown Shire's 1700 sq km has been rather too thoroughly cleared for agriculture. Most of this lies north and east of the town. The other half is multiple use State forest.

Almost all the multiple use forests within the Shire are being logged or will be logged intensively within this decade. This is a co-incidence of Central and Southern Region Forest Regions making their logging plans independently of one another.

One set of small fragmented forest blocks extend in an arc close around the town and form its backdrop. The forest is attractive; much used by locals for recreation, domestic firewood and so on. It is an important part of the local scene. Hester brook, already increasingly saline from agricultural clearing, flows through it. Part of it surrounds the district's water supply in the Hester dam.

Even this group of small forest blocks, separated by farm land and powerlines and surrounded by dwellings, despite their public amenity and ecological vulnerability, is to be logged, commencing in 1993.

Is this not a prime case for multiple use management to favour conservation and recreation, minimise salinity and protect water supply. But the only concession offered so far has been to apply Visual Resource Management. That, to me, is like painting a house a pretty colour but neglecting termites in the foundations.

Recommendations

I will conclude by making some recommendations for change in our approach to multiple use forests. Let us move from trying to modify the forest to produce more private goods, to protecting the ecosystem and the public goods it contains, and harvesting only the surplus.

So these changes need to be made:

- Ecology, not economics should be setting the pace.
- All remaining old growth should be retained. Old growth is our only link with the distant past; the genetic code and gene pool for healthy, adaptable forest, our living laboratory.
- Timber logging rotations should be lengthened, to perhaps 300 years in the jarrah forest.
- A much higher residual basal area should be left when thinnings is carried out.
- Royalty rates should reflect the value of public well as private goods.
- More labour intensive sawmilling should be encouraged to allow higher recovery rates, more jobs in the timber industry and less foreign exchange leaving the country to purchase high tech mills.

I am indebted to Henry Schapper (1991) for pointing out that the first priorities of government and its agencies ought to be human well-being and a healthy environment. These together should determine the composition and rate of economic growth. The economy must not be allowed to determine society's goals or the management of multiple use forests.

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MULTIPLE USE PRIORITIES

Nature Conservation

Recreation

Protection
(of water catchments and other forest values)

Production
(water, timber or other products)

Mining
(where this is imposed)

Public Utility

Objectives of management plans.

55. (1) A management plan for any land shall contain—

(a) a statement of the policies or guidelines proposed to be followed; and

(b) a summary of the operations proposed to be undertaken,

in respect of that land during a specified period, which shall not exceed 10 years.

(2) A management plan shall state the date on which it will expire, unless it is sooner revoked, but notwithstanding anything in this section or in the plan, a plan which would otherwise expire shall, unless it is revoked, remain in force until a new plan is approved.

(3) A management plan shall not disclose any information or matter communicated in confidence for the purposes of this Act or which would or might reasonably be expected to cause damage to the interests of the person from whom the information was received.

Contents of management plans.

56. (1) A controlling body shall, in the preparation of proposed management plans for any land, have the objective of achieving or promoting the purpose for which the land is vested in it, and in particular management plans shall be designed—

(a) 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;

A BILL

FOR

AN ACT to amend the *Conservation and Land Management Act 1984*, and to consequentially amend the *Land Act 1933* and the *Misuse of Drugs Act 1981*.

The Parliament of Western Australia enacts as follows:

Short title

1. This Act may be cited as the *Conservation and Land Management Amendment Act 1989*.

Section 55 amended

26. Section 55 of the principal Act is amended by inserting after subsection (1) the following subsection—

" (1a) A management plan for an indigenous State forest or timber reserve shall specify the purpose, or combination of purposes, for which it is reserved being one or more of the following purposes—

(a) conservation;

(b) recreation;

(c) timber production;

(d) water catchment protection; or

(e) other purpose being a purpose prescribed by the regulations. ".

CONSERVATION AND LAND MANAGEMENT AMENDMENT ACT

No. 20 of 1991

AN ACT to amend the *Conservation and Land Management Act 1984*, and to consequentially amend certain other Acts.

[*Assented to 25 June 1991.*]

Section 55 amended

27. Section 55 of the principal Act is amended by inserting after subsection (1) the following subsection—

" (1a) A management plan for an indigenous State forest or timber reserve shall specify the purpose, or combination of purposes, for which it is reserved being one or more of the following purposes—

(a) conservation;

(b) recreation;

(c) timber production on a sustained yield basis;

(d) water catchment protection; or

(e) other purpose being a purpose prescribed by the regulations. ".

