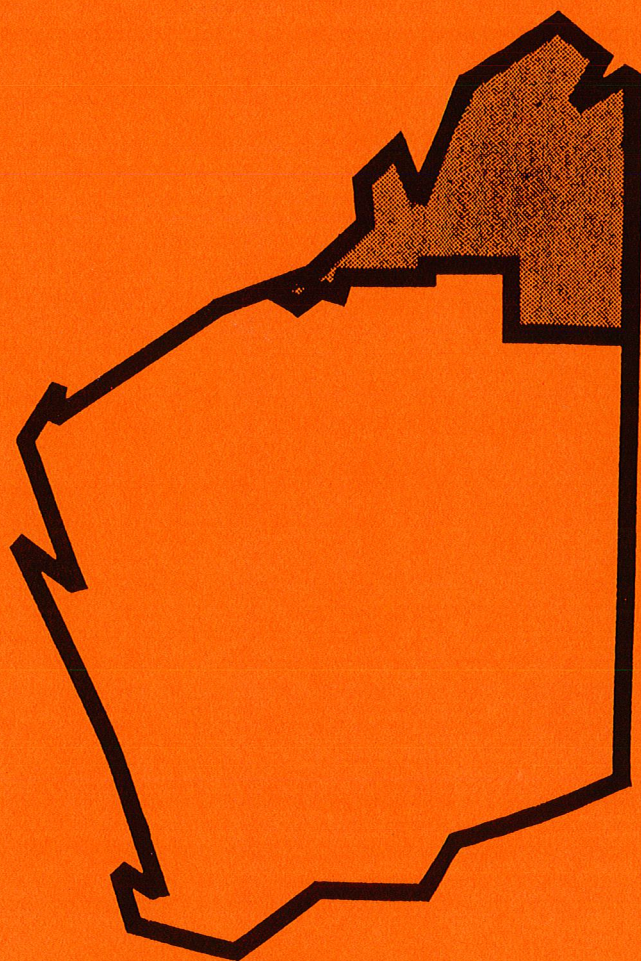


# Kimberley Region Planning Study



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**WORKING PAPER No. 8 -RESERVES AND CONSERVATION**

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STATE PLANNING COMMISSION  
PERTH, WESTERN AUSTRALIA

DEPARTMENT OF REGIONAL  
DEVELOPMENT AND THE NORTHWEST



GOVERNMENT OF WESTERN AUSTRALIA

KIMBERLEY REGION PLANNING STUDY

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INTRODUCTORY COMMENT

Thank you for taking time to read this working paper.

This paper was prepared from the record of proceedings of a Seminar held in Derby in September.

The comments and proposals it contains do not necessarily represent the final position of the Commission, Study Team or indeed the opinion of any individual.

You should read any proposed actions carefully and submit your comments and indicate whether you agree or disagree or to add to what is there. In this way, we can judge how acceptable the draft proposals are to the broader community.

Early responses would be most helpful but note that we will accept replies until the end of February.

Throughout the Study Programme, we have endeavoured to involve the community and we regard all input as a valuable part of the Study process. Please be assured that your comments will receive full attention.

Please note : Working Papers are available on the following topics:

- |                           |                                  |
|---------------------------|----------------------------------|
| 1. Tourism                | 5. Fishing                       |
| 2. Mining/Exploration     | 6. Agriculture                   |
| 3. Community Services     | 7. Pastoral                      |
| 4. Education and Training | 8. Conservation<br>and Reserves. |

LAURIE O'MEARA,  
STUDY DIRECTOR

KIMBERLEY REGION PLANNING STUDY  
CONSERVATION AND RESERVES SEMINAR

Prepared by Alice O'Connor  
October 1987

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## 1.0 INTRODUCTION

A Conservation and Reserves Seminar was held September 4-6, 1987 at the Overland Motel in Derby. The seminar formed part of the public participation programme for the Kimberley Region Planning Study. As such, it attracted representatives of various conservation bodies, people involved in tourism, Aboriginal people, eminent researchers and other interested persons.

The positive step of formulating a regional plan under the auspices of the current Kimberley Region Planning Study was acknowledged and supported.

The weekend was one of information exchange between speakers and community participants.

The speakers provided the public with details of various research projects. Summaries of speakers' presentations are in Section 2.0 of this paper.

Community participants divided into workshop groups to discuss each topic. These discussions resulted in the provision of a wealth of local information relating to each topic. Information from each of the workshop groups has been amalgamated and is presented in Section 3.0 below.

When the workshop groups came together for the final plenary session, some participants stated their strong convictions over the importance of the conservation issues discussed during the Seminar. It was suggested that a Conservation Working Group be formed, or at least that the findings of this Seminar be reported to the mid-September meeting of Kimberley Region Planning Study working groups. The findings were indeed conveyed to the September 19-20 meeting of the other working groups, and the purpose of this draft paper is to allow even wider public participation.

## 2.0 SUMMARIES OF PAPERS PRESENTED AT DERBY -SEPTEMBER 4-6, 1987

### 2.1 Geology, Landforms, Climate, Landscape, Flora and Fauna of the Kimberley Region - Kevin Kenneally

The Kimberley should not be considered in isolation. It is of statewide, national and global importance.

The environment of north west Western Australia has evolved as a result of :

- . Gondwanic origins and movement of tectonic plates;
- . Sea-level changes creating land bridges which assisted movement of biota;
- . Arrival of Aboriginal people, at least 40,000 years B.P., which led to increased incidence of fire, hunting and gathering;
- . Natural fire regime;
- . Introduction of exotic flora and fauna by European explorers;
- . Removal of biota suitable as food for seafaring people;
- . Climatic changes (wind, precipitation);
- . Water retention capacity and nutrient status of soils.

