

# **A SUSTAINABLE FUTURE FOR SHARK BAY**

**A RESPONSE TO THE SHARK BAY REGION PLAN**

**APPENDICES**

**SHARK BAY ACTION GROUP**

**Representing:**

**The Australian Conservation Foundation**

**The Conservation Council of WA**

**10th August, 1987**



## APPENDIX 1

Research Report  
Australian Conservation Foundation

CONSERVATION ISSUES

IN THE

SHARK BAY REGION

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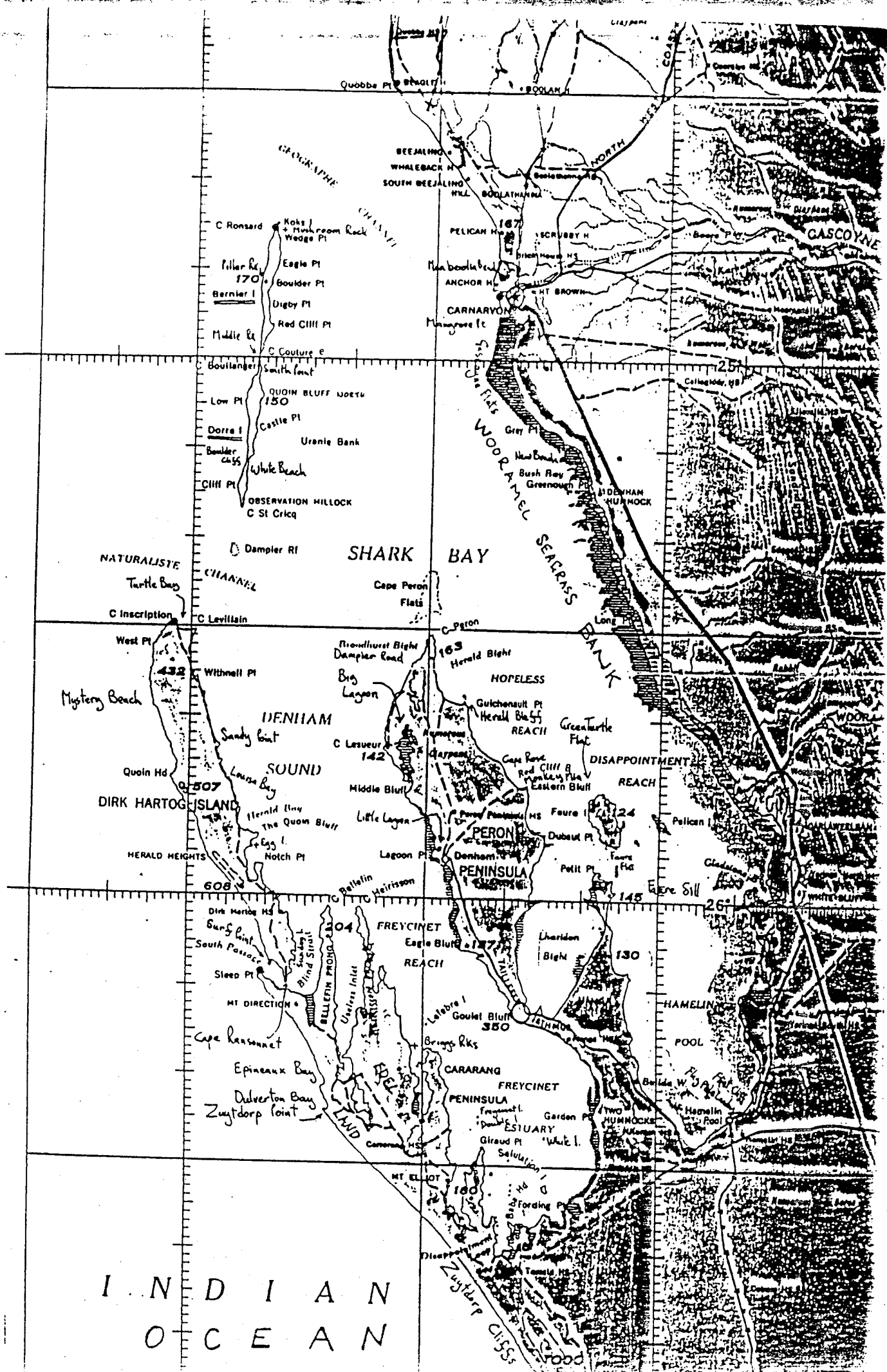
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# AUSTRALIAN CONSERVATION FOUNDATION

Policy Statement No. 41

## NATIONAL AND WORLD HERITAGE AREAS

### INTRODUCTION

On 22nd August 1974 Australia ratified the UNESCO Convention for the Protection of the World Cultural and Natural Heritage. As a party to the Convention, Australia recognizes that it has a duty to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage situated in Australia. Australia, by becoming a party, has pledged that it will do all it can to this end, to the utmost of its own resources. This includes taking effective and active measures to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage (Articles 4, 5).

As at 1984, there were five areas of natural heritage in Australia on the World Heritage list: Kakadu National Park, Great Barrier Reef, Willandra Lakes Region, Western Tasmania Wilderness National Parks and Lord Howe Island Group.

As a result of being a party to the Convention, Australia has enacted the National Parks and Wildlife Conservation Act, 1975, and regulations thereunder and World Heritage Properties Conservation Act, 1983 and regulations thereunder.

### POLICY

#### 1. IDENTIFICATION OF WORLD HERITAGE AREAS:

The Australian Government should investigate forthwith an on-going program to identify natural areas in Australia eligible for listing on the World Heritage list.

#### 2. ASSISTANCE OF STATE GOVERNMENTS AND PUBLIC:

The Australian Government should invite the assistance of State and Territory Governments, governmental authorities and departments and interested persons and groups, including those of the non-governmental environment movement, in the identification program.

#### 3. NOMINATION OF IDENTIFIED WORLD HERITAGE AREAS

Each natural area identified as eligible for listing on the World Heritage list should be nominated for listing by the Australian Government as soon as a submission supporting the nomination has been prepared.

#### 4. ENSURING NOMINATED AREAS ARE LISTED:

The Australian Government, supported by State and Territory Governments, governmental authorities and departments and interested persons and groups, including those of the non-governmental environment movement, should pursue, both in Australia and overseas, a continuing policy of advocacy to enlist support for and ensure the inclusion of the nominated areas on the World Heritage list.

#### 5. PROTECTION OF NATURAL AREAS

Each natural area which has been identified as eligible for listing, as well as each area already listed on the World Heritage list, should be protected either as a national park or, where the area is modified to such an extent so as to make national park status inappropriate, by such other means as will preserve the natural and other special values of the area.

## 1. INTRODUCTION

The Shark Bay region is unique in many ways. It contains plants and animals found nowhere else. Parts of the Bay (notably the hypersaline environment of Hamelin Pool) contain unsurpassed examples of marine processes rare in modern seas; these areas are of great interest to geologists and ecologists. Shark Bay was one of the first sites of European contact, and has historical values on this account.

While the nature conservation values of the region are outstanding, many of the areas' special features are delicate or fragile. The impact of tourism has increased dramatically in the last few years, and will escalate still further. Mining activities have also caused local environmental problems, and expansion of these activities gives continuing cause for concern. Agricultural settlement has caused historic damage to flora and fauna, some of which could be reversed should grazing cease.

The purpose of this report is: (a) to provide a brief description of the area's resources, and (b) to discuss the advisability of special conservation measures, such as World Heritage Listing, or protection by a combined land/marine national park.

In the following sections:

- the area's recent history is outlined,
- principles of World Heritage listing are discussed, and the current status of the area's conservation reserves is described,
- the area's value for nature conservation is discussed,
- likely future developments are outlined, and
- recommendations are made, both that the area be proposed for World Heritage listing and that an integrated reserve system be developed by the Western Australian State government to protect the area's high values for nature conservation and recreation.

In the preparation of this report we have relied heavily on material supplied by Professor Paul K. Anderson (of the University of Calgary, Canada) who has been conducting dugong research in Shark Bay for a decade. Additionally, most of section 2 has been drawn from material prepared by the Shark Bay Tourist Committee, while substantial parts of sections 4 and 5 have been drawn directly from the 1974 report of the Conservation Through Reserves Committee; detailed acknowledgement has been omitted to preserve readability. We would also like to thank the following for constructive comments on a draft of this paper: D. McConchie, L. Marsh, M. Moran, R. Prince, G.M. Storr, D. Walker, P. Woods. Special thanks go to L. Marsh for help with the reference list.