Section 56 amended

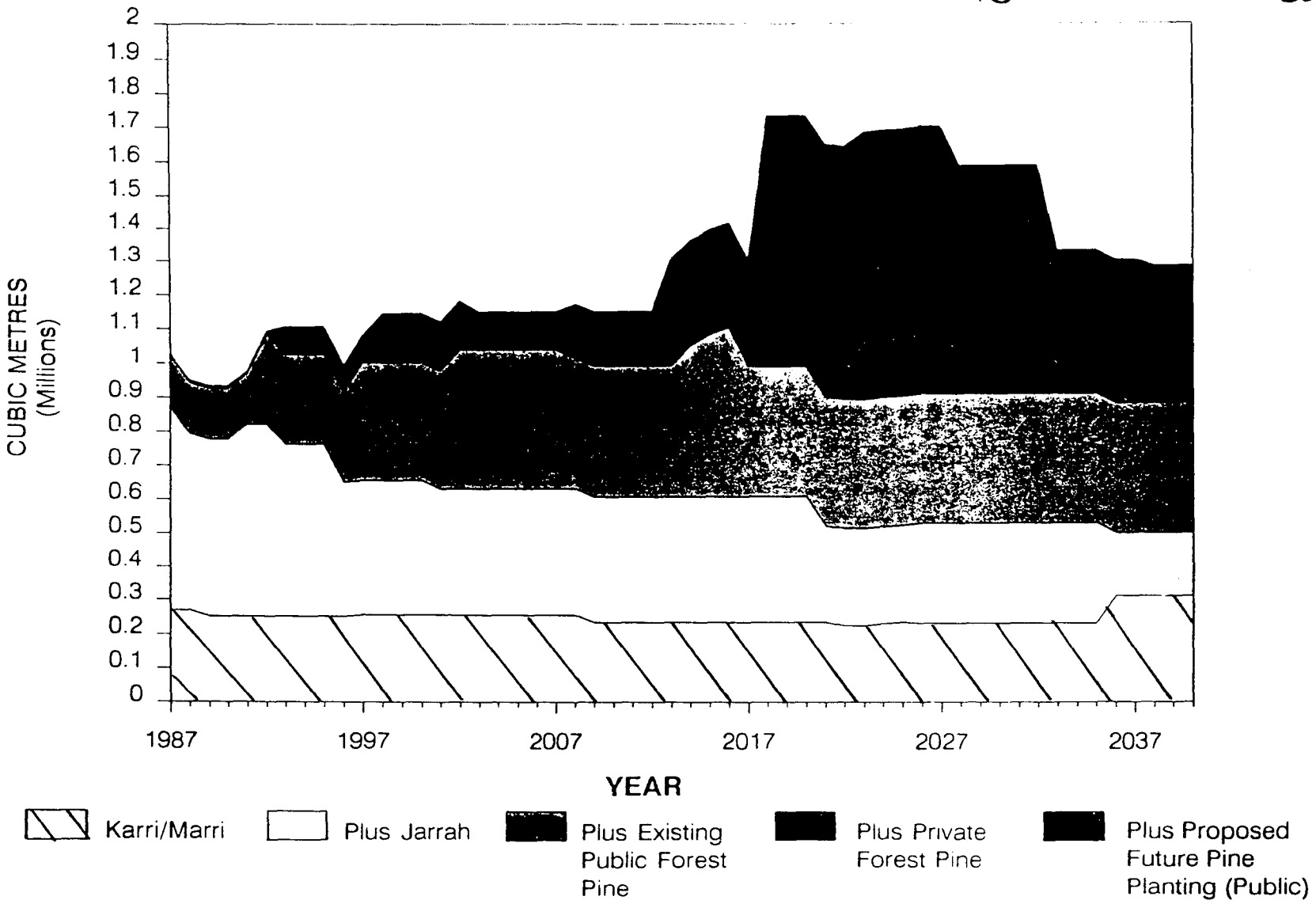
28. Section 56 of the principal Act is amended—

(a) in subsection (1)—

(i) by repealing paragraph (a) and substituting the following paragraph—

" (a) in the case of indigenous State forests or timber reserves, to achieve the purpose, or combination of purposes, provided for in the proposed management plan under section 55 (1a); ";

Figure 10
LONG TERM PROJECTED SUPPLY OF SAWLOGS FROM PUBLIC AND PRIVATE FORESTS (from Timber Strategy, 1987)



RECOMMENDATIONS

ecology not economics sets the pace

•

all old growth retained

•

timber harvest rotations increased

•

thinning to a higher residual basal area

•

royalty rates to reflect value of public as well as private goods

•

plantation and agroforestry encouraged on cleared land

•

labour intensive sawmilling

VALUE OF WATER AS A PRODUCT OF FOREST AREAS

Paper presented by Geoff W Mauger

Catchments for the Metropolitan Water Supply and Goldfields and Agricultural Water Supply Systems occupy most of the State forest between Dwellingup and the Great Eastern Highway. These catchments supply 170 million kilolitres/year, out of the 250 million kl/year supplied in total. The remainder comes from groundwater sources. This supply is almost as much as can be reliably drawn from the forested catchments, but completion of North Dandalup Dam and Conjurunup Pipehead in the near future will raise the potential yield by another 15 million kl/year.

The value of the forest is primarily in ensuring a safe, reliable source of high quality water. The forest environment and limited human activity result in stream water quality which can be safely drunk after only precautionary disinfection. Water from areas which were formerly forest but are now substantially agricultural or urban would require full treatment before use. If the existing forested catchment sources had to be fully treated it would add 15 to 30 cents/kl to the cost of producing the water. Thus protection of water quality caused by the presence of forest is benefiting Perth by about $25 to 50 million per year.