Biota was named by Aboriginal people, by sea explorers (Dutch, French and English) and by land-based explorers.

Early European settlers did not understand the hostile environment of the Kimberley Region. As a result, many did not survive. The environment also affected their introduced stock. At the same time the stock, particularly cattle, had a considerable impact on the environment.

Present day Kimberley is a mosaic of several distinct biotic communities, namely:

- (i) Closed canopy communities of rainforest (vine thickets), mangroves, and riverine communities;
- (ii) Savannah/woodland communities, including grasslands with eucalypt and acacia spp. predominating;
- (iii) Tidal mudflats.

Some of these communities are particularly important because they provide biological corridors for the movement of biota across northern Australia.

The pleasing aesthetics of the Kimberley must also be remembered. These include the bright blue skies, blue water lilies and the contrasting colourful sunrises and sunsets.



## 2.2 System 7 - Andrew Burbidge

With the inception of the Environmental Protection Authority (E.P.A.) in 1971, the Conservation Through Reserves Committee (C.T.R.C.) was convened to report on reserves in Western Australia.

C.T.R.C.'s initial report was presented in 1974, but the Metropolitan and Kimberley Regions were both omitted - the Metropolitan because of its complexity and the Kimberley because of lack of knowledge. The C.T.R.C. was reconstituted in 1976 to look at the Kimberley Region. In 1977, following discussions with Councils, biologists, geologists etc., the System 7 Green Book was produced.

The stated aims are :

- (i) to recommend an adequate system of reserves to secure the conservation of representative biological and geomorphic types occurring in Western Australia, as well as other features of special scientific significance; and
- (ii) to recommend adequate areas of National Parks (additional to those in (i) above, where necessary) to meet projected population growth, distribution and mobility.

Public comments and submissions on the System 7 Green Book were received and taken into consideration.

The E.P.A.'s recommendations on national parks and nature reserves for the Kimberley were then presented to the State Government in 1980 as the System 7 Red Book.

A significant number of new conservation reserves in the Kimberley have since been proposed (but not declared) as national parks by Government authorities. In addition then, C.A.L.M. has slowly been working through the biological resources of each reserve.

### 2.3 System 7 Update - Andrew Burbidge

Andrew Burbidge explained that the Kimberley Region Study area follows Shire boundaries into the Great Sandy Desert, so is larger in extent than the System 7 area. Desert portions of the Study area are incorporated in System 12.

System 7 update has involved re-examination of public submissions and extraction of knowledge from both lay people and experts. Burbidge expressed the hope that participants of the Conservation and Reserves Seminar would identify areas not yet being considered or those which had been given insufficient weighting. The original System 7 proposed only 16 areas whilst the redraft is considering 30 areas. (Areas purely for tourism purposes are part of a separate study.)

- . Ord River Nature Reserve is one existing reserve which may be extended;
- . Bungle Bungle National Park has been established, and extensions are proposed;

Additional areas under consideration for inclusion are :

- . Lake Gregory;
- . Mandora Salt Marsh, Swamps and Radi Hills;
- . McLarty Hills and Dragon Tree Soak;
- . Napier-Oscar Ranges;
- . Roebuck Bay;
- . Southesk Tablelands;
- . Wolf Creek Crater National Park; and
- . Varied rainforest patches which occur on scree slopes under breakaway laterite cliffs, along rivers, and under sandstone cliffs.

## 2.4 Conservation Priorities in the Kimberley - Richard Davies

Richard Davies' paper examined -

- (i) the impact of the pastoral industry; and
- (ii) the adequacy of present and proposed reserves.

The pastoral industry is not a 'sacred cow' and Davies questioned whether its economic value was sufficient to warrant forfeiture of the environment. It provides only 0.2% of Western Australia's total rural income, pays \$117,000 rent (1977) and employs 1,400 (1985), but at the same time has caused environmental degradation. For example, West Kimberley (Fitzroy, Mary, Meda and Lennard Rivers) has 36,000 square kilometres of poor to very poor land and 9,000 square kilometres is severely eroded. As a result, stocking has fallen from 60,000 to 20,000 head which represents an economic loss of \$1 million per annum. During the 1960's in the East Kimberley, 22 million tonnes of soil was washed down the river each year, creating the need for the Ord River Regeneration Reserve (O.R.R.R.). Over a 20 year period, \$7 million has been spent on O.R.R.R.

Davies quoted causes of degradation as listed in the Kimberley Pastoral Industry Inquiry (1985) report. Insufficient investment has meant insufficient cattle control. Too little fencing and too few artificial waters has allowed trampling and overgrazing.

Davies maintained that the pastoral industry is still causing degradation. He suggested that only those pastoral leases run in an environmentally sound manner should be allowed to continue operating. He called for management plans for all stations and outlined the form the management plans should take.

Turning to his second area of concern, Davies suggested that present reserves are inadequate. Specht et al identified 60% plant communities as being unconserved. Kabay and Burbidge (1977) and McKenzie (1981; 1983) had also highlighted inadequacies in reservations.

Recommendations were made for an additional reserve representative of Phanerozoic South-West Kimberley, and for extensions to existing reserves at Mitchell Plateau, Roebuck Bay and Eighty Mile Beach (marine and terrestrial), Bungle Bungle (to include Osmond Ranges), Oscar-Napier-Geike Ranges, King Leopold Range and Rowley Shoals. Management recommendations were also proposed. A portion of the paper focused on the degradation of pastoral lands.

The adequacy of current management was also raised. The operational budge of \$170,000 is insufficient. During 1984/85, \$62,000 was expended on Geike Gorge.

Other than two seasonal managers at Bungle Bungle National Park, there are only 3 other parks with onsite rangers. This policed 'area' amounts to only 0.2% of total area of parks in the Kimberley. Other parks are being degraded by cattle, tourists, fire, illegal tracking and diamond exploration.

