

SUBMISSION TO  
THE SENATE STANDING COMMITTEE  
ON SCIENCE AND THE ENVIRONMENT  
ON THE

**WOODCHIPS (MANJIMUP) PROJECT**

BY THE  
DIRECTOR OF CONSERVATION AND ENVIRONMENT

9 JULY 1976



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ON THE

IMPACT ON THE AUSTRALIAN ENVIRONMENT  
OF THE CURRENT WOODCHIP  
INDUSTRY PROGRAMME

*BY*

BRIAN J. O'BRIEN  
DEPARTMENT OF CONSERVATION AND ENVIRONMENT

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1. INTRODUCTION

I am pleased to have the opportunity to submit to this Senate Committee comments on behalf of the Department of Conservation and Environment and the Environmental Protection Authority on the important matter of the impact on the Australian Environment of the current Woodchip Industry Programme.

I emphasise at the outset that my remarks are addressed specifically and solely to the Western Australian Woodchip Programme that is centred around the Manjimup Project.

It is important to make it quite clear not only that there are environmental and other issues associated with the Manjimup Project that should not be confused with other woodchip projects elsewhere in Australia, but also that the machinery of environmental management in Western Australia, as I submit, is sufficiently different from elsewhere to warrant its consideration specifically for Western Australia.

I appreciate the honour that the Committee has done my Department in having it be the final organisation to make public submissions to the Committee before it leaves the State on this particular visit. This is both an honour and a burden of course, but it does reflect the opportunity that we have in Western Australia for the Department of Conservation and Environment and through it the Environmental Protection Authority to take if you wish an environmental "overview" of the operation of projects such as the Manjimup Woodchip Project.

In this submission I will speak first to the environmental management situation in Western Australia. Then I will discuss the consequential involvement of the Department of Conservation and Environment in the preparation by the Forests Department of their environmental impact statement (EIS). I will then indicate the environmental management of the woodchip programme and the way in which the Environmental Protection Authority has coordinated this. I will go further with the aid of my colleagues, Dr Maurice Mulcahy, Senior Research Scientist/Analyst of the Department of Conservation and Environment, and Mr Ken Kelsall, Deputy Director of Engineering of the Public Works Department, who is Chairman of the EPA's Steering Committee on Research into the Effects of the Woodchip Industry, to outline the on-going research in environmental matters associated with the Manjimup and related projects. I emphasise that the Manjimup research is just part of an entity of research into environmental matters in the South-West.

I will then proceed to discuss the activities in the State as concern national parks and nature reserves, and the extensive review which is coming towards an end now for the South-Western area. This work is a follow-on of the work of the Conservation Through Reserves Committee of the EPA, which, as I am sure senators are aware, was the trigger committee so to speak that first brought to public attention the importance of the Shannon River Drainage Basin in conservation issues in the South-West. I will deal with that in some more detail because the Shannon River has now become very important and almost a "catch cry" in conservation in the South-West, and because it is a good example of the potential conflict between conservation and development of the timber industry.

The status of the review of national parks and nature reserves in the South-West that I will be able to give here at this public hearing is somewhat restricted because the EPA recommendations are going before State Cabinet very soon. But I will discuss them as fully as I can before the Committee and make a suggestion as to how more comprehensive information can be made available to the Committee in a few weeks' time.

I will conclude by talking about the future studies and future environmental management that I envisage in the area. Threading these future studies together and threading the past and present studies together there is a philosophy on which I would like to spend some time. This is a philosophy of environmental management which I call the "Push-me Pull-you" approach, which is, I believe, proving successful in Western Australia.

2. ENVIRONMENTAL MANAGEMENT IN WESTERN AUSTRALIA

Although there are more than fifty Acts of Parliament in Western Australia relating to various facets of the environment, the Environmental Protection Act 1971 which came into force in December 1971 is the one that established the Environmental Protection Authority and it is the one which has both the overriding powers in the event of inconsistencies with other Acts and provides to the EPA the statutory authority to coordinate and otherwise manage environmental issues generally in Western Australia.

The Environmental Protection Authority is a three-man authority; its members comprise Mr P.R. Adams, Q.C., Professor A.R. Main, and myself as Chairman. It is aided by a 16-man advisory council which consists of heads of relevant government departments such as Agriculture, Forests, Fisheries and Wildlife, Town Planning, Public Health, the Surveyor General and so on and senior personnel, for example Mr L.C. Brodie-Hall, representing mining industry, Mrs Shirley de la Hunty and Mr John Bannister (Director of the Museum) representing conservation interests, and local government and primary and other industrial representatives.

The three-man EPA is served by the Department of Conservation and Environment which is a small department of the Public Service with 20 professional officers who serve generally as link men or organisers of coordinated action, with most of the field work being carried out by what I call the "service" departments such as the Public Works Department, the Forests Department, Department of Fisheries and Wildlife, and so on.

It is important to recognise that in Western Australia, perhaps in part through its frontier nature, perhaps in part through the relatively low population density and relatively low level of industrial pressure, there is an extraordinarily close liaison between State Government departments themselves and with the universities, industry, the Commonwealth Scientific Industrial Research Organisation, and so on. I consider it essential for the Senate Committee here today to appreciate fully the extent to which there is this Western Australian cooperation in environmental management, in industrial development and in many other areas relevant to the inquiry.

This is not to say, of course, that there are not occasions of confrontation on environmental issues. There have been what one might almost call massive confrontations. One of the first involved the Environmental Protection Authority recommending against the location of the \$300 million Pacminex Alumina Refinery in the Upper Swan. This recommendation was accepted, a new environmentally satisfactory site was chosen and a new Act of Parliament enacted with the new site specified.

But in general it is possible, as I will elaborate later on, to utilise the cooperation that exists in Western Australia to not only have rational development go forward but to use the very possibility of that rational development to learn more about the environment. This is a reflection, as I will discuss, of the "push-me pull-you" approach.

Specifically the EPA has statutory obligation under Section 30(4)h to -

*"coordinate all activities whether governmental or otherwise as are necessary to protect restore or improve the environment in this State."*

The EPA also is enabled to conduct and promote relevant research and it is the duty of the Authority -

*"to enhance the quality of the Environment"*  
(Section 28a)

and one of its functions is to carry out investigations into the

*"problems of environmental protection"*  
(Section 29b).

Within these broad ranges and the other responsibilities of the EPA it can set up committees. In the case of the woodchip project it established an expert committee chaired by Mr Ken Kelsall to assist it in environmental management.

In general the EPA is able to make its recommendations and reports public. In general furthermore it has the philosophy of involving the community, where practicable, as early as possible in its work, and as deeply as possible, whether it is a matter of the national parks and nature reserves survey carried out by the Conservation Through Reserves Committee of the EPA or whether it is a matter of the proposed routing of a West Coast Highway through residential areas in the Swanbourne-Cottesloe area near Perth, or other diverse issues. Participation in environmental issues by the public, conservation groups, local authorities and industry is encouraged, with all the attendant advantages and practical disadvantages. At Manjimup, for example, we have had three public or semi-public meetings and four meetings with Shire Councillors together with numerous meetings with and briefings by the Conservator of Forests.