Forests south of the Murray Valley are also catchments for irrigation areas, some minor town supplies, and, with the recent completion of the Harris Dam, the Great Southern Towns Water Supply. Although the monetary benefits in these catchments may not be so great at the moment, the principle of protecting the water sources is still true and the value will increase with time.

Although water quality is the most important value, management practises which affect vegetation density can have a significant influence on the volume of water available. This is because 80-90% of rainfall returns to the atmosphere by evapotranspiration. A small change in the transpiration rate of the forest results in a big percentage change in the remaining 10-20% of rain which ends up as streamflow. A change in water yield has a high value, equal to the cost of obtaining the water from other sources. For the Metropolitan system, this is currently about 25 cents per kl. Silviculture which leads to less dense forest could thus also increase water value. On the other hand, over-dense rehabilitation of bauxite pits may incur costs to water.

In summary, activities in the forest should be managed to avoid pollution of streams because if the forest cannot be relied on to produce high quality water, there will be large increases in the cost of water for urban use. Where vegetation density is subject to management, consideration should be given to the benefit of additional stream yield resulting from lower vegetation densities. However, increasing volume must not be at the cost of reducing stream water quality.

VALUE OF TIMBER PRODUCTION IN WA MULTIPLE USE FORESTS

Paper presented by Cam Kneen

- Overall WA log production about 2 million cubic metres
- 90 per cent from Crown land
- 80 per cent of that from multiple use forest

  = 1.4 million cubic metres hardwood

- Hardwood a decreasing proportion of total production
  - 65 per cent by 2005
  - but decrease in total production only 10%
- Use of hardwood logs
  - now about 57:43 sawlog:other
  - other includes pulp and charcoal logs
  - in 2005 about 50:50
- Use of products from sawlogs
  - about 85 per cent consumed in WA
  - balance overseas and interstate
  - house building major market
  - fluctuating demand
- Trade exposed
  - minimal tariff protection
- Dollar value ?
  - depends on industry definition
  - 1990 estimate of turnover - $500 million

THE
WILDERNESS
SOCIETY (WA) INC.

Wilderness and Spiritual Enrichment

Presentation given at the "Multiple Use" Management on State Forests Workshop, Friday 20 September 1991. By Bryony Nainby, The Wilderness Society.

Good morning, I am speaking on the spiritual value of caring for forests and other wilderness areas.

There is a great deal of talk these days about saving the environment, and indeed we must for the environment sustains our bodies. (Alan Gussow, 1971) But we also require support and nourishment for our spirits. This too can be gained from the environment, but not by merely admiring it like a great work of art, but by coming to realise our deep, interconnectedness with it.

Contrary to popular belief, humans are not to be seen as the ultimate of all beings, or, if you like, the "crown of creation". We are just "a plain member" of the biotic community, and our arrogance with respect to this community threatens not only ourselves, but all of life.

We must learn to "let beings be", to allow other species to follow their separate evolutionary destinies without dominating them. We must come to understand that life-forms do not make up a pyramid with our species at the apex, but rather a circle where everything is connected to everything else. We must realise that the environment is not something "out there" separate from us. (John Seed, 1988)

The philosophy that humans are separate from, and superior to, the other beings that live on this planet is an extremely dangerous one, for it leads us to regard them, not as vital parts of ourselves to be cherished and cared for as we should cherish and care for our own bodies, but coldly, as resources to be plundered for our own sustenance. We need nature to be fully alive, for air, food, shelter, spiritual enrichment. However, we live as if nature is only needed to provide extras such as paper, or occasional recreation, or jobs to provide economic growth. (Susan Griffin, 1978)

Those who support the notion that nature is something that can be "circled around, probed and pierced", for their own material gains are misguided. This "man over nature" attitude is an anthropocentric (or human centred) delusion. It is the same mind set that created such systems of inequality as slavery, colonialism, apartheid, and the oppression of women. (Robert Aitken Roshi, 1985)

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As I see it, the spiritual value of wilderness lies in the immense variety of sources of joy we experience through increased sensitivity toward, and respect for, the richness and diversity of all forms of life. This sensitivity and respect flows naturally if our perception of "self" is widened and deepened so that the protection of nature is felt and conceived of as protection of ourselves. (Arne Naess, 1986)

In conclusion, I ask all of you to remember my words as you discuss and plan the multiple use of the forest.

It does not belong to you, to be divided up like the spoils of war.

It does not belong to anyone.

It is part of that great living web of which we are all a part. Much harm has already been done to that web, and as I look at the world today with all the injustice, suffering, violence and fear, it is obvious that our spirits are manifesting in us the imbalance which we have wrought on the earth.

It is now time to redress that imbalance. It is time to stop taking from the earth and start giving.