Davies recommended that all reserves have management plans which have been formulated with public input. The plans should be implemented.

So the second recommendation was for more funding and staff.

Tourist development should be minimal.

Reserves should be given 'A' class status in line with environmental value. Davies stated this change requires an Act of Parliament.

## 2.5 Aims of Department of Conservation and Land Management - Roger Underwood

The Department of Conservation and Land Management's (C.A.L.M.) aims, in brief, are :

- (i) To provide an adequate system of management of reserves. The present system is inadequate. More management plans, increased staffing, funding and involvement of Aboriginal people are wanted.
- (ii) To contribute to the establishment of a representative reserve system. All major ecosystems should be represented and secure in tenure;
- (iii) To address conservation issues outside reserve systems. These issues include particular sites, species and landforms;
- (iv) To seek alternative and innovative funding to support the Kimberley area, including using the 'people resource' already in the Kimberley;
- (v) To responsibly take account of and care for cultural as well as biological heritages. People who have information on these aspects are invited to tell C.A.L.M.
- (vi) To maintain good relationships with our neighbours, including pastoralists, tourists and Aboriginal people.

C.A.L.M. is only a two year old infant. Kimberley is one of eleven regions. Local people in all regions ask for a role. Kimberley people can help by lobbying for increased funding and resources for this Kimberley Region Planning Study.

## 2.6 Management of Reserves in Remote areas - Chris Done

As well as being responsible for the management of specific National Parks, reserves and State Forests in Western Australia, C.A.L.M. is also concerned with the broader issue of protection of all native flora and fauna.

Chris Done spoke of C.A.L.M.'S staffing, which is inadequate but increasing, and its funding. Updating Davies' figures, he explained C.A.L.M. now has a regional office in Kununurra and 6 additional permanent officers involved in park and reserve management. This represents almost a three-fold increase in permanent management officers since C.A.L.M.'s establishment 2 years ago. Officers also have access to specialist staff in Perth. Threats to conservation were then outlined. These include inappropriate fire regimes, feral animals (donkeys, cattle, cats, camels, pigs), weed invasion (Parkinsonia aculeata, Noogoona Burr, Calotropis procera), visitors and mining.

Management practices and options with respect to the threats were covered. Fire buffers and mosaic patch burns are being used. Feral animals could be reduced by mustering or shooting in conjunction with the Rangeland Management Branch of the Department of Agriculture and weed control carried out, on a needs basis, to Agriculture Protection Board standards.

Co-operation with Aboriginal people is being sought. Co-operation with tourists is being encouraged by provision of better facilities, signposting, pamphlets and personal contact.

## 2.7 Conserving the Most Important Sites Outside the Reserves System - David Dale

David Dale's paper stressed that the Kimberley is special because of its unique geology, flora, fauna, its many magnificent natural areas and extensive wilderness areas, and its Aboriginal, cultural and historical heritage. As a result, in 1975 the Australian Conservation Foundation lobbied the Federal Government for World Heritage Listing for the Kimberley. Benefits accruing from such listing would include finance for research, rangers and tourism, and commercial and other opportunities. World Heritage potential, particularly of the North Kimberley, should be a major issue addressed in the Planning Study.

Conservation of sites outside the reserves system requires identification and then protection.

David Dale suggested that C.A.L.M. co-ordinate identification of sites, and that community involvement in the process was important. Identification could be by special inter-departmental committees (C.A.L.M., Tourism, Sport and Recreation etc., Aboriginal groups and pastoral representatives). Non-Government organisations such as R.A.O.U., Naturalist Clubs and local conservation groups could help identify and research areas. The North Kimberley wilderness area and the section along the Gibb River Road merited early attention.

Protection of sites could be achieved by listing, education, regulation and community involvement. Types of protective listing are the National Estate, under the Aboriginal Heritage Act, or through amendments to the C.A.L.M. Act and the Land Act. The establishment of a Kimberley Estate Listing was also proposed.

Education is the keystone. School curricula could be revised. Interpretive information, including Aboriginal place names and history, should be available for visitors. Community projects such as signposting, brochures and litter collection assist with education, as do special projects (Gould League, C.E.P.). Above all, decision-makers, particularly politicians, must be educated as to the value of many natural areas so that funding is greatly improved. Part of any increased funding should be directed to support community projects.

Persons and bodies to be regulated include tourists, tour operators, trespassers, the owners of four-wheel drive vehicles and boats, mining companies and pastoralists. Such control would require revision of Acts and regulations.

Community members should be involved in preparation of management plans, management and also maintenance. Honorary rangers have an important role to play and their numbers should be greatly increased in the Kimberley. The public could help with a communications network used for environmental information, and monitoring and also in the case of emergencies. Overall it is essential that the public be better represented in planning, management and decision-making involving conservation of important sites outside the reserves system. (David Dale subsequently presented a Seminar poster display highlighting wilderness areas and land management problems in the North Kimberley.)



## 2.8 Conserving the Most Important Sites Outside the Reserves System - Peter Kneebone

Peter Kneebone was glad to see the mixture of academics and knowledgeable locals, but disturbed by the absence from the Seminar of Council and Main Roads Department representatives.

Peter Kneebone pointed out that the enormous amount of 421,451km<sup>2</sup> of Kimberley land remains outside reserves, townsites and freehold land. Funding and co-ordination are inadequate to protect or maintain either this area or the area covered by pastoral leases. However, some relatively small areas of interest have the potential to contribute more to the economy than many pastoral leases.