3. PAST ACTIONS BY THE ENVIRONMENTAL PROTECTION AUTHORITY  
ON THE WOODCHIPS (MANJIMUP) PROJECT

The EPA in its early review of projects that were pending when it was established took what I believe to be a responsible position. (I might add that it would be of assistance if other newly-created environmental bodies took a similar stance, or at least stated explicitly what their stance was.) It made, in a letter published in "The West Australian" on 18 April, 1972, a statement which I consider is worth attaching as Appendix 1 to this submission. This says, in essence, that where there existed an agreement arrived at in good faith before the EPA came into existence, unless that particular agreement or proposed action had a major potential impact on the human environment (and I emphasise human environment) then the EPA would honour that agreement.

It appeared to the EPA that this was the only responsible position it could take. Provided that one included a proviso about the human environment, in general it would be quite improper for the EPA to seek to rescind agreements arrived at in good faith and negotiated in good faith between concerned parties before the EPA came into existence. If the EPA did otherwise it would create a climate of uncertainty and potential upset that would be in nobody's best interests.

Now the same philosophy applies even more so of course if there was an existing Act of Parliament, as indeed was the case with the Woodchip Project, where there was an Act of Parliament passed in 1969.

Therefore the EPA interpreted its role as, first obeying the law and, second making certain to the extent that it could of two specific points, as quoted in the Second Interim Report (September 1975) -

*"(a) to ensure that legally the Conservator of Forests had sufficient powers to remove, because of conservation reasons, areas from woodchipping activities*

*and*

*(b) to ensure that the best available expertise was used so that the judgements made by the Conservator, in liaison with the EPA, for management and excision for conservation were the best that could be made at the time"*

The initial role of the Department of Conservation and Environment then became one of assisting the Forests Department in preparation of an environmental impact statement to satisfy the Commonwealth request in this regard, and in ensuring adequate briefing of the EPA.



### 3.1 The Woodchips Agreement Act

Senate Committee members will be aware that major projects in Western Australia are covered by formal agreements with the State. These agreements are traditionally, but not necessarily, subject to Parliamentary debate and ratification. Such has been the case with the two Woodchip Agreement Acts, the original one in 1969 and the 1973 Amendment Act. Now, in order to give one general example of the way in which environmental considerations have been formally added to the agreement as distinct from just by the Environmental Protection Act itself, I would indicate that the following clause has been inserted in the 1973 Act which was not in the 1969 Act -

*"nothing in this agreement shall be construed to exempt the company from compliance with any requirement in connection with the protection of the environment arising out of or incidental to the operations of the company hereunder that may be made by the State or any State agency or instrumentality or any local or other authority or statutory body of the State pursuant to any Act for the time being in force."*

In addition the schedule to the original agreement was amended in the 1973 Act to strengthen the protection of the environment as follows -

*"The right is reserved to the Conservator to excise from the licence area at any time without compensation to the company -*

- (a) any area which the State may require for roads, railways, stream protection, wild-life maintenance, protection of scenic attraction or any other works of public utility, amenity or convenience;*
- (b) any area that has been cut over by the company for chip wood timber;*

*The company when working on any catchment area shall take all action required by the Minister to avoid the pollution (including salinity changes) of any such catchment area; and the company shall at all times when operating in die-back (phytophthora cinnamomi) affected areas comply with the hygiene requirements of the Forest officer in charge."*

The above matters are clearly of immediate concern to this Senate Standing Committee under its terms of reference from the Senate. It is clear that, quite apart from the passage of the Environmental Protection Act itself in 1971, there were more stringent environmental requirements included in the 1973 Woodchip Agreement Act.

As legislators, members of this Senate Committee will be aware of the growing public concern for the environment, as evidenced by the above facts. You will also be interested to know of the results of another comparison I had made between the 1969 and 1973 situations, in this case, not between the two Agreement Acts, but between the two debates.

Taking the Second Reading speeches and debate in the Legislative Assembly as representative of all political parties, I had an officer tally the number of times the words "conservation" and "environment" (or their derivatives) were used.

In 1973, in 13 pages of Hansard, they were used 38 times. In 1969, in 25 pages of Hansard, they were not used even once.

No further comment is necessary.

### 3.2 Preparation of the Environmental Impact Statement

The question of environmental impact statements (EIS) was a relatively new one to many in Western Australia at the time (early 1973) the Forests Department was required to produce such a statement. Indeed with due respect to the Federal Government agencies involved I suggest that it was a very new concept to them as well and at that stage they were not familiar with the wide-spread implications of the EIS approach nor its potential hazards and potential benefits. Indeed, as I have pointed out elsewhere, although the then Australian Government insisted on an EIS, it did not state what it believed an EIS to be nor what it should contain.

Be that as it may, the role of the Department of Conservation and Environment became one of assisting the Forests Department as far as possible to interpret what might be needed in such an EIS. I had very limited staff at the time myself, with only, I believe, two professional officers. We assisted the Forests Department by indicating to them the very nature of an EIS, giving examples of EIS's prepared elsewhere, overseas and interstate, introducing them to the concept of EIS generally and seeking to assist them by having them contact various expert agencies within the State from whom they could seek advice.

Towards the end of the period of preparation of the report one of their senior officers (Dr Hopkins) was seconded to the Department of Conservation and Environment, or as it was then the Department of Environmental Protection for a period of several months and my officers and he worked together in preparing the final document.

No one I believe, put forward that it is an earth-shattering document; it was prepared early in the history of environmental impact statements in Australia; it was prepared indeed before there was any Federal legislation on EIS's and before, with respect, Federal agencies were very well organised to specify just what information they wanted, much less to evaluate the result and information.

The EIS was a useful working document and it was not a very comprehensive one by any means. It should be viewed and criticised only in historical perspective. I would envisage that, in a year or two, with more experience and with the Kelsall Committee's results coming through, then there would be comprehensive review and updating of that EIS to assist in forward planning for further stages of the project. Certainly that would be one of the recommendations which I have not yet made explicitly to the Conservator of Forests but which I expect to make at an appropriate time in about one year from now. This would then prove a useful comprehensive assessment for the remainder of the licensing period of the project. I add that the Conservation and Environment Council receives periodic very comprehensive briefings by the Conservator of Forests, with the EPA having more frequent working sessions with him.

### 3.3 Statutory Role of the Environmental Protection Authority on the Woodchip Project

Mentioned already is the fact that the EPA took account at the outset of the fact that the Woodchip Project was a projected law validated by an Act of Parliament in 1969 before the EPA came into existence. When the possibility of revision of that Agreement Act and an increase in the throughput of woodchips annually were proposed the EPA saw that it had as mentioned earlier two major roles -

- (1) to ensure the issue of conservation was adequately protected; it ensured that this was done through Clause 9 of the Forest Produce Licence, a schedule to the Act, wherein the Conservator can excise areas for conservation reasons,  
and
- (2) to ensure that the Conservator had available the best possible advice with which to exercise his judgement.

A fuller account of the involvement of the EPA, and the concern it felt, is given in the First Interim Report (24 August 1973).

The issue is sufficiently important that it was reviewed at some length by the then Environmental Protection Council of which the Conservator is a member. I believe it is appropriate to record here the relevant resolutions of the Environmental Protection Council together with their dates and to show the response that this broad-based Council gave to the Woodchip Project.