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AESTHETIC VALUES OF FORESTS

Paper presented by Michael Tooby

Looking at the range of presentations being given by others I will restrict my own to the visual aesthetic or the landscape of the forest.

The landscape of a forest is quite distinct from just about all others by virtue of its enclosure.

In most landscape sky is a major component. The distant view evokes words such as majestic, awesome, wonder. The virtue of these is scale.

slides of mountain scenery - wide coastal, lake etc

All of these words might equally be applied to very high forest such as karri, tingle, mountain ash, Californian Redwood.

slides of karri/tingle/ redwood

In a distant view of a forest the individual tree is just part of a texture on the landform.

slide of distant forest

In the foreground an individual tree begins to be important for its own form and structure.

Brisbane Waters LSG Goldfields, Aspens

In a forest, however, small details become. Bark, leaves, flowers, insects, birds, animals, fungi, mosses. These evoke words like fascinating, pretty, delicate, curious.

slides of details

The views within a closed forest change second by second as you walk through it - they change in depth, in light and shade, and detail. By even standing still and altering the focus of your eye you will change the picture like a kaleidoscope.

more details - forest general shots

Compare this with open landscapes where the scale is such that one could walk all day and see little difference.

mountains/desert/ Nullabor

The implications for management are to retain the great diversity which characterises forest landscapes - the diversity not only in flora and fauna but also in field of vision.

The richness of the forest landscape is of primary importance in conveying the environmental message to the community. Here they can see and touch and smell the many individual elements and come to understand their interdependence.

It is important to bring people into contact with this learning experience.

4 aces

To bring them into forest the way has to be clear and well marked to overcome their fear of becoming lost. This has other management implications which will be touched on by others. I raise it only because the forest landscape is otherwise inaccessible.

boardwalks/paths

RECREATION AND FORESTS

Allan Tranter - Director Recreation
Ministry of Sport and Recreation

- Recreation is comprised of:

  opportunity, experience, choice, self-esteem, is individual building to community, encompasses self-responsibility and self-management.

- It is essential to recognise that it is not the activity that is important, but the satisfaction or enjoyment that people gain.

- People choose different activities to gain their own recreation experiences.

- Therefore in forest locations people will seek to do many different activities which they believe they will enjoy.

- However, when people go to the forest they do so to take advantage of the special environment that the forest provides. People see the land forms and the plants and animals as providing a setting which they hope will provide them with unique experiences.

- Some people use the forests for specific "hard yakka" recreation which usually involves planning, physical preparation and particular skills. Such activities include bushwalking, orienteering, abseiling, canoeing, white water rafting, camping and rock climbing.

- Other people use the forest in a more general manner which often takes minimal planning and no physical preparation. Such things as picnicking, one-site camping, short bushwalks and the like.

- These two broad groups need to be managed and provided for in different ways.

- The specific activity user will seek out the parts of the forest that meet their specific requirements.

- The more general user is looking for a "nice" environment in the forest, but also needs some more general spaces to play kick-to-kick footy and family cricket matches.

- Both types of use are equally valid.

- The use of forests for recreation is increasing at a rapid rate, more and more people are drawn to the forest to gain positive experiences.

- Furthermore, a greater variety of people wish to use the forests - this can be seen in the number of families, older adults and disabled groups/individuals who use the forest.

- The level of control in forests should be based upon the need to deter the wilful, educate the ignorant, but mainly to simply manage the majority.

- The forest should be managed in such a way to maximise the experiences people have [but not necessarily the range of experience], rather than just maximising numbers, and to enable the same experiences to be available for the next generation.

The Western Australian Farmers Federation (Inc.)

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ADDRESS TO LANDS AND FOREST COMMISSION

WORKSHOP ON "MULTIPLE USE" MANAGEMENT ON STATE FORESTS

20 SEPTEMBER 1991 BY KEVIN MCMENEMY

BEEKEEPERS SECTION PRESIDENT

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1. I would like to begin by thanking the Lands and Forest Commission for their kind invitation to both address and participate in this workshop today.

2. Before entering the clinical world of economic values I would like to dwell for a few minutes on the history of man and the honeybee. Honey storing bees first evolved some 15 to 20 million years ago. The earliest known record of honey hunting is a rock painting in Spain which has been dated as 15,000 years old.

3. References to honey and honeybees have been found in all civilisations. In Egypt honey was offered to Gods and buried in tombs with the dead as food. Unearthed some 33 centuries later the honey was still edible. Hippocrates, the father of medicine, prescribed honey for many ills. Honey was made into an alcoholic drink by the Greeks long before wine was developed.

4. During the Middle Ages it played an important part in wedding ceremonies, the old Germanic custom of drinking mead for a month after a marriage is the source of todays honeymoon.

5. Bleached beeswax was used by Roman sculptors to cover defects in their work. However, master craftsmen, proud of their perfect work, signed statements that their statues were "sine cera" (without wax). This is the origin of the expression that we have all used at some time in a letter - yours sincerely.

6. As you can see the honeybee has been an integral thread in the fabric of many civilisations as they have developed throughout the centuries. Hence it is important to see the honeybee in its historic social role as well as its economic status.