## 2.1 Aboriginal Presence

Prior to the European invasion of Australia, Shark Bay was undoubtedly important to the aboriginal population. The Bay's warm shallow waters are highly productive, and aboriginals would have harvested fish, shellfish and the larger marine animals such as turtles and dugongs. However, a major restriction to permanent residence in the region would have been the extreme scarcity of surface fresh water.

Today, there are few obvious signs of aboriginal presence in the region. Small artifacts remain around some of the numerous cliff caves, although cave paintings or engravings are rare. Just south of Denham, two lines of stones reach out 20 or 30 metres from the shore in a broken semi-circle, the site of an ancient aboriginal fish trap. There are other larger structures which can be discerned from aerial photographs, but there is argument as to their origin. For example, a long line of large stones on the west side of Faure Island encloses more than a square kilometre of shallow sand flat; although the stones are certainly too large to have been moved by a single person, the symmetry and linearity of the feature seem to suggest that it is not part of the natural geology.

## 2.2 The Europeans

On 25th October 1616 Dirk Hartog, Captain of the Dutch trading ship "den Eendraght" landed on what is now known as Cape Inscription on Dirk Hartog Island, thereby becoming the first white man to set foot on Australian soil. He erected a post to which he nailed a pewter plate recording his visit, then resumed his voyage to Java.

In 1697 William de Vlaming, on a voyage to search for survivors of a missing ship, landed on Dirk Hartog Island and discovered Hartog's plate. He replaced it with another pewter dish recording his own visit and that of Dirk Hartog. Vlaming's Plate is now on display in the Fremantle Maritime Museum.

William Dampier was the first Englishman to visit the West Coast of Australia. He spent seven days in Shark Bay in August 1699 sounding and examining the shore; several coastal features now carry names bequeathed by Dampier during this expedition.

In 1800, the French Government sent two ships, the Geographe under Captain Nicholas Baudin and the Naturaliste under Captain Hamelin, to explore the Southern hemisphere. The Naturaliste spent 49 days charting the area. Louis de Freycinet surveyed all the inlets between Dirk Hartog Island and the Peron Peninsula, while Pierre Faure was sent to chart the Eastern Bay. Most names of the islands and bays in Shark Bay were named after members of this expedition.



In 1858 the whole of Shark Bay was charted by Captain H.M. Denham and his name remains on the sea charts to this day. Whilst in the area, Denham carved his name and the date on the cliff face at Eagle Bluff where it can still be seen. The town of Denham derives its name from the Captain.

In the 1650's several groups of convicts were sent from the Swan River Settlement to dig the guano deposits on the islands within the Bay. Very little is recorded about these operations, and today rockwalls are all that are left of this period of settlement.

Release of land to graziers brought the first pastoralists to the area in the 1860's. About the same period traders in Perth became interested in the pearl shell and pearls which abounded in the waters, and by the early 1870's small settlements were dotted around the shores of Shark Bay. Like the goldrushes, pearling attracted a number of Asians to the area. Most of the Malays and Islanders were recruited by European pearlers, while Chinese often brought their own vessels crewed by their own countrymen. Following the first world war the pearling industry began to wane, and the onset of the depression finally caused its closure after some 70 years.

Fishing became the mainstay of the Shark Bay settlements, and by 1912 the first cannery and processing works was established at Monkey Mia, with another at Herald Bight further north. Later Freshwater Camp became the main base for the fishing industry, and Denham now stands where the original Freshwater Camp was situated.

When World War II ended, an open market for fish began to operate in Perth, and the region's fishing industry expanded. However, it was not until the late 1960's that the town obtained reticulated water and a reliable electricity supply. This period also saw the establishment of a hotel and caravan park.

Today, the economic base of the area is provided by tourism, fishing (prawn, scallop and scale), the harvesting of salt and gypsum at Useless Loop, and wool production from the area's large pastoral leases.

### 3. CONSERVATION STATUS

#### 3.1 State Government Management

Two Acts in Western Australia allow government agencies to manage nature conservation reserves. The Land Act (1933) permits the declaration of reserves for conservation purposes on public land, managed by agencies such as the Lands and Surveys Department, the Wildlife Authority, or the National Parks Service. Under this legislation the government has created a few small reserves in the Shark Bay area:

- . part of the shoreline of Hamelin Pool, between high and low water mark (for the conservation of stromatolites),
- . Bernier and Dorre Islands (for the conservation of rare and endangered marsupials),
- . small islands, Shark Bay area (for the protection of seabird breeding colonies and the collection of guano).

Adequate legislation for the conservation of marine areas does not presently exist in W.A., although the need for such legislation has been evident for more than a decade (EPA 1975 s. 9.1.6.3). However, powers granted to the Department of Fisheries and Wildlife under the Fisheries Act (1905) permit the creation of aquatic reserves. No such reserves exist in Shark Bay, although the Department of Conservation and Environment is understood to be committed to their consideration once the recent aquatic reserve proposal over the Ningaloo Reef tract is finalised.

In 1974, the Conservation through Reserves Committee published a number of recommendations concerning the protection of the Shark Bay region.

The most important recommendations were that:

- (a) the entire southern portion of Shark Bay (that is: south of the northern-most points of Dirk Hartog Island and the Peron Peninsula) with the exception of Useless Inlet, be protected by aquatic reserve status, and
- (b) most of the adjacent pastoral leases be resumed, and the area managed as a national park. A very substantial area was involved, including the Peron Peninsula, Dirk Hartog Island, and all of Edel Land with the exception of Heirisson Prong.

The exclusion of Useless Inlet and Heirisson Prong from the proposed reserves related to the solar salt industry in this area. Other more minor recommendations were:

- . that some of the existing small special purpose reserves be expanded slightly,

- vegetation clearance on the pastoral leases be prohibited pending full resumption by the government,
- public access, and the use of boats and vehicles, be strictly controlled in sensitive areas (such as parts of Hamelin Pool), and
- residents be appointed as honorary wardens to assist in policing the reserves.

Virtually all the Committee's recommendations were endorsed by the EPA in 1975, and later endorsed by the State government. Today however, few of the recommendations have actually been implemented.

### 3.2 World Heritage Listing

In August 1974 Australia became one of the first countries to ratify The International Convention for the Protection of the World Cultural and Natural Heritage (The 'World Heritage Convention'). The convention was adopted by the General Assembly of UNESCO in 1972 and came into force in 1975. It has now been signed by more than 70 countries.

The Convention aims to promote international co-operation for the safe-guarding of both natural and man-made environments. This co-operation is vital in a world with population and energy pressures, and increasing impacts on the environment from expanding industrialism. The maintenance of a nation's cultural identity depends partly on the conservation of the outstanding features of its natural environment as well as the cultural monuments and works with which the people identify.

The World Heritage Convention requires countries (who sign the Convention) to adopt general policies, to establish appropriate organisations and services, and to develop suitable legal, technical, scientific and financial measures for the protection, conservation and preservation of both the natural and cultural heritage.

Countries are also required to submit an inventory of sites potentially suitable for the World Heritage List. This inventory is being compiled to ensure recognition and protection of places of "outstanding universal value".

The Australian Heritage Commission is a statutory authority of the Commonwealth government, established under the Australian Heritage Commission Act (1975), as the government's policy advisory and administrative body responsible for the National Estate.

So far, the Commission has listed several specific areas in the Shark Bay region on the register of the National Estate, and has placed Shark Bay in the draft 'provisional' World Heritage inventory mentioned above. The Commission is planning to publish

a report in late 1985 which will consider whether Shark Bay should be put forward by the Australian government for formal listing. The Shark Bay region also appears in the International Union for the Conservation of Nature and Natural Resources (IUCN) Indicative Inventory of Natural Sites of World Heritage Quality.

The World Heritage Convention sets out four criteria for inclusion in the World Heritage List. An area must meet at least one of the following criteria. It should:

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

As will be evident from the following sections, Shark Bay meets at least three of the above criteria.

The implications of listing may be: (a) the State government may give the region a higher priority for conservation funding, (b) limited special purpose funds could be provided to the State by the Commonwealth government for the area's management; (c) major expansion of existing mining operations would be unlikely, (d) there would probably be increasing pressures for the resumption of the pastoral leases in proposed national park areas, and (e) there may be some increase in tourism solely due to listing, although it seems likely that this effect will be far outweighed by factors such as (a) increasing tourist pressure due to increases in Australia's population, and (b) improved vehicle access to the area.