#### ENVIRONMENTAL PROTECTION COUNCIL - 28 JUNE 1973

*"That the EPC endorses in principle the recommendation covered in paragraph 160 of the House of Representative Select Committee on Wildlife Conservation Report and will seek within the machinery of the State Government and State Government authorities, mechanisms to carry out necessary research to fulfil the intent of this paragraph."*

*"That the EPC advises the Director of Environmental Protection that it considers an environmental report should contain in addition to any matters required by the Commonwealth recommendations to cover the matters in items 14, 15 and 17 of the report tabled at this Council meeting, and in addition to provide for refuge areas distributed so as to ensure preservation of flora and fauna components."*

*"That the EPC noting safeguard provisions relating to the proposed Wood Pulping Industry, but being concerned about the potential pollution particularly with regard to water supplies and water resources, wishes to be advised as further investigations proceed before it makes a recommendation to the Minister."*

ENVIRONMENTAL PROTECTION COUNCIL - 8 AUGUST 1973

"Having noted that the Impact Statement drew attention to the likely problems arising from the Woodchip Industry rather than the precise management plan, and noting that the management plan may change from time to time in the light of experience, and having noted that the Conservator of Forests saw benefit in having the management plans reviewed by the Council it is resolved to request the Conservator to present to Council a situation statement from time to time giving details of management procedures."

"Council has noted -

i) that the Conservator of Forests was reporting to the Council on the management plans from time to time for information and consideration;

and

ii) that the Western Australian Wildlife Authority was being requested to recommend a programme of monitoring to study the effect of the project on the fauna of the area;

and endorses these actions."

"Council resolves to advise the Authority that subject to the favourable outcome of an inquiry on water salinity as it is affected by the project, Council sees no reason why the project should be halted on environmental grounds."

In essence the responsible government environmental bodies, both the EPA and the then Environmental Protection Council, considered that the Woodchip Project could go forward but considered that there should be an associated amount of guiding research going on at the same time.

The Agreement was subsequently ratified by Parliament on 2 October 1973 and the project commenced with the research programme commencing somewhat in advance.

As an aside, and as a measure of the growth of public concern for the environment between passage of the 1969 Act and the 1973 Act, I can advise the Committee that in the Second Reading speech and debate in the Legislative Assembly, I have had a count made of the number of times the words "conservation" or "environment" were used. In 1969 they were used 0 times in 25 pages of Hansard and in 1973 the respective numbers were 38 and 13.

### 3.4 Interim Reports of the Environmental Protection Authority

As mentioned earlier, the EPA wherever possible makes public its comments on environment reports on specific issues and the like and the woodchip project is no exception. The EPA has issued two interim reports which I table herewith. The first one being dated 24 August, 1973 and the second dated September 1975.

In the First Interim Report there is an extensive introduction which talks about the EPA's statutory role and environmental management and it goes further in raising some issues which have become less prominent subsequently, but on which the EPA is keeping a watching brief.

One of the recommendations of the EPA was that a Cabinet Subcommittee be formed to consider the interaction of the proposed Woodchipping Industry and a possible proposal to mine bauxite in State Forest areas within the woodchipping licence area. The reason was, of course, that regeneration is so different in the two cases. Such a meeting was held and the statement was made quite clear that if the Woodchip Industry was to go forward then the EPA assumed it was not the Government's intention to permit bauxite mining in the area while the area was being utilised as a managed forest for woodchips. There has been no further development of relevance on that matter.

As pointed out also in that first report the EPA "expressed its concern that adequate research should be a mandatory auxiliary to any such proposed development".

In the First Interim Report also, in Section 6.5, there was some EPA concern as to whether, given the power of a Conservator under Clause 9 of the Forest Produce Licence and given the research advice to the Conservator as to what should be conserved, in fact he would have "room" to efficiently exercise his options while still giving the export rate of 670,000 tonnes per year for fifteen years.

Our concern is now lessened for reasons that the Conservator of Forests has indicated, but it is something on which we are maintaining a watching brief.

One of the conclusions of that First Interim Report was (Section 8.1) -

*"the EPA remains unconvinced that sufficient is known about environmental implications of the woodchip proposal for it to be completely endorsed at this point in time. Equally as well the EPA is scarcely in a position to render at this stage a blanket disapproval of the project."*

The report then goes on to foreshadow the EPA reservations about the project -

*"on the one hand the State has the obligation to provide 670,000 tonnes of green weight timber per annum for 15 years; on the other hand guided by research findings the Conservator can excise areas for various environmental reasons."*

The EPA then went on to conclude (Section 8.4) -

*"in simple terms as research results become available these two actions may prove to be mutually irreconcilable".*

I believe that the concern then of the EPA has come true to a certain extent. If one takes as a single example, the controversy about the Shannon River Drainage Basin, were it not for existing commitments to felling for sawlogs, and the associated extraction of chipwood which was an important contribution to the 670,000 tonnes listed in the statute, the matter could have been resolved very quickly indeed. The Conservator could have given in to the weight of public opinion and excised the entire drainage area on his own volition. In fact, of course, the Shannon contains a significant proportion of timber required to meet that export requirement and the saw-mill requirements and so in essence the conflict which the EPA foresaw in August 1973 has come to pass to some extent.

The Second Interim Report of the EPA in September 1975 was more positive since by that time the research programme was moving forward as was our assessment of national parks and nature reserves in the area. The earlier reservations that we had about salinity were reasonably well resolved to the point where (Section 2) -

*"the EPA is now satisfied that salinity problems associated with the ... Industry are unlikely to be significant provided that logging areas are suitably selected."*

That conclusion was based upon reports not only of the Kelsall Committee of Steering Committee on Research into the Effects of the Woodchip Industry but also on the results of the independent assessment by the Department of Agriculture in their Technical Bulletin No. 27. There may be areas in which senators would wish to question me and my colleagues further in this, and I won't go into too much detail here.

The Second Interim Report also discusses Forest Management (Section 3) and makes the point to which I will revert later -

*"under natural conditions fire is an integral part of the forest ecosystem and promotes the renewal of karri forest".*

In that second report as well the Authority drew attention (Section 4) to the Shannon River Catchment Drainage Basin which had been the subject of so much controversy. The report points out the agreement by the Conservator of Forests that the cutting and regeneration programme would be restricted to less than 9% of the Basin to provide the opportunity for the Forests Department to rehabilitate some degenerate areas. The Conservator undertook not to allow further woodchip or saw-log operations in the remaining 91% of the Shannon River Drainage Basin without the EPA's approval.

The report concluded by stating that the EPA would keep a watching brief. A watching brief is still extant and research programmes are going forward. In fact there is a report on the Kelsall Steering Committee into research into the Woodchip Programme which is in an advanced stage of preparation and a copy of which can be provided to this Senate Committee in several weeks' time.



### 3.5 General

In summary the EPA has consistently been involved in supervising research into all environmental aspects of the Woodchip Project. It started off, if you wish at a disadvantage, because there was an existing Act of Parliament and the EPA felt bound to abide by the law.

Consequently the EPA's role has been one largely of environmental management and of negotiations with the Conservator to reach for example the agreement we reached on the Shannon River Drainage Basin.

In addition the EPA has had going on a number of programmes that would have taken place whether or not the woodchip project went forward. These are principally the evaluation of national parks and nature reserves throughout the State. This was a study that the EPA initiated at its first meeting late in 1971 and it is a point which I suggest is worth exploring in order to give the total picture on the Manjimup issue viz-a-viz the general conservation issues throughout the South-West.

#### 4. NATIONAL PARKS AND NATURE RESERVES IN WESTERN AUSTRALIA

##### 4.1 The Conservation Through Reserves Committee Studies

With the creation of the Conservation Through Reserves Committee (CTRC) early in 1972 by the EPA a study was begun of national parks and nature reserves in Western Australia that I suggest has no parallel in any other state in Australia.