7. The European honeybee, Apis Mellifera, was introduced to Australia in 1810 when the Rev Samuel Marsden arrived with two hives. Further importations followed and in 1846 honeybees arrived in Western Australia. By 1873 a large apiary was established at Guildford and despite the best eating efforts of the locals a surplus of honey developed.

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8. 1881 saw Western Australia's first commercial export of honey with 16 cases of "Swan River Colony" honey being sold in London. Commercial beekeeping grew steadily during the 1890's and by the early part of this century adventurous beekeepers began migrating hives by horse and cart. This activity was recognised in the Forestry Act of 1919 when it came into being.

9. By the middle of the century adventure had become a necessity as many competing factors forced beekeepers into ever decreasing areas of native vegetation. Today commercial beekeeping depends heavily on the remaining vestiges of native forests and ground flora.

10. Honey, with an annual retail value of $5.5 million, is produced for the domestic market and in addition a further $2 million is traded on the export market. Other apiary products such as wax, pollen, royal jelly, queen bees and package bees add another $500,000 to this total. Not a large primary industry by most standards but one nevertheless recognised and encouraged by the Commonwealth and all State Governments.

11. Overall there are some 25 Acts of Parliament (both Federal and State) relating solely to beekeeping and I believe we would be the only industry represented at this venue today that has its own Federal Statutory Marketing Authority. This is evidence of Governments clear recognition of the direct and indirect economic value of our industry.

12. It should be noted that honeybees are natures primary pollinators. They are designed principally for pollination and therefore are species specific in their foraging activities. Man recognised this long ago and in 1970 it was estimated the US derived in both direct and extended pollination some $50 billion in Australian dollar terms.

13. A recent Australian study has shown a value to this nation of between $600 million and $1.2 billion from planned and incidental pollination of agricultural and horticultural crops. It is estimated that the value of pollination to this State is $90 million which means the total contribution to the State's economy is approaching $100 million.

14. All this is built on a very small cornerstone, namely the continued availability to our industry of what is left of the State's south west forests. With a few notable exceptions our industry is compatible with most forest users and lends itself particularly well to a multiple use system.

Chairman, I have tried to encapsulate a lot in the time allocated and I hope from this that apiculture can be seen in a much broader perspective, than simply putting honey on the dining room table.

THE VALUE OF STATE FORESTS TO THE FLORICULTURE INDUSTRY

Paper presented by Aileen Reid

State forests are the foundation on which the Western Australian floriculture industry was built. Now, some 12-15 years on, they remain an integral part of the industry.

The native cut flower industry had its origins in bush picking, that industry has grown from a value of $1.28 million in 1980/81 to $11.2 million in 1990/91, though today cultivated product is much more important - about 45% of Western Australia's flower exports or $5.05 million is still sourced from Crown land. The nursery industry produces many species of plants for amenity horticulture that were first selected from native stands of bush and the bulk of native seeds are harvested from native stands.

A study of Burgman and Hopper in 1980-81 identified 288 species of native flora that were harvested from Crown land for export as fresh or dried cut flowers or foliage. Today, most of these species are still harvested from native stands although their relative importance has changed somewhat. Table 1 lists the 20 most important species from Burgman and Hoppers report.

Table 1. The 20 most heavily exploited species in the native cut flower trade.

Stirlingia latifolia
Agonis parviceps
Verticordia nitens
Podocarpus drouyniana
Beaufortia sparsa
Banksia coccinea
Dryandra formosa
Dryandra polycephala
Verticordia brownii
Adenanthos obovata
Boronia megastigma
Anigozanthos pulcherrimus
Anigozanthos manglesii
Banksia baxteri
Verticordia drummondii
Helichrysum cordatum
Banksia hookeriana
Beaufortia decussata
Anigozanthos rufus
Chamelaucium uncinatum

Of the above species, *Chamelaucium uncinatum* exports are now 87% from cultivated stands, banksias 74% and kangaroo paws 81%. A recent ban on the bush picking of *B. coccinea* will further sway the balance and it is likely that the quantity of *B. baxteri* picked from the bush will also decline further.

Crops which are yet to be readily cultivated such as *Stirlingia* are still 100% bush picked. Ti-tree exports are still 90% from bush picked or managed stands. Dryandra and Beaufortia are now 50% cultivated. In essence, of those species in the above list, there are none which now, cannot be cultivated. The reason why these species are still picked from the bush is purely economics. While there remains no price differential for quality, there is no incentive to

cultivate a better product. Unfortunately, the very nature of bush picking does mean, that in some instances, post harvest handling is less than optimum and because pesticides cannot be used insect damage and disease can also be a problem. Of course, the quality of some bush picked product is very good, and if it is to be dried, then the lack of post harvest handling may not be a problem.