It seems unlikely, given the area's resources and the conservation measures already in progress, that World Heritage listing would in itself have any major adverse effect on the tourist or fishing industries. However, listing may speed up management changes in these areas - many of which are already overdue. The most obvious need is the control of tourist access and activities in particularly sensitive areas (discussed in more detail below). Although some amateur fishermen ("Fishermen" as used here includes both sexes) may find their activities restricted, significant changes to commercial fishing operations seems unlikely.



#### 4. AQUATIC RESOURCES

##### 4.1 Seagrasses, and the Wooramel Seagrass Bank

The Wooramel Seagrass Bank forms a shallow marginal platform along the eastern shore of Shark Bay. The bank covers an area of 1030 km<sup>2</sup> and is 129 km long with an average width of 8 km. The Bank is the largest structure of its kind in the world.

The bank is a wedge-shaped body of sediment, composed mainly of biogenic carbonate debris mixed with terrigenous detrital grains. There is no rigid skeletal framework within the bank. The bank has been built in a high-energy environment of tidal currents and waves generated by strong prevailing southerly winds. Formation and preservation of the banks in this environment are attributed to the modifying influence of seagrasses on processes of sedimentation. The seagrasses act as organic baffles, and also provide habitats for organisms which contribute skeletal carbonate. Fifty-four tidal channels are the main paths for tidal water exchange across the intertidal and sublittoral zones.

The Wooramel Bank contains a variety of marine habitats. The outer margin, channel levees and floors are populated by seagrass communities; wide sublittoral and intertidal sandflats are inhabited by molluscan faunas and there are extensive mangrove or algal-mat communities in the intertidal and supratidal zones. The bank is one of the largest bodies of carbonate sediment formed by an organic baffle yet recorded from a modern environment. The only deposits of similar origin and comparable size are the seagrass-bound "mattes" on the Mediterranean coast of France, described by Molinier and Picard (1952). Smaller seagrass-covered banks have been described by Ginsburg and Lowenstam (1958) and Baars (1963) from the Florida region.

The Wooramel Seagrass Bank was documented by Davies (1970a) in a paper that has become a standard reference for research on carbonate banks, seagrasses and other organic baffles. The Bank remains the main field reference for scientific purposes. The majestic proportions of this seagrass bank must be emphasised. In size, continuity, growth rate and variety of features it surpasses most modern coral reefs that have long fascinated scientist and layman. The scientific research potential of the structure has only begun to be exploited and the Bank presents the opportunity for major research projects in sedimentation, marine biology and physical oceanography.

The bank structure is a major part of the Shark Bay ecosystem. Its southern parts are nurseries for prawns on which the commercial fishery is based and it is probable that the jungle-like growths of seagrass form an important element in the nutrient cycles of marine biota throughout Shark Bay. Tidal waters draining from the structure influence the hydrology of the embayment and contribute to the unusual steady-state conditions which pertain (Logan and Cebulski, 1970).

The seagrass communities of Shark Bay have been studied by Dr. Diana Walker (University of Western Australia), and the information in following paragraphs are drawn from her work. (See References).

Seagrass may be regarded as the dominant organism in Shark Bay, as important aspects of the physical, chemical and biological environment depend on the seagrass communities. Without seagrass, the marine environment of the Bay would be quite different. Three factors are of paramount importance: firstly, the seagrass beds are a major source of primary production; secondly, the beds provide important shelter for other organisms, and thirdly, the beds themselves have modified patterns tidal flow and thus salinity within the Bay, producing some of the area's most characteristic ecological features.

Seagrasses generally require a sediment covered bottom with a limited degree of water movement, in relatively shallow water where light intensities remain high. Shark Bay contains extensive areas well suited in this regard.

Amphibolis antarctica and Posidonia australis are the two dominant seagrass species; in both cases the grasses are at the northern limit of their geographical distribution, which may make them particularly vulnerable to environmental changes. Carrying 15 seagrass species altogether, Shark Bay is one of the most diverse seagrass regions in the world. Freycinet Estuary, and especially the sand patches offshore from Nanga, show the greatest diversity.

The area covered by dense seagrass in the Bay is around 4,000 sq. km.. While some areas are outstanding diverse, most seagrass beds are monospecific stands of Amphibolis antarctica, with smaller areas of Posidonia australis.

The extensive seagrass beds provide both the primary production and the physical habitat for the development of complex ecosystems. The shallow water and high light intensities contribute to high rates of production. Although concentrations of phosphorus in Bay water are relatively low, large amounts of nutrients are recycled by the decomposition of seagrass leaves within the beds themselves.

Seagrasses stabilise the sediment on which they grow, encouraging the development of sediment-based invertebrate communities. The seagrass leaves themselves present an area much larger than that of the bottom, and this area is colonised by a variety of small plants and animals. These communities themselves support higher trophic levels in the ecosystem, such as the young of fish species on which commercial fisheries depend.

By stabilising sediment in particular localities (such as the Faure Sill at the head of Hamelin Pool) seagrass has altered patterns of salinity within the Bay, producing ecosystems unique in the world (see section 4.2).

Seagrass communities are vulnerable to damage. Damage may occur through changes in patterns of sediment load (sediment may smother the seagrass, or reduce photosynthetic activity through changes to turbidity or through nutrient enrichment (which may have a similar effect by encouraging phyto-plankton or epiphytic algae). Seagrass dieback, followed by a decline in fish populations, has caused serious damage to estuarine ecosystems in Westernport Bay (Vic.) and Cockburn Sound (W.A.), among other places. Damage may also occur as a result of seabed tearing by boat anchors, propellers, or fishing nets, or through changes to water temperature.

#### 4.2 Hamelin Pool

Landlocked in the east, south and west, Hamelin Pool is a large, shallow marine basin partially separated from the rest of Shark Bay by an extensive sand and seagrass bank - the Faure Sill. This extremely shallow sill along the northern boundary of Hamelin Pool greatly restricts tidal flushing. Combined with low precipitation (about 225 mm per year) and high evaporation (about 2,250 mm per year) the restricted flushing results in sharply increased salinities. The basin is one of the few large areas in the world where marine waters are hypersaline, with salinities of 55 to 70 parts per thousand, almost twice the salinity of normal seawater. The size, depth and other geomorphologic features of the basin combine with salinity to make this an environment unique in modern seas.

The area including Hamelin Pool and the Faure Sill is of paramount scientific importance as a unique marine environment and a major field laboratory for continuing education and research in carbonate sedimentation, marine biology, physical oceanography and geochemistry.

Hypersaline conditions in Hamelin Pool have led to the development of a number of unique geological and biological features. Outstanding among these are algal stromatolites which are "living fossils" of comparable scientific importance and rarity to protected elements of the Australian fauna and flora. There also are restricted communities of marine organisms tolerant of hypersalinity, vast deposits of organic shells (coquinas), ooid shoals and lithified sediments of Recent age, all rare or scientifically important. The biota inhabiting hypersaline waters is of special interest to marine biologists because of physiological adaptations necessary for life in these highly saline conditions.

Stromatolites derive their name from their initial discovery as fossils; in fact, stromatolites are the oldest form of megascopic life, appearing in rocks up to 3.5 billion years old (Playford 1980). Stromatolites form when sediment becomes trapped and calcified within a mat of blue-green algae, or cyanobacteria. They take the form of elevated 'rock' beds or columns in the intertidal and near sub-tidal zone.

Blue-green algae can tolerate a wide range of salinities and temperatures, as well as periodic desiccation. During the Precambrian period (around 600 million years ago) they appear to have been one of the most common life-forms. Today stromatolites have all-but disappeared from the globe; Hamelin Pool is their principal remaining stronghold, containing an abundance and diversity of form found nowhere else.

The shape of stromatolites is controlled by their environment, the major factors being the direction and strength of wind and waves, and sediment availability. Too much sediment would swamp the algae, while too little would prevent stromatolite growth. Observations in Hamelin Pool over 25 years indicate essentially static stromatolite growth in most localities; material eroded during storms is more or less balanced by new growth. The maximum measured growth rate was 0.5mm per year. At one locality in Hamelin Pool, wagon tracks dating back around 50 years can still be clearly seen, illustrating the very slow growth rate of the stromatolite beds, and their vulnerability to human damage. It is clear that many living stromatolites must be hundreds of years old.