Public submissions on what was desired about future national parks and nature reserves in the State or what should be done about existing ones were received in the first half of 1972 and some 103 submissions were received.

The CTRC, which included senior personnel such as the then Director of the Museum, Dr David Ride, the Surveyor General Mr John Morgan, and persons of that seniority together with a technical advisory committee chaired by Professor Reg Appleyard, Professor of Economics of the University of Western Australia began an extensive survey of the State and its requirements as far as national parks and nature reserves were concerned.

Generally, Western Australia is in a fairly favourable position as far as national parks and nature reserves, because of the relatively high proportion of Crown land. Nevertheless, the task was an onerous one.

The CTRC divided the State into twelve distinct systems, in part for convenience, in part for physiographic, demographic and other reasons. These 12 systems are illustrated in the attached Figure 1.

The Committee carried out a three-year survey on much of the area. For all but Systems 6 and 7, their report, which is popularly called the "green book" was completed after three years, and early in 1975 was made available for the public to comment.

After an initially slow start the public response, following on a succession of country tours, public meetings, submissions and deputations were quite extraordinary, particularly in the South-West. There were, for example, public meetings held at Manjimup on two occasions to discuss the local implications of the "green book". On a later occasion I met with Councillors and others to review and discuss the "green book" recommendations, and later again, in May 1976, the three-man EPA met with the Shire President, Councillors and other groups at Manjimup.

Relevant to this Committee's inquiry, it is pertinent to state that the CTRC recommendations in the woodchip licence area hinged really around the Shannon River Drainage Basin. It has been alleged that they concentrated on the Shannon area alone for what had been called by some conservation groups political reasons. In fact I think that what the conservation groups are assuming is the supposition that the CTRC put "all its eggs in

the one basket" in this particular region in the licence area.

Be that as it may, the CTCRC made six recommendations in their Section 2.4 which deals with the Shannon area and these are attached to this submission. (Attachment 2)

The role of the Shannon Basin, is such that I believe it deserves a separate comment shortly. For the moment I just state that it became an important "catch cry" in the conservation movement against the woodchip industry, so much so that in many people's minds "Save the Shannon" was synonymous with stopping the Woodchip Project entirely. Some car stickers and the like have got "Save the Shannon - Stop Woodchipping".

Many comments then were received on the CTCRC report. It was quite clear after Systems 1 and 2 recommendations had been exposed for public comment for most of calendar year 1975 that most of the criticism of the CTCRC report was based on the fact that the Committee allegedly did not give adequate attention to alternative land uses specifically to forestry and agriculture. This being the case the EPA decided that it would establish a Special Review Committee which would examine the CTCRC report recommendations on Systems 1 and 2 from, not so much a conservation viewpoint, but more from a commercial land-use viewpoint.

The Committee therefore comprising senior officers of the Forests Department and the Department of Agriculture was placed under the Chairmanship of Dr Maurice Mulcahy who was then Senior Principal Research Officer in the Land Resources Planning Section of the Commonwealth Scientific Industrial Research Organisation.

The EPA has been subsequently criticised by conservationists because it has been claimed that this Review Committee was "stacked with Foresters" and hence their recommendations were biased. I do not believe that the latter is a fair allegation but what is fair to state is that the EPA deliberately did stack it with foresters and Department of Agriculture officers so as to get a land-use overview of the CTCRC recommendations. Indeed, since the area contains large areas of forest, managed by professional officers of that Department, I believe that we would have been remiss had we not ensured that their views were available to us.

The Review Committee had the opportunity of studying not only the CTCRC report and using their own general knowledge and various submissions made to the Committee but they also had available to them the results of public comments on the CTCRC report, notes from the various public meetings and various other submissions.

The Special Review Committee met late in 1975 and its report which is entitled "A Review of Recommendations for Reserves in the South-West and South Coastal Areas of Western Australia" was itself made available for public comment in March 1976. Public comments were invited

then until the end of May 1976 and rather more than 200 comments and submissions have been made. There have been various local authority deputations which I have met, and there have been various meetings.

So if I can recapitulate, as far as the community involvement in this study of national parks and nature reserves is concerned, we have the following steps:

- . Formation of CTRC : early 1972
- . Public submissions : 1972
- . CTRC report made public : early 1975
- . Public comments, meetings, deputations : throughout 1975
- . Special Review Committee on Systems 1 and 2 :  
December 1975
- . Review Committee Report made public : March 1976
- . Public comments thereon : April, May 1976
- . EPA recommendations to Cabinet : July 1976

It is therefore fair to say that public opportunity to participate in the national parks and nature reserves review particularly in the South-West over the past four years has been very extensive indeed. By 'public' I include here not just private individuals and conservation groups but also local authorities, the Chamber of Mines and various mining industries, the W.A. Chip & Pulp Co. Pty. Ltd., and hundreds of others.

#### 4.2 The Shannon River Drainage Basin

As mentioned earlier the CTCRC singled out the Shannon River Drainage Basin as a single entity, or as some may say, a single "ecosystem" deserving reservation in toto.

The first and major recommendation of the CTCRC was

*"that during the first licence period ... clear felling should not be carried out in an area designated here, the Shannon River Drainage Basin."*

However, in a later recommendation, the CTCRC did envisage that given adequate knowledge, there could be later (towards the end of the first licence period) selection of a substantial area of wet sclerophyll forest to be conserved in perpetuity as natural forest in the Shannon River Drainage Basin.

I believe it is quite important to assess for the Senate Committee here the way in which the concept of the Shannon has caught on in public imagination and in the conservationists' imagination. If the CTCRC were to do nothing else for this particular region I would say that it already had achieved a very great step forward in arousing this public concern and rapport with the forests of the South-West. The concern has been there in the past but it had never received a rallying point such as it gained from the CTCRC recommendation on the Shannon. This is not to say at all that I endorse the CTCRC recommendation. I will be discussing shortly what the EPA's approach to the area is.

But it is true that before the CTCRC report was made public there was very little, if any, outcry for preservation of the Shannon or specific areas of the South-West. The conservationist cries were somewhat diffuse - they spoke about karri generally or they spoke about salinity generally or turbidity of rivers or the rivers of the South-West generally.

Unfortunately associated with the rallying around the Shannon concept, was the fact that "save the Shannon" became synonymous with "stop woodchipping"; not so much "stop woodchipping in the Shannon" but "stop the woodchip project". I do urge Senators to differentiate between the two concepts which as I have said have become somewhat blurred in many conservationists' eyes.

The Shannon was among those areas visited by the EPA in three days of overflights and almost 500 km of local ground inspections in mid-May 1976.

It would appear as well to note that both prior to, and subsequent to, this field inspection, the EPA met with representatives of the Conservation Council, the Campaign to Save Native Forests, and the South-West Forests Defence Foundation. In addition, at the EPA's request, the Foundation supplied a list of areas it considered

should be inspected by the EPA. That list was sent by me to the Committee secretary prior to your own inspection. (In addition, of course, the EPA and Departmental officers had and will have, numerous meetings with the Conservator of Forests and his staff who, as 'managers' for the area, have certain industrial commitments, which they wish to honour, and which they can be expected to put forward to the EPA.)

The one major geographical area in which there was a difference of technical opinion between the CTRC and the Special Review Committee was the Shannon. This can be seen by contrasting the reports of the two bodies.