How do I feel about bush picking? Well I guess that in the long term I see it being replaced by cultivation. The perception of Western Australian native flower exports overseas is still poor and a large part of that is due to the fact that the quality of the product is often quite inferior to that of other cultivated products. Until that changes our markets will be limited and the price we receive for our product depressed. As a price differential develops for quality product, it will be more and more difficult for bush picked product to compete. Although there may still be a place for some bush picked species it will be more difficult for pickers to make a reasonable income from a limited range of species.

The value of the seed industry in Western Australia is difficult to ascertain but seems likely to exceed $2.0 million. Seed is widely sourced from native stands but some companies are now growing crops specifically for seed production. One company now cultivates 50 of its 2500 species listed or 30% of its product. The export trade in seed is still small, less than half of the total volume. Most of the seed is sold locally for rehabilitation work or to shire councils. There is also a substantial interstate trade.

The most heavily exploited species for seed collection were listed by Burgman and Hopper as *Acacia*, *Eucalyptus*, *Kennedia*, *Anigozanthos*, *Banksia* and *Helipterum*. Sixty-seven percent of the trade could be attributed to these six genera containing 115 species.

The value of the nursery industry in 1989/90 was $37.7 million. It is estimated that about 20% of this total or just over $8.0 million is from sales of Western Australian flora.

It is essential that native stands be conserved as far as possible. Apart from the direct benefits detailed above there are inherent benefits of retaining natural stands that are just as, if not more important. These benefits are those accruing from the genetic resource itself. One of our few means of maintaining our competitive advantage in flower and plant exports is by selecting and breeding a continuous supply of new varieties. Destroy our native vegetation and our future in export floriculture will be severely curtailed.

Interest in many of our native species as sources of oils and other chemicals for cosmetic and therapeutic purposes is another area which must be considered. Other products such as natural insecticides may also be able to be derived from native vegetation. People, including governments, must be persuaded to set aside short term monetary gains on this issue. Our forests as a genetic resource must be preserved.

THE SIZE AND IMPORTANCE OF THE TOURISM INDUSTRY

Paper presented by Ian Osborne

The scale, complexity and significance of the tourist industry currently means that no economy can afford to ignore the resource use implications involved in the tourism industry and its growth.

When mass tourism first started, many optimistic observers believed there were few natural resource limitations on development and that tourism resources were renewable. However, the truth is now obvious; successful tourism development can erode the very characteristics and features that provided the original attractiveness.

The reality is that all resources are finite and have alternative uses. Choices are an inevitable feature of resource use and an allocative process has to be determined to deal with the problems involved.

The size and growth of tourism in the south west

Tourism is a global industry. The aggregate value of international tourism is second only to expenditure on oil and oil-based products in world terms.

In the 1990-91 year a total of $158m was expended in the tourism industry in the south west region of WA. (The figures are not directly comparable with previous years because of new methodology) however it would appear that apart from the 1989-90 year which saw a 2% decline in visitation, that the trend-line growth rate of 4% pa since the early 1980s is being maintained.

That is, the tourism industry of the south west is already significant, and is growing at a faster rate than that of the economy generally (+1.5% for the 1990-91 year).

In terms of investment, the south west is also growing at a faster rate than the rest of WA.

In the March 1990 quarter, the Tourism Commission recorded a total of $2,114m of tourism investment in WA. $561m, or 26% of this was in the south west region. Fifteen months later, at the end of the June quarter 1991, the WA figure is $2,468m; of which the south west accounts for $947m, or 38%.

Tourism origin markets for the south west

1. Intrastate ..... the south west will continue to be an attraction to this market because of the contrast its environment offers. Forests are an integral part of this. Accounts for 86% of the region's business.

2. Interstate ..... traditionally centres around the wildflower market, which has been in decline in recent years. However, interstate road visitors enter WA mostly through the south west, and the karri forest is known to be one of the major 'top of mind' attractions for eastern state visitors to WA.

   The recent emergence of fly-drive growth as a result of deregulation of interstate airlines will also favour the south west, it is close to Perth, and easy for self-drive travellers to access.

3. International ..... at the moment the major selling point for SE Asian travellers to WA is the state's proximity, cultural contrast, similar time zone. These travellers look for shopping and night life (as a very broad generalisation) and future pressure on forests can be anticipated and met. As this market matures, the possibility exists for the forests of the south west to be presented as an attraction.

CONTENT ANALYSIS of the communicated material of the south west tourism industry would also prove that forests are an essential ingredient of our promotion campaigns. The objective of our advertising is to persuade people to take holidays. In order to persuade, the elements which influence must be known.

Content analysis of tourist industry communications would show that the forests of the south west have been used in successful campaigns to build the level of tourism visitation to the south west, to the extent that it is one of our largest and most rapidly growing industries.

However, this must be balanced by the commercial demands of the tourism industry.

I've sat in meetings where justifiably proud local inhabitants have sought explanations as to why Inbound Tourism Wholesalers would take tourists all the way out to Wave Rock, when a forest, free for the viewing (the Lane Poole reserve), is available within an hour of Perth.

The answer was that a tour wholesaler, who spends years and thousands of dollars, at great risk of losing the investment building lines of distribution in SE Asia, needs to have something to SELL to recoup his investment. A tour operator can't make a profit out of a free forest. He can get a return from commission on sale of entry to a theme park, a restaurant, an accommodation house.