Once 'secret' places have been discovered, the ready availability of 4WD vehicles, together with visitors' determination, make even the remotest site accessible. Areas not recognised as normal destinations have no protective surveillance and are therefore at greatest risk of losing their original natural attractiveness. Problems include traffic flow pressures, littering; a health threat due to lack of toilet facilities, severe erosion, damage to flora and fauna (through illegal fishing, shooting, trapping and removal of rare plants, shells and corals) and removal of Aboriginal artefacts. The dramatic increase in wild dog numbers is also having a catastrophic impact on indigenous wildlife.

Normal procedure calls for an Environmental Impact Study prior to establishment of any new industry. The Kimberley is being strongly marketed for tourism. To date, no EIS has been undertaken to study the effects of tourism on the environment. This deficiency should be redressed.

The stock answer to lack of surveillance is 'no money'. The time has come when something must be done. Funding to local authorities and government departments must be increased.

Surveillance could be aided by the establishment of a Norforce type of organisation.

## 2.9 Tourism and Aboriginal Heritage - Clive Senior

Laurie O'Meara presented a summary of Clive Senior's Progress Report.

Tourism in the Kimberley has grown for several reasons. Firstly, the increasing international attraction of Australia and the Kimberley Region has been boosted by films, and by the devaluation of the Australian dollar. Secondly, sealing of the Great Northern Highway between Fitzroy Crossing and Halls Creek has led to a traffic increase estimated as being in the order of 60%. Thirdly, there has been a growth of the 4WD adventure holiday.

Tourism is growing so rapidly that 1986 figures are 'old'. However, to give some perspective, there were an estimated 87-91,000 overnight visitors, with an average stay of 3.5 nights, making a total of 315,000 visitor nights. Day trippers during 1986 were 70-80,000.

The objective of Clive Senior's study is :

'the development of a strategy for the management of tourism to regularise and minimise the impact on Aboriginal people and their culture and for involvement of Aboriginal people in the management process with emphasis on the Kimberley Region'.

The study brief is :

1. To ascertain the major areas of Aboriginal concern regarding visitation of sites.
2. To assess the impact of tourism on sites and culture.
3. To establish the need for protection and conservation procedures for sites affected by tourism.
4. To record and document current Aboriginal attitudes to tourism.
5. To determine what involvement, if any, Aboriginals want to have in tourism.
6. To report on the operation of the Northern Territory Tourist Commission's Aboriginal Liaison Officer and assess the suitability of the establishment of a similar position in the Kimberley.
7. To suggest ways in which the perception of Aboriginal people and their culture by tourists and tour operators may be improved.

8. To prepare a management plan for the Kimberley Region in relation to Aboriginal sites and culture.

A Steering Committee has been established under the chairmanship of the Registrar of Aboriginal Sites.

Fieldwork for the study has been extensive, but will be completed by the end of September. It is anticipated that a report on the study will be with the Minister by the end of this year.

It was to be expected that different Aboriginal groups might have different perceptions. The study has shown that this is true, but not in any predictable manner.

The study has highlighted the fact that within the communities themselves, there are differences. That is, there are traditional thinkers and 'new' thinkers.

Although tourist contact is increasing, the level of communication between Aboriginal people and the tourists is not great. This may lead to distrust.

Cultural experiences (in the form presented by tourist promoters) may not be as important to the tourists as the promoters might think.

Concern has been expressed about abuse of sacred areas, but the study identified few specific areas which have been damaged. Concern was expressed about tourist intrusion into Aboriginal communities and the extra demand on resources made by the influx of tourists.

One recommendation which has already come out of the study is that an Aboriginal liaison manager be appointed for the Kimberley, similar to the Northern Territory Tourism Commission position.

## 2.10 The Role of Aboriginal Communities in Park Management - Phillip Toyne

Phillip Toyne made the point that Aboriginal people have lived successfully and presumably in harmony with their environment for millennia. Their breadth of experience far exceeds the European experience of only 200 years.

National parks in the Northern Territory, e.g. Uluru, are moving towards the concept of cultural parks. Aboriginal people are involved in preparation of management plans and their implementation. Certain activities have been contained on both sides to accommodate conflicting interests. This form of power-sharing is looked upon as a model by North Americans and should be adopted in the Kimberley Region.

Aboriginal people benefit by maintaining their traditional values and cultural links with their land. They derive income from ranger wages and also 'rental' from the Government. In addition, they have the opportunity to be experts in an area where they have extraordinary knowledge (flora, fauna, layout of the country).

Europeans benefit by obtaining insight into the way Aboriginal people relate to country and therefore enjoy a richer visitor experience in the park. Furthermore, visitor information about Aboriginal customs and sites of significance will be accurate rather than preposterous versions. They also reap benefits from the outstanding valuable management tool available in Aboriginal peoples' knowledge.

Phillip Toyne charged the Western Australian Government and European population with the task of examining the Northern Territory models and the benefits which flow from joint management. Existing deep seated hostility and misapprehensions would be alleviated. It is vital that Western Australian people accept that Aboriginal people can play a positive role in management. Rejection of a joint management board for Bungle Bungle National Park is short sighted and disappointing. Joint management of parks is an extraordinary example of how race relations in Australia can be conducted on a mutually beneficial basis. Time is running out in the Kimberley for such arrangements. The longer dispossession lasts, the harder it is for Aboriginal people to maintain a meaningful link with their country.

## 2.11 Aboriginal Lands and Sites - Nick Green

Consultation with Aboriginal people prior to the establishment of existing reserves was minimal. Nick Green explained that this has resulted in lack of knowledge on both sides. Traditional custodians of Drysdale River National Park do not know their land is vested as a National Park. Other Aboriginal people are unaware of the purpose behind, or results of, mapping and exploration undertaken by Europeans. They do not know where drill rigs are going or why. On the other hand Europeans are incompletely informed about elements of Aboriginal culture, sites of significance and the operation of the environment. This lack of consultation and communication needs to be urgently rectified. Europeans must ensure they consult the right Aboriginal people by first identifying the traditional custodians of any land being discussed.