The Review Committee took the point that the Shannon is not virgin country nor indeed that the Shannon was all that special as far as karri was concerned. It devoted a special appendix to the history of the Shannon (Appendix 3) which treats the modifications of the Shannon and the incursion by European man which began on the west coast of Broke Inlet near the mouth of the Shannon around 1860. There is discussion in that appendix of the extensive logging that has taken place, of the extensive fire damage, particularly in the central half of the Shannon and indeed of the establishment of a town site there, which no doubt members of this Committee have had the opportunity to see for themselves.

The problem posed for the EPA then was a rather unusual one, in that our committees of technical, professional experts disagreed. I tried the obvious approach of having them meet together, but they continue to disagree on the Shannon.

One of the problems of the EPA in deciding what should be done about the Shannon in particular was the fact that we do value the interest in conservation that the Shannon issues has aroused. In other words, quite apart from the worth of the Shannon from a conservation point of view or from an ecosystem point of view, there is value in the reservation and management of the Shannon by name. The EPA has to take into account the fact that if people are sufficiently interested in conservation to want preservation and/or management of a particular area then the EPA has in a sense a responsibility to respond to that public wish. But it has a further responsibility of course - to the extent that it is reasonable - and that is to guide the direction of that public wish.

The EPA then created the opportunity for public involvement as a result of establishing the CTRC, it established a Review Committee to look at the public submissions plus the CTRC submissions from a different point of view and finally the EPA itself is reviewing public comments on both Committee reports.

The EPA will make a final decision this afternoon on the Shannon. It would be appropriate then to follow through and to advise this Committee what the present situation is as regards the EPA recommendations on national parks and nature reserves in the South-West.

#### 4.3 Present Status - Environmental Protection Authority Recommendations

I have mentioned earlier the sequence of deliberations of the EPA following on the work of the CTRC and the Review Committee. It would be appropriate again before this Committee leaves Western Australia to appraise members with the status of the total review of National Parks and Nature Reserves throughout Western Australia.

For Systems 4,8,9,10,11 and 12, which are shown in Figure 1, the EPA made recommendations in December 1975. On 9 February 1976 Cabinet accepted and endorsed all 143 recommendations of the EPA for these systems which recommendations were then published in what is called the "red book".

It is important to appreciate that in the preamble to the "red book" there is a great deal of expression of philosophy of the EPA towards national parks and nature reserves management. We discussed our views on the relevant roles of the National Parks Board (which is now the subject of new legislation to establish a National Parks Authority) controlling national parks, the Western Australian Wildlife Authority looking after flora and fauna reserves, and the Forests Department.

It is important to note, that in that preamble, we do indicate to the public the fact that we regard the Forests Department as one of the three major State organisations looking after national parks and nature reserves of various types. We strongly favour the Forests Department's new approach to multiple-use management of forest areas and there is a very close link between the Forests Department and the Department of Conservation and Environment and through it the EPA.

Further in that preamble there is a discussion about desert reserves, wetlands and the like and it is perhaps appropriate here to comment about the philosophy of the EPA to wetlands because this does indicate the balanced approach that we believe can be taken in such matters in Western Australia.

Wetlands are amongst the scarcest resources in Western Australia and they support a range of flora and fauna requiring conservation. But the EPA -

*"in its recommendations has taken into account human activities"*

such as agriculture, sanitary landfill and recreation such as aquatic sports, fishing and duck shooting.

The EPA sees that there is an opportunity for balanced management of wetlands and perhaps a simple illustration of this concerns duck shooting. If one takes the strict conservationist point of view then one should conserve wetlands in order to conserve wildfowl. But there is no reason why wildfowl ducks should not be regarded as a

harvestable resource provided they are adequately managed, so that one can derive income from duck shooting licences for example, which can assist in the real day to day costs of management and preservation of wetlands.

It would be useful in fact to discuss the analogy of duck shooting, the necessary research to assist management, the financial aspects, and conservation issues.

In Western Australia there are approximately 6000 duck shooters licences at \$2 each issued annually for a total income of about \$12,000 (all figures are approximate).

The annual management costs to the State Government consist of overflights, liaison and inspection and together these total about \$12,000, so that the licence fees essentially offset management costs.

But in order for the State Government personnel to be in a position to carry out this management, a research programme approximately \$70,000 p.a. had to be mounted for some seven or eight years for a total expenditure of perhaps half a million dollars.

The commercial aspects are also very relevant, since, just in ammunition alone, the annual expenditure is estimated to be some half a million dollars.

I submit that there is no *a priori* reason why similar methodology should not be applied to woodchipping, with a balance between conservation, management and commercial utilisation of the forests.

The same broad principles can apply to fisheries management, and kangaroo management and we submit that we see the same principle applicable to forestry management, where there is a possibility of harvesting a renewable resource, with conservation as a dominant issue, but with the income derived from the harvest being used to assist in managing and conserving the resource - in this case the forest.

It is not appropriate here to enter into discussions about cost-benefit analysis of the woodchip project, which is an extremely complex issue and the subject of other submissions.

So the "red book" recommendations on Systems 4, 8, 9, 11, 12, 143 recommendations in all, were accepted by Cabinet in February 1976 and made public. The relevant recommendations pertinent to the immediate inquiry today are mainly on System 2, which is a part of another package of recommendations on Systems 1, 2, 3 and 5 which will be completed by the EPA this afternoon. They will then be submitted to Cabinet very shortly by Hon. Peter Jones, MLA, Minister for Conservation and the Environment.



Therefore, unfortunately at this public hearing I must take the position of treating those EPA recommendations as having the confidentiality of Cabinet papers. I do foreshadow that when Cabinet has made its decision on the recommendations then the same sequence of making them public would be followed through another "red book".

Because of the timing of this hearing by the Senate Committee in Perth now and due to the absence of my Minister, Hon. Peter Jones, MLA overseas while I was preparing this submission, I sought and received his approval to indicate to you today that I would be recommending to him that within the next few weeks, once Cabinet has received their "red book" and had an opportunity to deliberate at least initially on it, I would seek his permission to forward to you in confidence the "red book" findings of the EPA on Systems 1, 2, 3 and 5.

Of particular interest to your present investigation I submit would be all the substantial portions of the new preamble pertinent to those Systems and also of course recommendations on System 2 and the Shannon River.

I cannot go any further than that at this time but envisage that I can arrange to have matters organised with the secretary of your Committee to ensure that these papers are forwarded to you in confidence at the earliest possible opportunity.

5. THE PUSH-ME PULL-YOU APPROACH TO ENVIRONMENTAL MANAGEMENT  
IN WESTERN AUSTRALIA

I indicated earlier that I very strongly recommend to this Committee that in reviewing the broad terms of reference of their study and in assessing the Western Australian activities in this area they regard the West Australian Manjimup Woodchip Project as an exercise in itself and in its own right.

In my view, albeit a parochial one, it would be unfortunate if the activities and management of the Manjimup Project were confused with and blurred by what goes on in some other parts of Australia. I submit, with due respect to my colleagues of the Department of Environment, Housing and Community Development in Canberra, that in their submission to this Senate Standing Committee they do not seem to appreciate the special technical and management nature of the Manjimup Project.

The special technical nature of the project I will leave to my colleagues here to discuss. The special management aspects of it I will discuss now.

Some of the management features as I have indicated earlier, arise through the close degree of cooperation that exists between Government and non-Government instrumentalities such as CSIRO, in the Western Australian community. This is particularly so in the woodchip research projects and in the bauxite mining projects whose interrelation I wish to discuss briefly from an overall management point of view.