The three major development zones of the south west

I think we can identify three major zones of tourism interest in the south west.

1. The coastal strip, from Mandurah to Dunsborough. The traditional summer holiday resort destination for Western Australians. Based on fishing, swimming, boating; serviced by caravan parks and camping grounds.

   Currently being recapitalised at a massive rate. Port Geographe, Mandurah, Bunbury Harbour City, Dunsborough.

   Able to sustain intensive development, and not yet at a perceptible point of social/environmental strain.

2. The Cape to Cape region, Margaret River. Based on the wine-art/craft-food-surf mix.

   Dependent for its attractiveness on a degree of exclusivity and retention of natural environment.

   Showing clear signs of social rejection of inappropriate (but not of further) growth. Eaglescliffe Golf Resort development at Prevelly Park.

   In my view would not want to grow too much further. Although we have no measures, my feeling is that the optimum is about achieved, and further growth risks the production capacity of the product.

   Natural forests at Boranup.

3. An emerging product in the area from Nannup to Pemberton/Manjimup.

   Based around karri forest, clean inland water, champagne, trout, art/craft.

4. Future? ..... southern ocean. Small crescent beaches, windswept granite headlands, winter storms.

The important of forests

In all of this, the importance of the natural environment to the tourism industry is obvious.

Note the difficult of costing unvalued goods.

We have had the difficulty before that when a conflict has arisen over competing uses for natural resources, the tourism component of the cost-benefit analysis has been unquantified.

Difficulty caused by the fact that tourism largely relies on the creation of images in order to stimulate people to take a holiday in the south west.

How can we measure the difference between a south west with forest images and experiences, and a south west without these images and experiences?

However, despite these sorts of difficulties, there is strong and continuing anecdotal evidence that the attractiveness of the south west and the strength of its tourism performance is underpined by the environmental (including forest) resources available it has available.

Many operators rely directly on the forests for their business (wildflower tours, bushwalking and adventure tours, horseback tours, chalet accommodation).

Craftsmen are reliant on the forests for wood supply, and for artistic inspiration.

Summary

The tourism industry of the south west is already large and is growing at a faster rate than the economy generally.

Although it is difficult to quantify the value of the forests' contribution to the tourism industry in the south west, there is no doubt that forests are an integral component of the array of attractions which make up the success of the industry.

WORKSHOP NO. 1 Development a definition of "multiple purpose" management in forests

Blue Group

- The term "multiple use" is not necessary.
- Must define an objective for management.

  Management of the forest to sustain ecological processes while allowing for and managing the range of uses of the forest."

Other points raised in discussion:

- Must provide for public goods as well as private goods.
- All goods are owned by the State. No one owns the product. Resources are allocated by license. Once the resource is allocated it may restrict public access.
- The word "preserve" should not be used (use sustain).
- Must start with maintenance of the ecosystem rather than starting from the demand side.
- Another version of the definition above:

  Management for human uses of the forest while maintaining ecological processes.

Black Group

- **Multiple purpose management of all forest systems should meet the existing and potential needs of the whole ecosystem wherever these are compatible through space and time.**

Other points raised in discussion:

- Don't like the word "use" - implies "taking from" or "using up" the forest. Prefer the word "purpose".
- Should consider the whole forest (including private).
- Multiple purpose is a "mosaic" of priority purposes over space and time.
- Query the wording of the CALM Act - how broad should the definition be?
- What are the range of values?
- Must be flexible - to reflect the changing values of the community.

Orange Group

Definition:

1. **Protection of ecological systems and processes.**

2. **Management of forest-dependent uses to integrate values, vision and uses.**

Other points raised in discussion:

- New term needed to express concept of "sharing and caring" of forests.
- Must consider protection of all values over time.
- Long term view is important (100-200 years).
- Protection of biological diversity.
- Priorities only necessary when competition exists between uses.
- Identify things that are not compatible so that people can make choices.
- The community may not know what is actually best for them - need balance between community and experts.

Green Group

Definition:

Multiple purpose management is the management of compatible forest activities and the resolution of usage conflicts enshrined in an overall conservation policy, involving:

- **a holistic approach**
- **no degradation of ecosystem processes**
- **underlying philosophy in important**
  - .. **ecological constraints with equal value**
  - .. **economic constraints**

Other points raised in discussion:

- "Multiple use" is a cover for inefficiency!
- How do you set priorities for dominant use - conflict resolution needed.
- Concern about debate being based on economics.
- People and their demands are an issue: how do we manage the demands?

Brown Group

Definition:

Sustainable ecological management for multiple values.

Other points raised in discussion:

- Don't' concentrate on use.
- Consider non human values.
- Management covers a wide spectrum from doing very little to widespread uses.

Red Group

Unable to develop a definition in the time available.