Blue-green algae have wide ecological tolerances, and have persisted without significant ecological change for about 3500 million years. However, stromatolites have steadily declined in abundance since the early Paleozoic. The explanation appears to be the evolution and adaptation of organisms which can graze the blue-green algae.

Several fish species occur in Hamelin Pool, and one species of bivalve is very abundant, but in general the Pool's high salinity has produced an environment of notably low diversity. Marine gastropods which graze on blue-green algae, although abundant elsewhere in Shark Bay, are virtually absent from Hamelin Pool. As Playford (1980) puts it, "stromatolites are an important ecological example of the progressive suppression of a biological group, forced to the extreme limits of its ecological range by the evolution and adaptive expansion of animals that utilise it as a food source."

A key element in the formation and maintenance of the hypersaline environment has been the growth and shoaling of the Faure Sill. This structure is a barrier bank constructed in the past 5000 years through the accumulation of skeletons of marine organisms living in seagrass meadows that flourish on the bank surface. Shoaling and growth have led to restriction of tidal influx into Hamelin Pool and to the development of hypersaline concentrations. The progression to hypersaline concentrations from low (oceanic) salinities can be "read" from sediment cores taken in the basins (Hagan 1973). As conditions become unsuitable for seagrass growth (salinities greater than 62 parts per thousand) the associated assemblages change, limiting the growth of Faure Sill. The process is thus self-limiting, and existing patterns of salinity seem fairly stable.



Conservation of the Hamelin Pool environment depends primarily on maintenance of hydrologic conditions in the area of the Faure Sill. Unnatural interference with the Sill could lead to an increase in tidal exchange, and salinities in the Hamelin Pool basin would fall to normal levels. This would lead to widespread changes in biota and in sedimentation, resulting in the destruction of algal stromatolites, molluscan populations and the cessation of ooid formation and lithification.

Ooid shoals result from the precipitation of spheroidal grains of calcium carbonate in hypersaline water. Coquinas are sedimentary rocks composed of the shells of marine organisms cemented by precipitating calcium carbonate. These sediments are particularly abundant in Hamelin Pool, where they have largely accumulated from populations of a small bivalve, Fragum hamelini. The coquina beach ridge and storm ridge formations are not yet accorded Class A Reserve status.\*

The inclusion of the Faure Sill in any reserve is essential. The preservation of algal stromatolites, coquinas, ooid shoals and cemented sediments also requires measures which will prevent direct destruction by activities of man - as might occur under intense recreational pressures.

The Hamelin Pool stromatolites between high and low water marks are at present protected by Class A reserve No. 30885 "for the Protection of Sedimentary Deposits" (not vested). This small reserve was created in response to a request (for a much larger reserve) made in 1968 to the Department of Lands and Surveys by the Department of Geology, University of Western Australia, for a reserve covering Hamelin Pool, the Faure Sill, and the coast up to 5 chains (100 metres) inland.

This proposal was supported by the Western Australian Geological Survey Branch of the Mines Department. However, the then State government decided to reserve only the intertidal areas because the State had no legislation authorising the creation of marine reserves, and a 5-chain reserve above high water mark would have required resumption of land from the adjoining pastoral properties. The boundary of these properties lies 2 chain above high water mark, and the 2-chain strip could have been included in the reserve without resumption.

A committee of international experts (Environmental Protection Authority Report, 1973) met in Perth on 24, 25 and 26 August 1973 and prepared a report on conservation measures for the Hamelin Pool area. This group unanimously recommended that Hamelin Pool and the Faure Sill be classified as an A Class reserve, vested in the Western Australian Wildlife Authority in terms of the existing legislation, without power to lease. Among their major recommendations were that:

- \* Class A Reserves are the 'most highly protected' classification, revokable only by Act of Parliament.

1. the existing Class A reserve No. 30885, as administered by the Department of Lands and Surveys, be extended to 2 chains (40 metres) inland above high water mark, and, once appropriate legislation is enacted, that the area of the balance of Hamelin Pool be included in this reserve;
  2. the purpose of the reserve be extended to include conservation of sedimentary deposits, fauna and flora used in geological and biological education and scientific research;
  3. in the interim, the (then) Department of Fisheries and Fauna be requested to prohibit interference with fauna and flora on the seafloor of this area as far as practicable;
  4. tourist access be prohibited, except as follows, with the permission of the W.A. Wildlife Authority. Public access to the coastal area of stromatolites and beach ridges should be provided from the road to Denham on the western side of Hamelin Pool in the vicinity of Nilemah. Tourist sites should be selected by the management authority in conjunction with expert advice;
  5. honorary wardens resident in the district be appointed to assist in policing the reserve;
  6. no vehicles or power boats be permitted on the reserve without permission;
  7. no development, exploration or mining within the reserve, or within 5 chains of its boundaries, be allowed without permission of the (then) Department of Environmental Protection;
  8. resort development and unauthorised camping be prohibited in the Hamelin Pool area.
- The future need for additional tourist development in the Shark Bay area be recognised, but such development should be directed towards places other than Hamelin Pool, e.g. Lharidon Bight, Freycinet Estuary and Dirk Hartog Island.
9. the entrance channels be not interfered with, particularly by any attempt to introduce commercial prawn cultures in Hamelin Pool or on the Faure Sill with attendant disturbance of the sea bed;
  10. existing levels of commercial fishing do not appear to be interfering with the present ecology in the area and there does not seem to be any need to restrict the present level of activity.
- The committee of international experts further recommended the ultimate creation of a large reserve as follows:
11. Hamelin Pool and its margins south of Australian National

Grid, Zone 1 co-ordinate 1,770,000 yards north and including the coast to 2 chains (40 metres) inland from high water level;

12. the Faure Flats area north of Hamelin Pool, including the submerged banks and channels in the area bounded to the north by the 1,800,00 yards north co-ordinate; bounded by the co-ordinate 170,000 yards east, and to the east by the mainland coast extending to a distance of 2 chains (40 m) inland from high water level.

This committee of experts stressed that conservation measures which do not include the protection of the Faure Sill would be ineffectual, as this barrier has been the key element in the development of the environment and in the maintenance of hypersaline conditions in Hamelin Pool.

Today, most of these recommendations still await formal implementation.

#### 4.3 Denham Sound, Freycinet Reach and Estuary, Hopeless Reach and Lharidon Bight

Denham Sound, Freycinet Reach and Estuary, Hopeless Reach and Lharidon Bight are broad gulfs bordered by shallow platforms and seagrass banks. The gulfs contain prolific marine life and support a commercial scale fishery, intensive sport fishing and shell-collecting by amateurs and professionals. The biota also includes the dugong, turtles, rays, sharks and giant cod. There are also populations of immature prawns in these areas. Freycinet Reach and Estuary are dotted with numerous small islands, most of which are nature reserves established to protect sea-bird breeding sites. On these islands may be found breeding colonies of the white-breasted morph of the Wedgetailed Shearwater, the only ones in Australia.

The area is picturesque with broad stretches of relatively protected water, colourful coastal cliffs, beaches and lagoons. There are numerous sheltered anchorages for small craft in bays and behind islands and shoals. Tourism at the centres of Denham, Nanga and Monkey Mia is largely based on sport fishing, but yachting, cruising and other aquatic activities are developing and will expand with public realisation of the attractions of the region.

The scale fishery is a major industry. The principal commercial species are whiting (*Sillago* spp.), snapper (*Chrysophrys* sp.) and mullet (*Mugil* sp.). Netting for whiting and mullet is carried out mainly in sublittoral sandflat environments. The Commercial Whiting catch is around 100 to 200 t/yr, with mullet catches of similar size. Whiting populations use metahaline (salinities 40 to 53 parts per thousand) areas as nurseries and large populations of young are found in southern parts of Hopeless Reach and Freycinet Reach (Lenanton, 1970).

The main snapper fishery within the Bay is located in Freycinet Reach and Denham Sound but this species also is taken in Hopeless Reach. Sport fishing is intensive and expanding. The 1983 amateur catch was estimated at about 45 tonnes of snapper, plus another 45t of assorted scale fish. The commercial snapper catch (which is largely taken in the ocean waters outside the Bay) is about 450t. (M. Moran, pers. com.). Conflict between amateur and professional interests will arise if substantial amateur fishing activities move from the Bay to near-ocean waters.

Commercial trawling is prohibited in the areas south of latitude 25° 30' S and east of the Peron Peninsula, and in Freycinet Reach and Estuary south of latitude 26° S. These closures, enforced by the Fisheries Act, protect immature prawn populations and nursery areas for other species.