The State Government supports Homeland Returns, but appears to be unaware of aspirations and concerns of Aboriginal people. The people of the Mitchell Plateau left their lands in the 1940's and have only returned for holidays since. For some time they have wanted to return but no assistance or funding has been made available to them. They now wish to take matters into their own hands.

Tourism, mining and national parks all impinge upon use of the land by Aboriginal people. They are not automatically averse to any of these activities. However, if Europeans do not understand the Aboriginal viewpoint, then drilling, sampling and building of roads can destroy Aboriginal sites. Roads built for mining allow uncontrolled access by tourists. National parks may limit the traditional rights of Aboriginal people to hunt. This should be discussed with them.

There is a strong necessity to involve Aboriginal people in management positions. They already hold maritime ranger positions (under C.A.L.M.) at One Arm Point. This type of employment should be extended to the northern Kimberley coastline and to land reserves. Aboriginal people do not dislike Europeans. They sincerely want to educate them and pass on their own knowledge heritage and deep understanding of the country.

## 2.12 World Heritage Listing - Phillip Toyne

World Heritage Listing is part of a United Nations Treaty signed by Australia under the Whitlam Labor Government. It is one method by which the natural and cultural assets of the world may be preserved. A committee meets once a year to consider proposals from around the world. Assessors from the International Union for Conservation of Nature and Natural Resources (I.U.C.N.) then examine places nominated, basing suitability on a set of criteria which state the place must:

- (i) be an outstanding example representing the major stages of the earth's evolutionary history;
- (ii) be an outstanding example representing significant ongoing geological processes and biological evolution and man's interaction with his natural environment;
- (iii) contain unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty; or
- (iv) be a habitat where populations of rare or endangered species of plants or animals still survive.

To qualify, an area needs to comply with only one criteria. So far, 75 natural areas have been entered into the Register. Five are in Australia. Another four Australian sites will be nominated in the next two years, and the Kimberley Region should also be considered.

World Heritage Listing obliges the Commonwealth Government to offer formal protection from degradation. Substantial funding for research and management is normally provided. It is wrong to assume land is locked up. Once an area becomes internationally significant, it becomes more economically valuable because it is sought after as a tourist destination.

### **3.0 PARTICIPANTS' INPUT TO ENVIRONMENTAL AND ABORIGINAL CONSERVATION ISSUES**

Information emanating from workshop group discussions has been incorporated under the topics of global importance, conservation of the Kimberley environment (formal and informal), management of the environment, Aboriginal participation, and funding/resources.

#### **3.1 Global Importance**

The uniqueness and importance of the Kimberley Region's environment was highlighted throughout the whole weekend. A most deeply felt concern was that when Kimberley conservation areas are proposed and established, consideration must go beyond the local viewpoint to include statewide, national and international perspectives.

##### **3.1.1 World Heritage Listing**

The Swiss office of the I.U.C.N., which investigates World Heritage Nominations, recognises the global importance of the Kimberley Region and regards it as a potential area for World Heritage Listing.

The tentative area suggested for World Heritage Listing encompasses Walcott Inlet, Prince Regent River, Mitchell Plateau and Cape Londonderry.

Participants felt the Government should assess World Heritage Listing potential.

##### **3.1.2 International Treaty for Wader Birds**

Community participants felt that the Australian Government should be called upon to fulfil its responsibilities as a signatory to the International Treaty for Wader Birds, by recognising that Roebuck Bay and the Eighty Mile Beach needed protective status.

### 3.2 Conservation of the Kimberley Environment

Given the uniqueness and importance of the Kimberley environment, there is a need for both formal and informal conservation measures.

#### 3.2.1 Formal Conservation (Reserve System)

The reserves system is the formal method of conservation. Definition of distinctions between nature reserves and national parks should be clear.

Working groups suggested that priorities to be considered when declaring reserves should include :

- (i) Degree of threat, including proximity of urban concentrations and ease of access;
- (ii) Areas representative of geology, flora, fauna;
- (iii) Uniqueness of geology, flora, fauna;
- (iv) Establishment of wilderness areas.

Wetlands and rainforests should be given high priority.

Participants suggested several prerequisites for a reserves system. The system needs to be planned, secure and representative.

#### Planned

Reserves and parks need to be planned, not simply residual areas of land no-one else wants. Planning should fit into a framework of conservation philosophies and strategies specific to the unique Kimberley Region.

Boundaries of reserves and parks should be planned so that they are based on rational, physical landmarks, such as crestlines, rather than simply ruled on maps to follow cadastral boundaries.

Access to reserves needs to be restricted in some areas and clarified in others. Zonation in National Parks should allow general access to some areas and permit only restricted access to others.

The framework for all land ownership, tenure and accessibility must be clarified and/or planned. What is legislatively appropriate for south west Western Australia is not necessarily appropriate in the Kimberley. The issue of multiple versus single use of land was cited.



## Secure

Community members pointed out that security of reserves was far from assured. The Conservation and Land Management Act (1984) can be overridden by most other Acts including the Mining Act. There is a need to address legislative imbalance in order to provide secure reserves.

Areas deemed to be under immediate threat should be provided interim protection by a 'rapid action' technique. This would allow time for assessment and the setting of priorities.

## Representative

C.A.L.M. guidelines in selecting reserves include :

- (i) Selection of representative areas; and
- (ii) Protection of unique areas.

Existing reserves are not fully representative of the Kimberley landforms and biota. For example, it is now a well known fact that the spectacular Bungle Bungle massif was omitted from initial reserve recommendations. There is a need to ensure that maximum biological diversity is conserved. Members of the working groups identified deficiencies in coastal, littoral reef and island reserves. In addition, it was noted that some vegetation associations were poorly represented and that some reserves were too small to support viable populations of the fauna for which they had initially been reserved.