Throughout Western Australia I have found very little difficulty in promulgating what I call the Pull-me Pull-you approach to environmental management, which is described in more detail in an article of mine in 'Search' June 1976 Volume 7 page 264, a copy of which has been forwarded to you previously.

Briefly the "Push-me Pull-you" approach states that in an area such as Western Australia which is lightly-industrialised, lightly-developed and lightly-populated, more often than not a potential development can be adequately managed from an environmental viewpoint provided enough financial and personnel assistance is given to environmental research, monitoring and management.

I take the point of view that a portion of what might be called an "environmental overhead" of a particular project should be allocated to environmental research monitoring and management.

I take the further point of view that without the possibility of that development, or the existence of it, it would be extremely unlikely that one could obtain either the fiscal or the human resources and skills and capabilities to carry out that particular research. This is necessarily the case when one is confronted, as was almost invariably the situation, where very little indeed is known about the environment in which it is proposed a development should take place.

In general I have found from a variety of environmental studies, whether they be air pollution, water pollution or in this case forest management, if one tends to think of an "environmental overhead" of the order of between 1 and 4% of the capital costs of the project then we are talking about a reasonable percentage of allocation of fiscal and human resources to environmental studies and management.

In the case of the Woodchip Project nominal capital value \$280 million, the annual expenditure in environmental management independent of forestry participation amounts to \$20,000 per annum for overhead and \$163,000 p.a. for 1975/76 for associated expenses amounting to a total expenditure per annum of \$183,000 which is then to be 1 percent of the total annual income from the woodchip project.

It is, I submit, too simplistic a view at least for the Western Australian present stage of development to stand back and say we need to know everything about that particular animal or that particular resource, or that particular environment before any project or before any development goes forward.

This might be the extreme case of the use of an environmental impact statement. It is I suggest one of the hazards of the use of an environmental impact statement that it may be misused in this sense, i.e. people may expect it to provide all the answers before a project gets the go ahead. If one adopts the "fail-safe" approach to environmental management then indeed one can support this approach that you need to know everything about the environmental implications before anything happens. However, I maintain this is totally unrealistic and in many cases it is totally unscientific. There is for example no way in which one could have predicted all the environmental implications of the Ord Project before it went forward.

But in the case of the Manjimup Woodchip Project we had sufficient baseline information about many things to state that it could go forward provided, as the EPA earlier said, there was the opportunity to excise from the licence area various regions for conservation purposes and provided there was adequate technical guidance as to what areas should be excised for conservation and environmental purposes.

I suggest these provisos are being followed at the present time. The intensive research that is being carried out down in the area and in the bauxite area are not only materially assisting environmental management of each of those projects but are adding to the fundamental baseline information from which one can derive more and more advance information on the environmental implications of potential future projects. In other words one is building up a reservoir of knowledge, experience, technical capability and team work, to be able to predict more reliably and manage more reliably in advance, future industrial projects in the South-West.

It is vital to stress that the research referred to above may be thought of as "applied" research. It is still essential for any modern community to subsidise heavily so-called "pure" research, i.e. that carried out in a search for truth and the solution of mysteries without necessarily any immediate practical application. The point to be made is that this "push-me pull-you" research is a necessary minimum accompaniment to any development - it will rarely be completely adequate.

## 6. ECOSYSTEMS AND THEIR MANAGEMENT

### 6.1 Ecosystems

In discussions of the Woodchips Programme, as in discussions of national parks and nature reserves generally, there is often loose ill-informed talk about what is meant by an "ecosystem". Discussions of the significance of a so-called ecosystem have been high on the priority of the Environmental Protection Authority in its deliberations on the forest areas of the South-West.

The concept of an ecosystem is based on dynamic interactions, principally energy and nutrient flows, by which whole communities of plants and animals are held together in a stable way. However, definitions based on such a concept do not allow the existence of ecosystems which are self-contained and independent entities, since all have inputs from and outputs to other systems, atmospheric, terrestrial and marine.

Ecosystems which become established on dune sands or disturbed areas, e.g. after fires, will with time usually contain increasing numbers of plant and animal species until they finally reach a stage beyond which no marked increase occurs. They are then said to be at a successional climax.

At climax an ecosystem is considered to be not only mature but also said to be more stable as an ecosystem because it is believed that at such a stage -

- (a) the system will recover more readily from perturbation,
- and
- (b) mature ecosystems lose less energy and nutrients than mature ecosystems.

Nevertheless, maturity in an ecosystem, though from a total view a stable and perhaps long-lasting stage, particularly in forest systems, is not a static but a dynamic condition. Increasing quantities of nutrients may be held in inaccessible forms, leading to low levels of biological productivity, lack of vigour and incidence of disease. In a forest individual trees may age and deteriorate.

In nature, such a climax situation does not persist indefinitely. It frequently ends with a cataclysmic event such as a severe fire which destroys the old forest, and regenerates a new one, thus initiating once more the cycle of ecological succession. In many communities, including some eucalypt woodlands, fire is an important agent of regeneration, with effects on reduction of competition, encouragement of pioneer species, and nutrient inputs and release through the "ash-bed" effect.

It is considered essential that those who speak of a virgin forest (or, as in one submission to the EPA, of an "almost-virgin" forest) understand that a natural ecosystem is a dynamic system. To borrow from the laws of physics, it may be said also to be in a state of dynamic equilibrium in its natural or undisturbed (by man) state.

The problem of management of such a forest is then quite simply to determine the extent to which a forest can be used and exploited, whether for timber production or tourism, without throwing the total system into such an unstable state that it will not recover for decades.

## 6.2 "Wilderness" areas and the need for management

One of the major problems confronting a body such as the Environmental Protection Authority is that it must draw a balance between the varied demands of society, the demands being for economic development and growth on the one hand, through a wide variety of in-between stages to, in the extreme, the setting aside of so-called "wilderness" areas, nominally untouched by human hands.

Those who advocate wilderness areas on the grounds that they wish to get away from it all, or on the grounds that there are scientific enclaves that should be preserved at all costs for future studies, are I believe, being somewhat naive.

There is of course the occasional area that should be set aside for scientific studies so that we can learn more about our natural environment, the way it has evolved, the way it is evolving, so that in turn we can use that knowledge not only in itself but also to assist in planning other related areas.

We can also set aside rather limited areas which are untouched by human hands, but which of course suffer to some extent the very first time that a person sets foot in them, that is a person with a European style of living.

However, when one is talking about extensive areas as being wilderness areas - and here I am talking in terms of fifty thousand acres or of that order, and even areas of more than ten thousand acres, which are set in proximity to fairly intense human activity, whether it be tourism, agricultural activities, recreational activities, fishing, access to the coast, canoeing or any such human activity - one has to accept the fact that to preserve the wilderness, paradoxical as it may seem, there has to be an element of management.

This is true even in, for example, the United States Wilderness Act which is often given as an example of the need for wilderness areas. The Act itself permits activities such as road building for fire control purposes, measures for the control of insects and disease and measures for the health and safety of persons. In other words, the very wilderness areas themselves, under the Wilderness Act in the U.S. need to be managed.

For the South-West of Western Australia I want to illustrate by referral by the schematic plan of Figure 2 the various alternatives as to what would happen to a forest in the South-West were it managed or unmanaged or partially managed.