Points raised in discussion:

- Some purposes appear mutually exclusive.
- Hard/Soft/Intermediate zoning is an inevitable compromise.
- Zoning concept should entrain appropriate timeframe.
- Non human uses of the forest should not be subordinated to human uses.
- Preservation of ecosystem as a whole or maximise preservation/restoration of components of ecosystem or ecological processes.

WORKSHOP NO. 2 How should "multiple purpose" management be implemented?

Blue Group

Implementation should be a six stage process.

1. CALM to prepare a "baseline" document that includes:
   a. Environment, ecological processes and resources
   b. Potential uses
   c. Potential impacts of each use and interrelationships
   d. Draft management principles and suggested allocation of uses over space and time
2. Public input - discuss resource allocation and acceptable environmental impacts.
3. Formulate management plans: CALM to Controlling Body to Parliament.
4. Implement, monitor and research ecology and impacts (CALM).
5. Conflict resolution mechanism involving CALM, Controlling Bodies and Parliament.
6. Agreed time to review plan and discuss actual *vs* predicted impacts. Discuss allocation of resources again.

Other points raised in discussion:

- Who makes decisions? CALM sets framework from which decisions are made. Decisions represent community <u>needs</u> (not wants).
- How to sort out priority uses? CALM needs to produce document (with public input) that provides <u>guiding principles</u> which CALM uses to decide uses.
- Need some check to ensure CALM does not succumb to pressure for inappropriate uses.
- Ecological sustainability overrides uses in all zones.
- What is the total resource available to supply demand? If large supply/low demand, requirement for zoning is low.
- "Ideal" situation
  - full ecological information
  - full information on effects of use

  Without full information need cautious approach.
- It is not a solution to say "we don't know enough so do nothing".
- Cautionary approach - activities in small bits. Precautionary approach - research first, then act on information.

Black Group

1. At what level and spatial scale should each value be provided for over time?

   - "Umbrella" value is "maintaining ecological processes".
   - List values.
   - Set priorities for these values. This will provide zoning guidelines. Allocation of uses/values will determine hard or soft (integrated values) zoning.

2. Does zoning have value in managing multiple purpose?

   - Essential for some uses (hard zones).
   - This methodology requires great public input.
   - Danger of over zoning, but a second level (soft) zoning is also needed.

4. Community involvement

   - Community involved through various methods (ballot box, public submissions, consultation etc).
   - Zoning is a dynamic process.
   - Planning must be set in a social context.
   - Community expectations must be identified at the beginning of the process.

Orange Group

The planning process must:

- Define an evolving vision.
- Define ecological systems and processes to be maintained.

Answers to questions:

1. Whatever level is required to sustain biodiversity in existing ecosystems.

2. Zoning does have a role.

3. By negotiation and consultation.

4. - Involvement, education, information.
   - Monitoring and accountability according to agreed criteria.

What are the values of a forest?

- Develop a range of options reflecting range of values.
- Negotiate and consult to arrive at integrated solutions.
- Some uses (values) may not be acceptable.

Green Group

Implementation

- Must consider the physiological age of trees in the forest in deciding time scale.
- Zoning may discriminate end rule of some uses.
- "Political reality" is that priority purposes for forests are - timber (houses, jobs), water, mining (wealth, jobs).
- This will be imposed on CALM by Governments.

- Must develop management strategies that reduce demand on forests.
- Demands will increase, therefore must intensify uses (exclusive use zones).
- Management will need to be "research driven" (in order to monitor management). Zoning will therefore need to be flexible to allow research knowledge to be used.

Assessment

- How do we monitor? Keystone species?
- Need community involvement to provide a sense of ownership and to provide accountability.

Brown Group

Process towards vision:

- Individuals take more responsibility for their lifestyle.
- Recognition that forest industry must move more to forest land.
- Recognition of trees environmental role.
- Greater community involvement and control of decision making. More localisation of decision making.
- Decentralised decision making, local economy, reduced consumption.
- People's social and ecological awareness raised.
- Increased recycling.
- Reconstruction of damaged ecosystems by community (some forests are in very modified state).
- Message to next generation

  - look what we've save?) Difficult choice
  - look what we've made?)

- Major question -

  Which uses are "allowable" ?
  Avoid "lowest common denominator?

- Establish community needs and demands

  - process to involve community input throughout
  - need future options (uses/values) which to choose from
  - how to compensate for non allowable uses
  - how to achieve community needs with lowest environmental impact (local and global)
  - people must know options and consequences.

- Conflict resolution

  - more dialogue between interest groups
  - avoid danger of lowest common denominator
  - avoid *ad hoc* decision making based on political pressure
  - community changes therefore need flexibility but should not breach intergenerational equity.

Red Group

1. Zoning concept is a process which minimises/resolves conflicts between otherwise mutually exclusive activities.

2. Within State forest net loss of area from the forest estate must be prevented.

3. Zoning process should be undertaken with formal public consultation (EPA process). Should then be transferred to CALM District officers to implement.

4. Development of temporal management of forests must entrain ecological essentials (eg, jarrah growth requirements).

5. Community involvement could be improved by increasing size and representation on the Lands and Forests Commission.

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