Workshop groups on the topic of System 7 update suggested areas for consideration as extensions of, or additions to, reserves and parks. Priorities were difficult to identify, so unanimity was not achieved. However, there was consensus about areas which should be considered.

- . The entire Kimberley coastline should be considered, with particular regard given to adjacent islands, Rowley Shoals, Scott Reef and King George Falls. Roebuck Bay should be extended to cover Dampier Peninsula and link up with proposed Mandora Reserve by including 80 Mile Beach, Roebuck Plains and Thangoo Plains. These latter are feeding and roosting areas for wader birds. The vine thicket/remnant rainforest behind Cable Beach is of immediate concern. This forest occurs in patches between Gantheaume Point and Coulomb Point, is the most southern occurrence of vine thicket in Western Australia, and contains endemic species.

- . Mitchell Plateau should include lateritic palm communities joining those areas between Mitchell River and Lawley River. Livistonia woodland areas need to be included too.
- . King Leopold Range.
- . Oscar-Napier Ranges.
- . Lake Gregory.
- . Bungle Bungle National Park should be extended north to include Osmond Range area and south to include part of Ord River Regeneration Area.
- . Packsaddle Gorge.
- . St. George Range.
- . Lennard Gorge.
- . Logue Spring.
- . East coast of Lake Argyle and mouths of Ord River into the Lake urgently require protection.
- . Millyit Range, west of Christmas Creek, is arid desert habitat of scenic interest.
- . Paddy's Pocket, east of Diamond Gorge will be flooded if Diamond Gorge Dam is built. Pools and gorges contain paintings and sites of significance to Aboriginal people. Access is limited and difficult. This could be used to advantage to control volume of tourists.
- . Munkayarra station site and fresh water lake are of importance as a bird habitat.
- . Cabbage Tree Gorge.
- . Coulomb Point should be extended to include the habitat of the long-eared bandicoot.
- . Fitzroy River banks from Mt. Anderson to the mouth, including Willare Bridge. This will protect fish breeding areas.
- . Uralt Creek, where irrigation works are used by birdlife.
- . Gibb River Road Gorges, where tourism traffic is heavy. It may need more sympathetic alignment to pastoral boundaries.

- . Phillips Range.
- . Prince Regent River catchment.
- . Phanerozoic river flats (Gogo, Cherrabun and Christmas Creek areas).
- . Edgar Range.
- . Cone Bay.

### 3.2.2 Informal Conservation (Outside Reserves)

Land management and conservation ethics/techniques should be extended beyond reservations to all other land uses such as pastoralism, mining and tourism e.g. the 'Kimberley Explorer' venture.

Working group members first looked at the need for informal conservation of land outside reserves, and then at some mechanisms by which this could be achieved.

#### Need

- (i) Reserves cannot exist in isolation. The buffer zones between reserves and adjoining areas need to be managed.
- (ii) Areas outside reserves have their own economic value which must be protected e.g. pastoral leases.
- (iii) Unreserved areas have attractions for visitors and local people. This can reduce pressures on reserves.

Expansion of towns may cause degradation of the environment. The threat to vine thickets near Broome was given as an example. Other susceptible areas in close proximity to settlements are over-used due to lack of control over access.

The impact of traffic on the environment also needs to be considered.

#### Mechanisms

Holders of land adjacent to reserves should, as a matter of priority, be encouraged to follow conservation practices in-line with those in the reserves. This would assist with reduction of management costs.

To protect land outside reserves, education of the general public on conservation needs (in the broadest sense) is essential. Education and communication should be through school and community programmes which provide for public participation in the planning process.

The question was raised of who should take the initiative to identify areas which require conservation but are outside the reserve system. Some felt that C.A.L.M. should co-ordinate and others felt that this was not C.A.L.M.'s main role. Perhaps the State Planning Commission (S.P.C.) or Department of Regional Development and the North West could assist, but local government and community involvement through Aboriginal, pastoral and other local groups should be considerable.

Once identified, sites should be categorised (scenic value, bird habitat etc). Capacity for use as a day only or overnight camping site should be established.

The idea of a register, such as a Kimberley Heritage Register, was advocated. If such a register of information were available to Councils, developers and others, protection of sites could be taken into consideration.

Other methods of protecting areas outside reserves include:

- distribution of a pamphlet outlining conservation issues and educating the public regarding the 'Kimberley Code';
- a permit system which would limit access to environmentally sensitive areas;
- guided tours;
- containment of camping within specifically developed nodes to steer visitors away from fragile areas;
- protection of areas by honorary rangers, volunteer groups and a network of agencies such as Norforce, Royal Flying Doctor Service and State Energy Service.

Self regulation is preferable to Government regulation. However, in the long-term, bureaucratic control and imposition of penalties may be necessary.

### 3.3 Management of the Environment

Once a system of conservation reserves is in place, the need for management is always felt.

Management plans must be put in place for all reserves and parks.

#### Problems

Problems requiring management include :

- . feral animals (donkeys, cattle, cats, camels, pigs)
- . weed infestation
- . fire regimes
- . litter
- . soil erosion and degradation.

Soil erosion and soil degradation with relation to pastoralism, animal trampling and recreation, was discussed as a consequence of Richard Davies' talk.

Davies' paper was criticised on two counts. First because the factual information was not up to date and secondly because the area of land severely degraded by pastoral activities was made to appear more substantial than it actually is. Furthermore, pastoralists will take advantage of any fencing incentive provided to help fence off river systems. Many of the present degradation problems stem from historical inheritances. Some are being rectified to allow regeneration of pasture, and to improve productivity and returns. The Chairman pointed out that pastoralism is being discussed separately. He requested that discussion depart from that topic and address the Seminar's set topics of conservation and reserves.