It can be seen therefore, and I believe must be generally accepted, that for the South-West, whether it be the Shannon or other areas, some degree of management is necessary, in particular as regards fire control. Once one accepts that fact then one is faced with the next problem and that is -

*"who bears the cost of this management?"*

This is where a value judgement has to be made by the Government and by society as to whether the cost for that management is to be borne by the community as a whole or whether to some extent society can recoup that cost which is incurred for the benefit of relatively few members of the population, such as canoeists.

A recoup of that cost may come by utilising the area for tourism, or commercial timber production from fees for apiarists or some such commercial activity or combination of activities whereby at least in part the management costs are recovered. The National Parks Board, for example, has endeavoured to follow this approach by charging admission or donations to its national parks.

The sequence of matters for decision with regard to management of ecosystems in the Woodchip area is as follows -

- . even a wilderness area requires management;
- . in the South-West there are three courses of action in management of a forest as shown in Figure 2;
- . one can make a value judgement as to which of these are preferable; and
- . one can then make a value judgement as to the manner in which the costs of management should be borne by the community at large for a select few or be recovered in part through commercial exploitation whether by tourism and/or timber extraction or apiarists' licences or other means.

The argument FOR woodchipping is that this is a form of forest management which, at least in part, provides some return on costs.

The argument AGAINST woodchipping surely must come down to the argument not against any form of forest management, but against woodchipping as a management tool.

If the argument can be distilled to that point, then a large portion of it resolves to being a silviculture argument.

7. CONCLUSION

In the one million square miles of Western Australia, only a relatively small proportion is forested, and there is only a small proportion of hardwood forest area. It is therefore self-evident that the hardwood forests of the South-West form an important part of the State and national heritage. They are more than that, even, because, as the EPA's Conservation Through Reserves Committee stated -

*"With their associated understorey, the giant karris of south Western Australia constitute a unique and ancient forest; one of the great botanical associations of the world."*

It is clear, therefore, that they require special care and attention.

Also, apart from conservation issues, the forests, together with the beautiful rivers and coastline, constitute a major tourist and recreation haven. This will be more intensively used both due to population and mobility increase in Western Australia itself and due to the sealing of the Eyre Highway.

The forests are there for part to be set aside for select "ecosystems" and so-called "wilderness" areas. Other areas must be managed, to ensure their use by the population, whether via tourism or passive recreation.

If they are to be managed, they must be well managed. I consider that generally this is happening, and will continue to happen, provided the Forests Department continues to improve its knowledge and techniques, gives cognizance and support to associated research, and continues to look to the independent bodies of the EPA and its advisers for an environmental "overview".

If the forests are to be managed, then society has to decide the extent to which management costs can be defrayed by exploitation of the timber. To the extent that woodchipping can be sound silviculture if well managed, then a commercial woodchip project which can assist in sensible forest management and also assist in defraying management costs can be accepted.

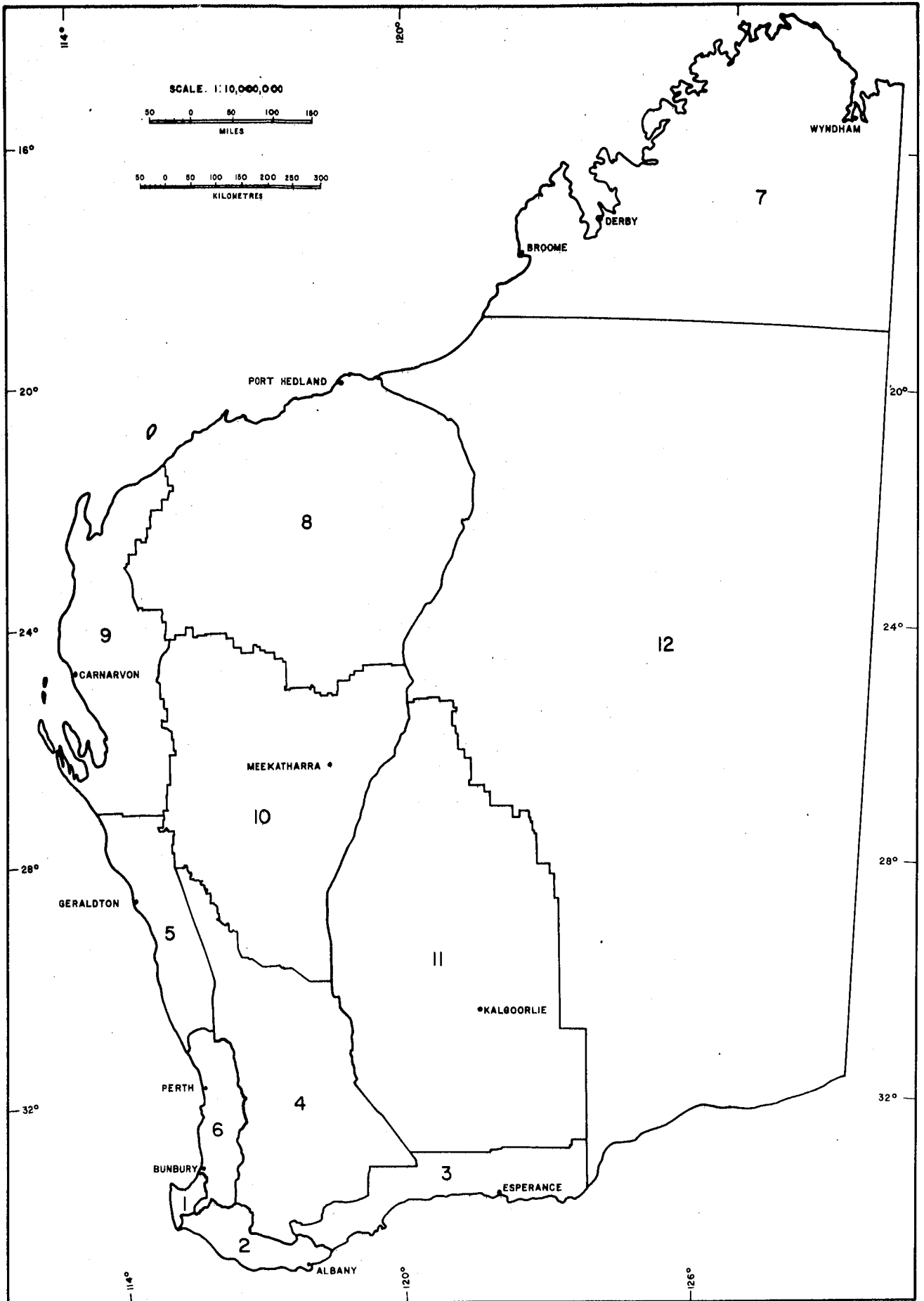
The Environmental Protection Authority has been faced with the Woodchip Manjimup Project as a fact of life, endorsed by two State Parliaments of opposite political persuasions. We therefore established management procedures on the one hand, and an intensive review of the need for national parks and nature reserves on the other.

I consider that there is sufficient technical expertise, goodwill and overall coordination of environmental management in Western Australia to enable the Woodchip (Manjimup) Project to continue under the existing safeguards.



Implicit on this belief, however, there must be the firm understanding of continued and strengthened Government support not only for the associated environmental research but also for the setting aside in the South-West, of adequate national parks and nature reserves. These are being recommended currently by the Environmental Protection Authority after a four-year analysis of community, conservationists' and land-users' requirements. Their acceptance should go a long way towards public acceptance or at least tolerance of the Woodchip Manjimup project as being not just a commercial venture but also a forest management tool. If the public can appreciate that areas will be set aside for conservation purposes, and recognise the legitimate and valuable management roles which foresters can play in such areas, then the often-acrimonious debate will have been worthwhile.