It is important that marine invertebrates (mainly mollusca) be protected against over-collecting. The stability of the ecosystem should be protected because of the relationship between this area and the important prawn and scallop fisheries in northern Shark Bay.

#### 4.4 Large Marine Animals

##### 4.4.1 Dugongs

Historically dugongs have been the subject of extreme pressure through hunting. Husar (1975) cited reports suggesting or confirming extinction of dugongs around many islands in the Indo-Pacific region. Steller's sea cow (*Hydrodamalis gigas*) was completely exterminated by hunting less than 27 years after its discovery (Stejneger, 1887). Recently, dugong populations have not fared much better. In the Persian (Arabian) Gulf, it is estimated that the entire population has been killed as a result of oil spilling from damaged oil rigs. Natives of Papua New Guinea continue to hunt dugongs at an uncontrolled rate. Along the northern and eastern Australian coastlines the animals are often caught up in shark nets and gill nets; power boats collide with dugongs inflicting injury (with either the boat or the propeller) and irresponsible thrill-seekers, with power boats, chase dugongs to the point of exhaustion.

To stress the ever increasing threat to dugongs, the Marine Steering Committee of IUCN has listed dugongs as "vulnerable to incidental capture in fishing and other nets, to pollution affecting seagrass beds; and to other human disturbances, as well as continued hunting." They are protected in many countries but the laws are incompletely enforced. Further attention has been given to the protection of dugongs by the animal being listed in both Appendix I and II of CITES.\*

- \* APPENDIX II - All species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilisation incompatible with their survival.



The Shark Bay dugong population appears to be one of critical importance for both scientific study and the preservation of the species. It is one of only two known to number in excess of 500 individuals, and the only one of that size not subject to legal hunting. Further, the existence of some areas of clear water make dugongs here available for scientific study and public education. Shark Bay is, however, located at the southern limit of the dugong's range. From studies (Prince, et al. 1981) it appears that temperature, interacting with food supply, is probably the main limiting factor, and Shark Bay is a thermally marginal dugong habitat. Dugongs make seasonal migrations within the Bay and since at all seasons they occupy the warmest water available to them there is strong circumstantial evidence that these migrations are imposed by water temperature patterns. Extrapolating from studies on the low temperature tolerance of manatees, in conjunction with observations on behaviour of dugongs in their winter refuge along Dirk Hartog Island, the Shark Bay herd's existence is energetically precarious during winter. At this time areas of dugong concentration should be kept free of human disturbance.

During the summer months dugongs concentrate heavily on a small area in the eastern Bay where dense growth of a tropical seagrass (Halodule) occurs on the delta of the Wooramel River. This plant community is unique to that site and it seems probable that if it should be destroyed the carrying capacity of the Bay for dugongs would be drastically reduced. As the Halodule is a tropical species at the southern limit of its distribution, it is extremely sensitive to environmental perturbations. Protection of this Wooramel Delta area is critical to the dugong population, since the high quality diet it provides is probably essential for successful reproduction. The control of human activities within the delta area is important, and it would also seem desirable to keep development within the Wooramel catchment to an absolute minimum.

Dugongs have public appeal as strange, large, gentle mammals associated with many myths and cultural traditions. They are, however, usually difficult to approach and the behaviour visible from the surface is generally limited. Public acquaintance with dugongs, in an educational and recreational sense, will be practical only in the form of guided "dugong watching" tours. These could be based at Monkey Mia during the summer months, and would have to operate from a base on Dirk Hartog Island or along the north-eastern shore of the Peron Peninsula in winter. Occasionally substantial herds move into South Passage and in years when this happens there are excellent opportunities for photography and subsurface observation.

At present levels of boating activity, the threat to dugongs from boat strikes is minimal. Dugongs readily avoid boats moving at speeds under about 10 knots. They cannot take evasive action when boats are moving at higher speeds, however. Deaths or injuries are rare events at present because relatively few boats travel in the areas of dugong concentration. If caravan park

development at Gladstone results in a sharp increase in boat traffic around the Wooramel Delta in the September-May period, or if there is a major increase in traffic along the inner coast of Dirk Hartog Island north of the Homestead in winter, significant threats of boat kills would develop.

There are no aboriginal reserves in the Shark Bay area and no legal hunting by aboriginal people. It appears that local residents, some of whom are of aboriginal ancestry, may occasionally take a dugong for meat, and the semi-official view is that the kill is probably less than a dozen annually and can be overlooked. Recently there have been reports of poachers from communities outside the Bay making forays to hunt dugongs. A watch is being kept for this, but as only three fisheries officers are responsible for the entire area, assessment of poaching impact, and apprehension of poaching parties, is difficult and unlikely.

#### 4.2.2 Dolphins

Shark Bay supports a healthy population of dolphins (Tursiops truncatus). The exact population size is not known but the animals are seen frequently from most vantage points (aerial surveys, boats, headlands and cliffs). In general, the population does not appear to be under any immediate threat. Increased development in Shark Bay, however, could easily disturb the dolphins' habitat and threaten the dolphin-human relationship of the small pod of dolphins at Monkey Mia.

For more than 15 years, up to 16 dolphins have come more or less daily to the beach at Monkey Mia, have been hand fed, and have allowed themselves to be touched. There has been considerable publicity and the "friendly dolphins" have become an important tourist attraction. Estimates of the proportion of tourists attracted to the Denham-Monkey Mia area by the opportunity for close contact with the dolphins range from 15 to 70 percent. No systematic assessment is available, but the dolphins' contribution to the tourist trade is not insignificant.

The phenomenon of 'wild' dolphins voluntarily approaching humans is extremely rare. Historic records indicate that such events have occurred in various places for thousands of years; however most such "interlocks" (to use the phrase coined by Wade Doak, 1982) are usually transient, and have often ended tragically for the dolphins concerned. Today, the only other place where dolphins approach humans on a beach is Brazil - and this Brazilian development is only very recent. Because of its rarity, the Monkey Mia phenomenon attracts dolphin-lovers from around the world. The chief threat to the Monkey Mia interlock stems from the tourists themselves. The dolphins could well be deterred by too many tourists attempting to touch them, or inappropriate behaviour on the part of the tourists. If the interlock is to be protected, it is essential that funds be found to educate and supervise tourists at the site. In this regard, the presence of the 'dolphin wardens' now working at Monkey Mia

is absolutely critical. It is also important that fresh fish be provided for tourist use as dolphin food.

#### 4.4.3 Whales

Shark Bay has been described as the site of the last great whale slaughter. This refers to whaling which occurred in the 1930's when several thousand whales were taken inside the Bay in a period of two or three years. Whaling continued from a shore-based station north of the Bay into the 1960's. Whale stocks were drastically reduced, and some local populations may have been exterminated. Others, such as the Southern Right Whale (Eubalaena australis) may now be on the increase, and whale surveys in the area have been carried out in recent years under the supervision of Dr. John Bannister of the Western Australian Museum.

A small minke whale stranded near Nanga in 1981, and a moderate size whale, probably a humpback, appeared south of Louisa Bay in June 1982. Two humpbacks (Megaptera novaeangliae) were seen travelling close to shore along the outer coast of Dirk Hartog Island in mid-July of 1982. Six more humpbacks, including a suckling calf, were seen off the eastern coast of Dirk Hartog Island in mid-September 1983 and 1984. Two killer whales (Orcinus orca) attacked dugongs at Sandy Point shoal in mid-May of 1983. In the near future 'whale watching' might become part of tour activities and interpretive programs at Shark Bay.

#### 4.4.4 Marine Reptiles

Loggerhead turtles nest on the more remote northern beaches on the Peron Peninsula and Dirk Hartog Island. Green turtles (Chelonia mydas) and loggerheads (Caretta caretta) predominate in the Bay waters, and are especially abundant on Green Turtle Flat, north of Faure Island, and around the northern ends of the Peron Peninsula and Dirk Hartog Island. Both species of turtles are listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Appendix I of that Convention lists species "threatened with extinction which are or may be affected by trade." As well, both species are listed as "Endangered" in The IUCN Amphibia-Reptilia Red Data Book-Part 1.

Shark Bay also supports populations of at least six sea snake species; one species, Aipysurus pooleorum is endemic to the Bay. While their venom is highly toxic it has been found that they are non-aggressive and danger to divers or swimmers appears to be negligible. Sea-snakes are a scientifically little known and interesting group, and the Bay could provide valuable opportunities for research on sea-snake biology.