Trampling of riverine/wetland habitats and seedlings by domestic, feral and native animals is a recognised problem. The impact needs to be minimised because rivers are the lifeblood of the country, encourage high speciation and permit the existence of endemic species. One conservation priority in the Kimberley should be protection of the rivers.

Damage caused by recreationalists was highlighted as an area of concern e.g., along the lower reaches of Fitzroy River. It should be stemmed.

Apart from physical environmental problems requiring management, lack of co-ordinated action by Government bodies was also raised as a management problem. Some Government institutions may require structural changes. Greater communication between Government Departments is certainly necessary. For example:

- (i) National Parks tried to set up its own register of Aboriginal sites when W.A. Museum already has this responsibility; and
- (ii) there is an imbalance between the promotion of tourism and the proper management of reserves.

### Causes

Some activities pinpointed as causative agents of these environmental problems are pastoralism, mining and exploration, urban expansion with its associated unrestricted growth of recreational activities, and tourism. Once tourists have discovered 'secret' places their determination, combined with the ready availability of 4WD vehicles, make even the remotest site accessible.

### Solutions

One management solution suggested was the provision of more park rangers.

Zonation within reserves was discussed. Zones provided should include areas of multiple use, areas easily accessible for recreation, and restricted wilderness areas.

Research is a management tool. Research into many aspects needs to be either initiated or continued. Research should be right across the board, to cover not only conservation and management (water resources, biological etc.) but also the social impacts of tourism.

Some participants believed a tourism impact study to ascertain how many people are visiting what sites and why they are going to those particular sites would be a more beneficial use of funds than half a ranger. The idea of an Environmental Impact Study, or EIS, for tourism was supported. These days it is normal procedure to undertake an EIS prior to the establishment of any new industry. The Kimberley is being strongly marketed by the tourism industry. To date, no EIS has been undertaken to study the effects of tourism on the environment. Participants felt this deficiency should be redressed.

Visitors to the region must have access to interpretive information at key points, not just in the parks and reserves. In addition, a greater variety of information should be made available.

It was noted that over-emphasis on people management, to the detriment of biological management, must be guarded against. Management plans and funding must be all-encompassing rather than addressing just those ad hoc areas currently used by tourists. Prior to the establishment of management plans, there is a need for specific biological studies to identify species and thus ensure maximum diversity is conserved. Appropriate fire regimes and methods to control feral animals and weeds must be suggested.

Potential for conflict during management arises when, for example:

- (i) Aerial baiting to control feral animals may have an adverse impact upon native fauna; or
- (ii) Pastoralists' desire to eliminate dingos conflicts with C.A.L.M. objectives.

Some alternative management suggestions were the use of biological control for feral animals and weeds; round-up of goats by Aboriginal people or contract shooting of feral animals (funds insufficient for this); solar powered electric fencing.

Potential sources of additional management assistance, as distinct from funding, are :

- . Establishment of formal structure to identify the role of Aboriginal people in management. Such a role could involve company management; living leases adjacent to remote reserves; use of Aboriginal people's time and their knowledge of traditional conservation techniques.
- . Co-operation between Government bodies such as C.A.L.M., Bushfire Board, Agricultural Protection Board, Fisheries and Tourism could prevent duplication of management effort and also reduce tourist impacts on certain areas.
- . Pastoralists are willing to be involved in maintenance and perhaps guided tours (to prevent unsupervised damage) but would need to recoup costs.
- . Local people and interested tourists could be co-opted to assist. For example, a voluntary 'Friends of the Park' could work on nature trails and aid with clean ups, although Councils would need to co-ordinate the operation.
- . Navy/Coastwatch system could report to C.A.L.M. regarding marine reserves.

### 3.4 Aboriginal Participation

Aboriginal people who were traditional custodians of the Mitchell Plateau and the Drysdale River National Park, were present. Despite unfamiliarity with the European style of meeting, many of them presented their views. They believe the Aboriginal people and white people should be friendly. They have assisted white men in mining companies and were promised land and houses in return. These promises were not kept. They have not lived in their country for a long time. After years and years of waiting for the Government or anyone to help, they have decided to start moving back by themselves. Their roots are in their traditional lands. They feel for the land, and know about water and food. They want to take their children back and teach them the ways of the land. Instead, emus and kangaroos are locked away. Europeans are digging up the earth, destroying animals and hurting Aboriginal feelings. The land does not look like their land anymore. For example, Argyle Diamond was a beautiful hill and now it is flat land. Above all else, because they are traditional custodians of the land, they need to know what is going on and being planned. They do not know.

#### Type of consultation

The concept of conservation groups working and consulting with Aboriginal groups is new in Western Australia, but is occurring in South Australia as well as the Northern Territory.

Contrary to Phillip Toyne's comment that Europeans oppose Aboriginal involvement, landholders present at the Seminar had no objection at all. They felt that Aboriginal people must participate in modern society at all levels, from menial to management. It was reconfirmed that it is essential to deal directly with Aboriginal people and communities actually involved. Not all Aboriginal organisations represent the local people. One avenue by which communication could be improved would be to include an Aboriginal Working Group in the Kimberley Study. Aboriginal people have some difficulties about speaking without the full range of their people around them. This could be overcome with more time.

Discussions about whether or not the Aboriginal people's point of view was taken into account were inconclusive. However, participants concluded that consultation with traditional Aboriginal custodians is of paramount importance. Consultation should be :

- (i) Adapted from the European 1 : 1 formal meeting to suit the Aboriginal bush meeting.