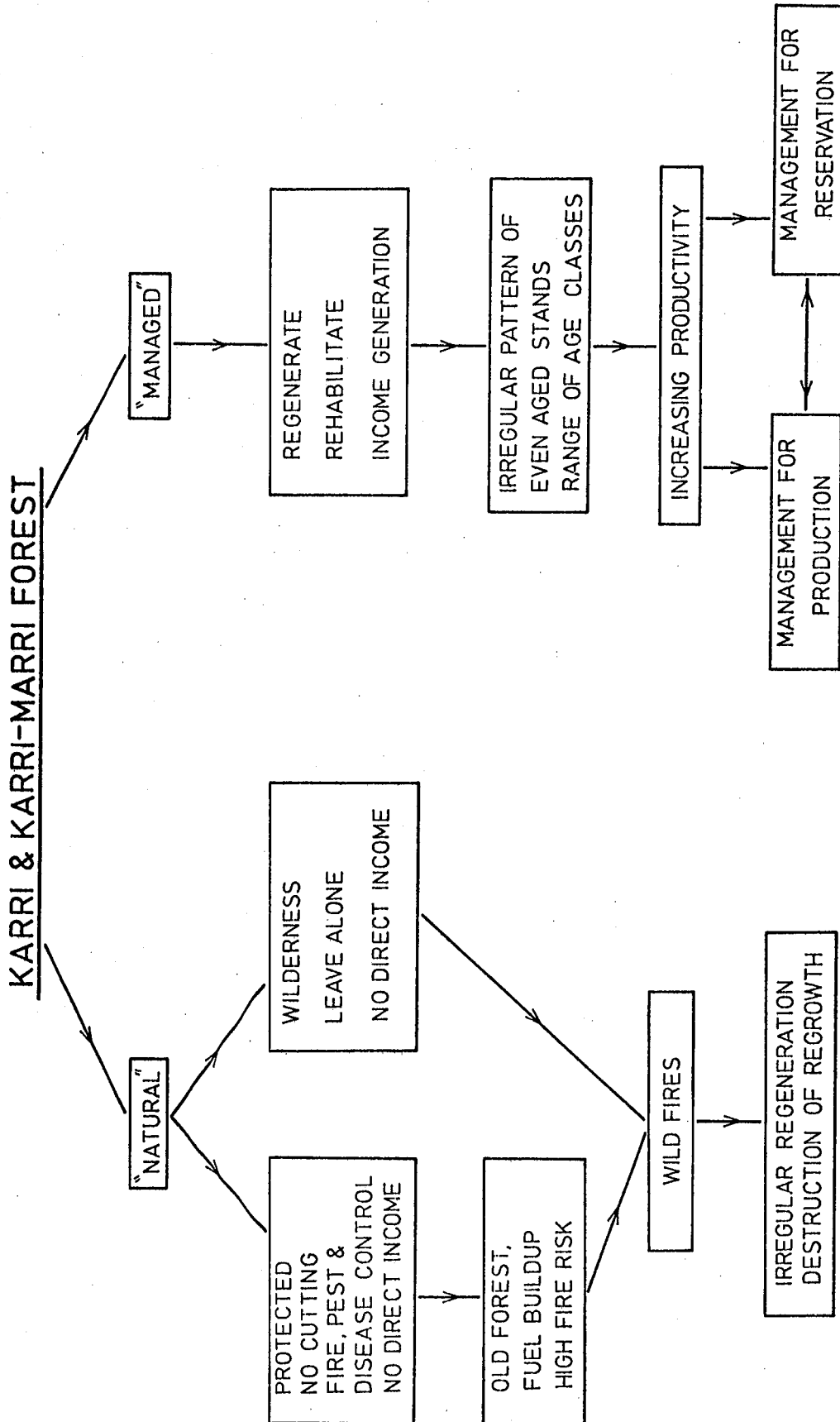
FIGURE 1



Geographical outline of twelve systems delineated by the Conservation Through Reserves Committee of the Environmental Protection Authority.

FIGURE 2

Diagrammatic simplified choices to be made with regard to man's interaction with forests in the South-West.



APPENDIX 1

The Editor  
 "The West Australian"  
 115 St George's Tce  
 PERTH 6000

The Editor  
 "The Australian"  
 2 Holt Street  
 SURRY HILLS NSW 2010

Dear Sir,

The question has arisen as to the role of the Environmental Protection Authority in major projects in the State of Western Australia. It is therefore considered desirable to make it quite clear that while the guiding philosophy of the Environmental Protection Authority is being developed in this new, complex and virtually uncharted field of human relations, the following points should be noted.

1. It is recognised that in part because of the long gestation period of environmental protection bodies in this State, there has been considerable public interest and sometimes disquiet on several matters of environmental concern, which some members of the public may have felt were not receiving adequate attention.

2. However, the EPA recognises that in such transitional periods it is necessary that, except in matters which it considers of major importance to the human population, there should not be an interruption of orderly planning proceeding in good faith.

For this reason, for example, the Authority considered it inappropriate to make recommendations which could interfere with the completion of the Pinjarra alumina refinery whose Agreement was negotiated some time ago.

3. In the recent example of the report on the proposed alumina refinery project, popularly called Pacminex, it must be emphasised that the Parliament of the State placed a specific statutory requirement on the Authority to report on the matter. This requirement was placed not under the Environmental Protection Act, 1971, but imposed by Parliament under the Alumina Refinery (Upper Swan) Agreement Act, 1971. This point does not appear to be generally recognised.

4. The Authority will, under the Environmental Protection Act, co-ordinate all activities, whether government or otherwise, as are necessary to protect, restore or improve the environment in the State. To this end it will, of course, be involved in early consultation with appropriate bodies, so as to ensure that appropriate information is available in the early planning stages wherever practicable in the future.

Yours faithfully,

Brian J. O'Brien  
 CHAIRMAN

April 18, 1972

CONSERVATION THROUGH RESERVES COMMITTEE RECOMMENDATIONS  
CONCERNING THE SHANNON RIVER DRAINAGE BASIN

The Committee recommends:

1. That during the first license period of the Wood Chipping Industry Agreement Act, 1969-73, clear-felling should not be carried out in an area designated here the Shannon River Drainage Basin;
2. that precise boundaries of the area to be set aside as the Shannon River Drainage Basin be determined by the Environmental Protection Authority in consultation with the Conservator of Forests;
3. that all Crown land within the designated boundaries which is not at present incorporated in State Forests should be immediately reserved;
4. that, towards the end of the first license period when the effects of clear-felling in other areas can be assessed, a committee select, from within the Shannon River Drainage Basin, a substantial area of wet sclerophyll forest to be conserved in perpetuity as natural forest; the Environmental Protection Authority, the Conservator of Forests, the Western Australian Wildlife Authority, and the National Parks Board of Western Australia should be represented on this committee;
5. that the Conservator of Forests be asked to manage the area selected for conservation as though it were a National Park;
6. that during the first license period of the Wood Chipping Agreement, the Environmental Protection Authority collaborate with the Forests Department in initiating a project to study in detail, and over a prolonged period, any aspects of the biology, hydrology, sedimentology, pedology and geology of the Shannon River Drainage Basin (including Broke Inlet) that appear relevant to assessment of the environmental effects of the woodchip industry and to the conservation of the wet sclerophyll forest.

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