#### 4.4.5 Sharks and Rays

The most common sharks in the area are the small 'Bay Whalers', tiger sharks and hammerheads. Large groups of Bay Whalers congregate from time to time along the eastern side of Dirk Hartog Island, while the larger sharks may be seen in the deep water against the western coast of the island.

Examination of tiger shark stomach contents within the Bay indicates that cormorants and small turtles form an important part of the diet of these fish.

The shallow sand flats of the Bay provide habitats for a diverse and abundant population of rays. Green Turtle Flat (north of Faure Island) and the sandflats around Pelican Island, Cape Rose, Guichenault Point, Middle Bluff and Blind Strait are areas where rays can be readily observed.

The huge and majestic manta rays are abundant around the north-eastern side of Cape Peron, and along the coast of Dirk Hartog Island between Sandy Point and Cape Levillain. Manta rays are plankton feeders, and quite harmless to man. They can be clearly seen from the air over sandy shallows, their dark bodies silhouetted against the azure background.



## 5. TERRESTRIAL RESOURCES

### 5.1 Landscape

The terrestrial landscape of Shark Bay is predominately one of low rolling hills interspersed with low, flat clay pans. Where the sea has access to areas of clay pan, as has occurred at Little Lagoon, just north of Denham, and in a more spectacular way at Big Lagoon (further north along the western shore of the Peron Peninsula) shallow inland bays of outstanding beauty are created.

The vegetation is a variety of low shrublands, herb-fields and grasslands. With the important exceptions of Bernier and Dorre Islands, pastoral leases have been granted over almost the whole area, and consequently the vegetation has been modified considerably by grazing.

The landscape is arid, and the consequent absence of surface fresh water and trees contribute to land's inhospitality in summer, when strong south-east winds seem to blow incessantly.

Sea cliffs are a distinctive feature of the landscape. Cliffs facing the Bay along Dirk Hartog Island, Heirisson and Bellefin Prongs, Peron Peninsula and Bernier and Dorre Islands vary from around 6 to 35 m. in height, and overlook sandy shallows and seagrass beds. Dolphins, sharks, rays, dugongs and various seabirds can be seen from these vantage points. Cliffs on the ocean side of Dirk Hartog Island and Edel Land are impressive in form and height. Long sections of cliff drop vertically to the water, where undercut shore platforms bear the brunt of enormous waves rolling in from the Indian Ocean. These cliffs vary from 30 to 60 m. in height. The cliffs of Herald Heights, on the south-western end of Dirk Hartog Island, rise to around 180m; the cliff walls here are formed from loose, sloping rock faces.

The ocean cliffs overlook steeply sloping rock shelves, with nearshore depths of up to 100m. Wave action is very great, with blowholes, spouts and huge sea caves abounding along this outer coast.

There are magnificent opportunities for hiking and photography in these areas, the main obstacle at present being lack of fresh water and difficulty of access.

### 5.2 Bernier and Dorre Islands

Bernier and Dorre Islands are Class A reserves for the conservation of flora and fauna, vested in the WA Wildlife Authority. They are nature reserves of world importance. Their biology has been documented by Ride *et al* (1962). Natural history records for the islands date back nearly 200 years. The islands present a diverse pattern of steppe, scrub and dune formations.

The flora combines elements from all three botanical provinces, especially the South-West and Eremean. It provides an interesting yardstick against which the flora of Dirk Hartog Island can be compared, while the flora of the adjacent mainland provides a further comparison. Unfortunately there has been some grazing by goats on Bernier Island.

Bernier and Dorre Islands are perhaps the most important small nature reserves in Australia with regard to the conservation of rare and threatened species. The Islands support the only population of Malurus lamberti bernieri, a sub-species of the Varigated Fairy-Wren.

The Western Barred Bandicoot (Perameles bouganville) was formerly widespread in coastal regions of western and southern Australia. This animal is now restricted to Bernier and Dorre Islands.

The Boodie (Bettongia lesueur) was also once widespread, inhabiting extensive areas of arid western and southern Australia. The Boodie is now found only in Bernier, Dorre, Barrow and Boodie Islands.

The Rufous Hare-wallaby or Mala (Lagorchestes hirsutus) was formerly widespread through much of arid and semi-arid Australia. Today, two small relict colonies survive in the Tanami Desert (N.T.), but the only secure populations are those of Bernier and Dorre Islands.

The Banded Hare-wallaby or Munning (Lagorstrophus fasciatus) had a more restricted range in semi-arid country in the south-west of W.A. This animal today survives only on Bernier and Dorre Islands, with a small colony on Dirk Hartog Island, re-introduced in 1974.

The Shark Bay Mouse (Pseudomys praeconis), formerly recorded from the Peron Peninsula, is today restricted to a colony on Bernier Island. (Burbidge 1984).

### 5.3 Dirk Hartog Island

Dirk Hartog Island is under pastoral lease. The biology of the island has been described by Burbidge and George (1973). Plant life is diverse, over 250 species having been recorded. Some of these are endemic to the island while others are little-known plants rarely collected on the mainland or occurring well away from their mainland range.

An examination of historic maps and air photos indicates that soil erosion on the Island has increased markedly over the last few decades, with large sand-dunes now occupying substantial areas. Overgrazing by cattle is the most likely cause.

Dirk Hartog once had populations of marsupials of the same

species as occur on Bernier and Dorre Islands, but most have died out (partly due to predation by introduced cats). Populations of the Sandy Inland Mouse (Pseudomys hermannsburgensis) still survive on the island. A sub-species of the White-winged Fairy-wren (Malurus leucopterus leucopterus) and a sub-species of the Southern-Emu-wren (Stipiturus malachurus hartogi) are both found only on Dirk Hartog Island. As the largest island off the western coast, Dirk Hartog is ideal for the re-establishment of native fauna under controlled conditions, but success may depend on the absence of terrestrial predators or competitors. Work on this repopulation commenced in the 1970s with the assistance of the present lessee, Sir Thomas Wardle.

The island is also historically important as the site of the first documented landing of a European in Australia : Dirk Hartog's in 1616. It was also visited by Vlaming in 1697, William Dampier in 1699, French scientific expeditions in 1801 and 1818 (see section 2.2).

#### 5.4 Edel Land

Edel Land Peninsula and its enclosed marine inlets and loops were included in the EPA's 1975 national park proposals.

The area is a terrain of calcareous aeolianite dune ridges and interdune depressions. The western margin, fronting the Indian Ocean, is formed by the majestic Zuytdorp Cliffs that rise to heights of 70 to 170 m above sealevel and descend sharply to depths of about 40m. The cliffs are greatly undercut at sealevel by heavy swells from the Indian Ocean; beach-lined embayments break the otherwise continuous cliffs at Dulverton Bay and False Entrance.

The eastern margin of the peninsula contrasts with the west. It is a region of calm bays and inlets. The inlets include Blind Strait, Useless Inlet, Boat Haven Loop, Brown Inlet, Depuch Loop and Disappointment Loop. The inlets are picturesque, being bordered by sandy beaches that are interspersed with rocky platforms and headlands of aeolianite; they terminate on the south in elongate supratidal and inter-tidal flats. North-trending ridges up to 70 m high border the inlets and extend below sealevel into Freycinet Reach as a series of shallow banks.

The Conservation Through Reserves Committee viewed Edel Land as one of the major areas for public recreation in the proposed Shark Bay National Park. The protected inlets are ideal for aquatic activities, such as boating and fishing, and additional scenic attractions include the rugged Zuytdorp Cliffs and the more serene inlets.

The southern parts of Tamala Station fulfil the requirements of a wilderness area and include the historic Zuytdorp wreck site.

There are many features of scientific interest. Exposures of

calcrete soils occur in many locations with classic sections at Baba Head (Read 1971b). Marine Pleistocene sequences outcrop at the margins of tidal flats and interfinger with the soils. These features are being used in geological education.

There are important nature conservation issues in the area. The inlets and embayments probably represent important nursery areas for fish, and are thus a part of the larger Shark Bay ecosystem. Development of tourist facilities in Edel Land should take place under conditions compatible with the preservation of the region's high nature conservation values.

Edel Land also contains populations of three reptiles found nowhere else: the scincid lizard Menetia amaura and the legless lizards Abrasia haroldi and Pletholax gracilis edelensis.

The national park proposed by the Conservation Through Reserves Committee includes Carrarang Station above low water mark, excluding Useless Inlet, Useless Loop and other areas already given over to the production of solar salt. It also includes Tamala Station, and is bounded on the east by the Tamala-Nanga Station boundary.