- (ii) With the right Aboriginal people. Tribal boundaries need to be identified. To facilitate effective Aboriginal representation, a register of traditional custodians must be established. The need for this was strongly felt.
- (iii) Across the board, covering this Kimberley Region Planning Study, E.P.A.'s revision of the System 7 Report, the gazetting and management of reserves and parks and other conservation and mining activities. To permit this, a formalised consultation framework should be established.

The Aboriginal people should have majority or equal say during such consultation.

#### Consultation at planning/decision-making level

Aboriginal people's input into management strategies has been ad hoc and only by invitation. A formal structure should be established to allow consideration of their aspirations during formulation of management plans. Early consultation with Aboriginal people would utilise their enormous fund of implicit conservation knowledge.

Following Nick Green's presentation, several Aboriginal people made further comments pertinent to land use decision-making. They want to return to their own land for two reasons. First, someone needs to guard their land and its sacred sites. Second, they are trespassing on other people's land. They feel it is a shame to live on other people's land. Their land was given them by their ancestors. From the depths of their hearts they want Europeans to understand how important it is for them to live where they were born.

Excisions of land from pastoral leases are only temporary measures for Aboriginal people. They are too small for a living and Aboriginals are unable to develop independence. Furthermore, excisions normally do not cover a full range of sites. Aboriginal people would like to return to their lands, but the Land Rights 'spectre' needs to be overcome.

#### Consultation at ongoing management level

There was a response to Toyne's comment that the Conservation Council of Western Australia was itself critical of Aboriginal peoples' ongoing involvement in parks. It was suggested that the Conservation Council would now be likely to be in line with Toyne's ideas if its position were reassessed. Hostility on the part of the general community in the Kimberley did not exist before 1960; it has been perpetuated by misquotations in press reports.

Participants believed that Aborigines have a role to play in parks and reserves. They should be involved in ongoing management and at ranger level.

Return to their traditional lands would assist with Aboriginal people's autonomy as well as assisting Europeans with management and provision of rangers.

Because National Parks are important to both Aboriginal and European communities, it was suggested that joint vesting and management between either Government bodies or Aboriginal people and C.A.L.M. be considered for some reserves. The European body could be an authority other than C.A.L.M., but there is no point in fragmenting control. Joint management bodies would mean that C.A.L.M. would have knowledge and expertise 'on tap'. Continued consultation with Aboriginal people would balance their interests in traditional versus modern methods of gathering food and resolve the question of who can in fact hunt protected animals.

A query arose regarding the financial management of parks. Aboriginal people have no track-record in the handling of finances, either due to lack of opportunity or difficulties with communication. Toyne explained that although discussion of funding was involved in joint management decision-making, the Northern Territory Parks Service was in fact accountable for expenditure. Another delegate was able to cite numerous successful commercial ventures run by an Aboriginal council. These included an Ampol distributorship and a supply agency and transport service.

Last year some important sites in Drysdale River National Park were destroyed. The Aboriginal people should manage and run the park so that the 2-3,000 tourists can be controlled. Payment for these services would be useful. However, Aboriginal work cycles are different from those of Europeans, and this should be taken into account when Aboriginal rangers are employed.

Aboriginal sites of significance throughout the Kimberley Region should be identified. Tourists could then be managed so that they do not intrude and also for their own safety.

One method of achieving tourist control would be the establishment of a permit system for entry to Aboriginal reserves. Permits should be available in urban centres. Tourist Bureaus and information signs should inform tourists of the need for a permit. The idea of 'paying parks' needs to be canvassed. Fees could pay for the upkeep of roads and/or assist with Aboriginal people's financial independence.

Funding for all the foregoing is a perennial problem. However, funding for research into Aboriginal interests and for implementation of C.A.L.M.'s programmes is essential.

Representatives of C.A.L.M. and other government departments indicated that they are vitally interested in what Aboriginal people have to say. Last year, C.A.L.M. conducted its first Aboriginal Ranger Training Programme, in the Pilbara Region, for four rangers with traditional affiliations with Millstream/Chichester and Hamersley Range National Park. A number of other training programmes are ready to proceed, including in the Kimberley Region. Training personnel are fully committed, but other interested communities are encouraged to approach C.A.L.M. to see if they can be included in subsequent training.

### 3.5 Funding/Resources

Funding required to create adequately protected reserves is exorbitant.

Sufficient funding is of crucial importance in order to get beyond the 'glossy' surface and attack areas such as monitoring, employment, education, environment, accountability, fencing, safety and emergency. All four working groups separately came to the same initial conclusion. Namely, the fundamental management problem is lack of resources for both people and biological research and management. Western Australia is underfunded when compared with other parts of Australia.

Many felt greater commitment from the W.A. Government was required.

Road engineering costs need to be quantified. The issue of who should pay for road construction and maintenance needs to be considered.

Funding needs to be broadbased. The willingness of the public to pay should not be discounted. However, collection of finance and rerouting it through local authorities would require an administrative framework. Sources of additional funding could be:

- . Federal funds emanating from World Heritage Listing;
- . Reallocation of State funds once the economic and social values of conservation have been demonstrated to politicians;
- . Corporate (direct tax and/or voluntary);
- . Taxes of 1% extra, on all Australians, for conservation purposes (not an advisable alternative);
- . Provision on taxation forms to 'donate' the tax on income to conservation;
- . User pays;
- . Levies at time of vehicle purchase or car registration;
- . Broadbased fuel tax;
- . The establishment of a Heritage Fund similar to that operating in Edmonton, Alberta, Canada;
- . Levy on international travellers, to be added to departure tax;

- . Local airport tax;
- . Private funding;
- . Tourist operations on a concessional basis;
- . Franchising of campsites allowing the charging of fees for camping. This may not be popular, but may help limit numbers;
- . Reduction of management costs by educating the public.