#### 5.5 The Peron-Nanga Area

The Peron-Nanga area is a physiographically distinct region which is underlain by quartz sandstone (Peron Sandstone). The area includes the north-trending Peron and Nanga Peninsulas, which divide the southern waters of Shark Bay into a series of broad, semi-enclosed gulfs; from west to east these are Freycinet Reach and Freycinet Estuary, Hopeless Reach, Lharidon Bight and Hamelin Pool.

The coast in the Peron-Nanga area contains narrow beaches and headlands. The beaches are covered with quartz sand and the Peron Sandstone is exposed by erosion on the headlands. There are wide expanses of intertidal and supratidal flats and beach ridges of coquina and sand in the southern parts. The landscape comprises broad, undulate, red sand dunes fixed by a vegetation of sclerophyllous plants. Maximum elevations are about 45 m, whereas interdune depressions are only a metre or so above present sealevel. Most of the topography is controlled by a zone of calcrete which lies between the dune sands and the Peron Sandstone. This calcrete zone, which is exposed in coastal cliffs, ranges from 2 to 45 m above sea level.

Many of the interdune depressions contain evaporite pans called "birridas" in local usage and "montbaxin" by Freycinet (1818); several contain marine lagoons. Most of the pans lie in closed, amphitheatre-like depressions surrounded by dunes. A few have remnant, evaporite-filled channels which open to the adjacent coast, but these pans are flooded by seawater only during periods of abnormally high storm tides. The pans range from a hundred metres to a kilometre in width. Little Lagoon (just north of

Denham) and Big Lagoon (further north along the west side of Peron Peninsula) have both been created by the regular ebb and flow of the sea into interdune depressions through narrow channels. The resulting warm, shallow pools are both very beautiful and very fragile. Inappropriate tourist pressures could destroy these remarkable areas.

Lying at the northern end of the South-West Botanical Province, the area is the northern limit for many plant species. The southern end of Nanga Station contains dense tall sandplain vegetation with many species of genera such as Grevillea, Hakea, Calothamnus, Hibbertia, Banksia, Pityrodia, Conospermum, Newcastelia and Eucalyptus, all typical of the South-West. Northwards along the Peninsula, the South-Western species gradually disappear and the dense heath is replaced by an open shrub-spinifex steppe. Species of Acacia and spinifex (Triodia/Plectrachne) become dominant. In the dense heath at the southern end of Nanga, several species are of outstanding interest: e.g. Eucalyptus roycei, Adenanthos acanthophyllus, Grevillea rogersoniana, Newcastelia chrysophylla and Lamarckea hakeifolia var. hakeifolia. Near the Tamala Station boundary and near Peron homestead are populations of Eucalyptus which is apparently endemic to the vicinity.

A number of the blue-flowered plants which so impressed William Dampier during his visit in 1699 are readily visible to the visitor using main roads and tracks. They include Halimolobos littoralis, Brachycome latisquamea, Solanum spp. and Porana sericea (George 1971).

Three species of kangaroo are present: Red (Megaleia rufa), Grey (Macropus fuliginosus) and Euro (Macropus robustus). This is the northernmost limit in Australia of the Western Grey Kangaroo. Other species recorded include the Echidna (Tachyglossus aculeatus) and hopping mice (Notomys spp.). The area is very rich in bird life, field camps by the Royal Australasian Ornithologists Union having recorded about 100 species, compared with 75 recorded from Dirk Hartog Island. A bird which reaches its southern limit on Peron Peninsula is the Yellow Silvereye (Zosterops lutea). It is interesting to see this species and the Western Silvereye (Z. lateralis gouldi) in close proximity, yet never actually intermingling. The former is restricted to mangroves while the latter never leaves the scrub and thickets. Some south-western species are at the northern end of their range, such as the Mallee-Fowl (Leipoa ocellata) and the Southern-Scrub Robin (Drymodes brunneopygia).

The thick-billed grass wren (Amytornis textilis) formerly widespread in the arid and semi-arid zones of Southern Australia is now extinct over most of its former range. The only viable colony now remaining in Western Australia is located on Peron Station at the northern end of the Peron Peninsula.

Faure Island is the site of several sea-bird breeding colonies.

One interesting record from Faure Island is a skull of the Woillie (Bettongia penicillata) a marsupial which is now restricted to small areas of the South-West. Skulls of this species have also been found in cave deposits on Dirk Hartog Island and there is a record of it from Shark Bay in the British Museum.

Just south-east of the Peron Peninsula, between Hamelin and Coburn Station homesteads, there is a small area of mallee-spinifex growing on red sand. This area is unique to the Shark Bay region, and contains the only known population of the scincid lizard Ctenotus zasticus, as well as the only population of the agamid lizard Ctenorhynchus rubens south of the Gascoyne River. Peron Peninsula is the core of the proposed Shark Bay National Park system and is the area most used for recreational purposes, with resorts at Denham, Monkey Mia and Nanga. Approximately 7000 visitors stayed at Denham in 1972-73 and substantial increases can be expected with the sealing of the main access road (in 1986) and active promotion of the tourist industry. In 1982, an estimated 20,000 tourists visited the area.

The main recreational base is aquatic (boating, fishing, shell collecting) but there are other attractions including coastal scenery, wildflowers, wildlife and historic sites. The area borders on the proposed Hamelin Pool-Faure Sill nature reserve with its unique natural features, and there is the possibility of controlled public access to this reserve from the Denham road. Development of facilities and access to a wider area of the peninsula should be encouraged.

The peninsula has an insular character, being connected to the mainland at the narrow Taillefer Isthmus across a tidal-supratidal flat that was once a shallow seaway connecting Freycinet Estuary and Lharidon Bight (Logan *et al.*, 1970). The narrow width of the isthmus has led to suggestions that the peninsula could be sealed by fencing, and native fauna re-introduced after eradication of the very substantial numbers of introduced fox, cat and rabbit. Such a project could be considered following the rehabilitation of Dirk Hartog Island fauna. As on Dirk Hartog, overgrazing is a problem in some places.

Peron Station lease which includes all the Peninsula north of Taillefer Isthmus was offered for sale to the State as a possible National Park in 1972. The National Parks Board, WA Wildlife Authority and the Department of Fisheries and Fauna supported this acquisition but funds were not then available and the lease passed on to private hands. The lease came on the market again in 1984, but once more the State government let the opportunity pass by.

## 6. DEVELOPMENT IN THE SHARK BAY AREA

The growth in the tourist industry - to around 25,000 visitors in 1984 - is indicative of the growing awareness of Shark Bay and what it has to offer. The existing amenities at Denham and Monkey Mia are capable of handling the current numbers of tourists, with some crowding during the peak May and September school holidays.

The commercial fishing industry is still healthy, but is beginning to feel competition from amateur fishermen. As Shark Bay has only three fishing inspectors, it is difficult (if not impossible) to fully control the fishing of closed waters. As well, it is difficult to police the using of nets by amateurs. These nets are occasionally tangling up and drowning dugongs and may represent a threat to the dugong population of Shark Bay, should such incidents increase. Recent restrictions on amateur net use are an excellent start, and should be strongly policed.

The mining industry is expanding slowly, but some projects have been curtailed on environmental grounds. Concept Nominees Pty.Ltd. applied for extensive exploratory licences in 1983 for the coastlines along both the Freycinet Estuary and Hamelin Pool. The intent was the extraction of coquina for the production of calcium carbonate. This threat was removed when the Minister for Mines refused the application.

Other mining proposals and activities, however, are still being considered, have received tentative approval, or are not adequately controlled.

The most recent actions to cause concern are a number of mining tenements which have been applied for over the northern part of Peron Peninsula. Three licences are being sought to mine gypsum. Part of the original plan was a proposal to build a jetty 2 km out into Herald Bight. Herald Bight contains important dugong habitats, and the jetty proposal has been subsequently dropped. Shipments are now to leave from Denham.

An example of the threat to wildlife by development is the current situation on Slope Island. This island was previously a part of a Class A fauna conservation reserve. It is now used as a port site by Shark Bay Salt Pty.Ltd. and has therefore been connected, via a causeway, to the mainland. Due to the construction activities of the port, many breeding burrows of a colony of wedge-tailed shearwaters (*Puffinus pacificus*) were destroyed. In addition, foxes crossed the man-made causeway and have all but wiped out the remaining population. A situation like this must not be allowed to take place on any of the other islands of Shark Bay.



A recent and controversial issue was that of a proposed one hundred unit motel-tavern complex at Monkey Mia. Many private citizens and conservation groups, including the Dolphin Welfare Foundation, expressed great concern for the welfare of the Monkey Mia dolphins if this development were allowed to proceed. The Shark Bay Council, at Denham, gave tentative approval pending a study of the situation; however we understand that the proposal has been suspended due to doubts economic viability.

Another proposal was put forward by Prone Corporation Pty.Ltd., for a development at Big Lagoon. Big Lagoon is an isolated area on the western side of Peron Peninsula, several kilometres north of Denham where there are presently no amenities whatsoever. The only existing access is by boat or four-wheel drive. The proposal was for a "Club Mediterranean style" development which would include:

- . 300 room hotel
- . 50 three bedroom cottages
- . 100 place caravan park
- . 300 pen marina and facilities for visiting boats
- . an airport
- . a 9 hole golf course

Servicing such a development could create environmental problems. There is a shortage of fresh water in the area, and any proposal to create large areas of impervious catchment (as has been done at Rottnest Island) would need careful consideration. Treatment and disposal of sewage would also need to be done with great care, as any disposal affecting the waters of the bay would be highly undesirable due to the limited flushing capabilities of the local marine waters. Eutrophication problems could easily result, creating serious environmental problems.

The Big Lagoon area is presently one of the most beautiful parts of Shark Bay, more suited to limited "wilderness" camping than resort development. With its large areas of sheltered habitat, it would also appear to be an important fish nursery area. The scale of the proposed development is totally out of keeping with the area's primitive environment and exceptional nature conservation values.

The tourist industry of Shark Bay is going to continue to grow and with it the development of services will be necessary. The direction in which the development is allowed to proceed and the activities which are to be allowed are the main concerns. Shark Bay could quite easily become another playground for speculative development on the scale of Queensland's Gold Coast. On the other hand, small scale-environmentally sympathetic developments in conjunction with a system of marine reserves and national parks would cater to the tourist industry and respect the integrity of this unique area.

Long-term employment opportunities would still exist by involving the local residents in interpretive/appreciation programs based on the area's natural history. Guided nature tours (both on land and on the water) would afford an increased awareness and sense of value to the local population.

The professional fishing industry in Shark Bay has been operating at a fairly stable level over the last decade. The gill nets and shark nets which cause so much damage by incidental kills on Australia's northern and eastern coastlines are not used in Shark Bay. Although dolphins, dugongs and turtles do become entangled in the fine mesh nets used by Shark Bay professionals, these animals are usually able to extricate themselves, and fatalities are rare. (John Mutter, pers. comm.).

It is also believed that professional catch levels are balanced in respect to the size of the fish stocks, and overfishing is not occurring. However, this situation could alter should significant damage occur to breeding and nursery grounds, or should the amateur catch increase significantly.

Amongst amateur fisherman, there is a group operating - at least for short periods - at "professional" levels. These fishermen operate with fast sea-going boats equipped with freezers. Fish are cleaned, filleted and refrigerated almost as soon as they are caught. In these circumstances, the policing of minimum legal lengths and catch bag limits is impossible. The elaborate equipment and large catches of this group suggest that they operate semi-professionally. Although unlicensed professional operation would be illegal, prosecution of offenders is extremely difficult. The only way to control the activities of these fishermen would be to prohibit the shipboard processing of their catch, and in our opinion, this move will be necessary within the next few years.

Shark Bay is not a good spearfishing area. Visibility is poor in many areas, and reef areas are rare within the sheltered waters of the Bay. Some isolated reefs, once the habitat of giant cod, have already been shot out. Coral "patches" are also scarce, and easily overfished. The western ocean reefs are inaccessible and dangerous. Blind Strait is one of the very few areas in the Bay where accessible reefs occur in clear water. Here, in a moderate-energy oceanic environment, the greatest generic richness of coral may be found. Such environments are rare in Shark Bay, the other notable example being the coral reef zone between Bernier and Dorre Islands.

As the Bay is largely unsuitable for spearfishing, and there are much better areas for this activity both north and south of the Bay, the banning of this activity outright within the region would affect very few people, and would serve to protect scarce and easily overfished areas of reef and coral.

## 7. RECOMMENDATIONS

### 7.1 State Government Management

The most important and urgent action the State Government should take is to commence implementation of the recommendations of the Conservation Through Reserves Committee - recommendations which have remained in limbo for a decade, inspite of being endorsed by the EPA and the then State Government.

The most appropriate management regime would actually be a large integrated terrestrial/marine national park - and this should certainly be a long term aim. However, the legislative basis for such a national park still needs to be developed in W.A.. We draw attention to the recommendations in Suter (1983) regarding marine park legislation, and urge that an Australia-wide approach to marine park legislation be developed.

The most urgent immediate need in the Shark Bay area is to increase the number of fisheries and wildlife field officers. At present only three fisheries officers are stationed in the region: one at Denham and two at Carnarvon. A single wildlife officer operates from a Carnarvon base. This situation is totally inadequate, bearing in mind the region's extremely high nature conservation values, and its huge size, not to mention the rapidly increasing impact of tourism.

Other immediate needs are:

- (a) education and extension services related to the area's conservation values should be provided, and
- (b) there seem to be strong arguments for the control of certain fishing activities, for example the activities of "semi-professionals". Spearfishing should be banned outright, as argued in the previous section.

### 7.2 World Heritage Listing

If the World Heritage Convention has any meaning in the Australian context, it is clear that the Shark Bay region should be recommended for listing. The area meets not one, but three of the four criteria specified in World Heritage Convention (see section 3.2 above).

Hamelin Pool, for example, clearly meets three of the conditions, being:

- (a) an outstanding example of evolutionary processes,
- (b) containing rare natural phenomena (marine hypersalinity) and
- (c) a habitat for rare species of plants or animals.

It could also be argued that the fourth condition - the representation of the earth's major evolutionary stages - is also met with the Pool.

As described in sections 4 and 5 above, other parts of the Shark Bay region provide critical habitat for several rare and endangered species. In this regard Bernier and Dorre Islands are among the most important areas in Australia. Shark Bay appears to be the only secure habitat in the world for dugongs.

Other areas also clearly meet the required conditions. The Wooramel Seagrass Bank is an example of a "superlative natural phenomena", as are the awe-inspiring ocean cliffs and the incredible Big Lagoon system. These last two features are also of "exceptional natural beauty." The Monkey Mia dolphin interlock is an unsurpassed example of a very special kind of "man's interaction with his natural environment."

The Shark Bay region is clearly of World Heritage Quality.

## 8. SUMMARY

The Shark Bay region contains immensely significant nature conservation values, areas of outstanding natural beauty, and important historical sites. It is also the location for an extremely rare phenomenon: an interaction or "interlock" between humans and wild dolphins.

The most significant features from a nature conservation viewpoint are:

- the marine hypersaline environment of Hamelin Pool. The ecology of the pool is a superlative example of evolutionary adaptation to changing environments. Hamelin Pool is the last stronghold of stromatolites, an early lifeform once widespread throughout the world.
- the Bernier and Dorre Islands are the only remaining habitats for several endangered marsupials. Although some of these animals were once widespread across Australia, habitat changes brought about by European colonisation have exterminated their mainland populations.
- the Wooramel Seagrass Bank is the largest structure of its kind in the world. It and other areas of seagrass around the Bay provide habitat for one of the last large populations of dugongs on the globe. The importance of Shark Bay to these threatened animals cannot be over-estimated.
- the area contains populations of a number of endemic birds and reptiles. These populations are typically small, and thus vulnerable to both human damage and natural catastrophe. The region is also especially rich in fossorial reptiles (Storr and Harold 1978).

Many other areas within Shark Bay have very important natural values, and it is clear the area needs integrated management to conserve and protect the environment.

Although a large marine/terrestrial national park in the region has been on the state government agenda for a decade, almost nothing has been done. A few small "A" class reserves protect specific features, but even here government resources committed to protecting and managing the reserves are woefully inadequate.

The area is clearly of World Heritage quality. The Australian Heritage Commission is believed to be planning a detailed study of the region; the report of this study may be available late in 1985. It can be anticipated that the Australian government will eventually submit the area for consideration under the World Heritage Convention, but it is imperative that the implementation of a conservation-oriented management regime should not wait for this action.

Tourist pressures have increased rapidly over the last few years, and a further dramatic increase may be anticipated once the access road becomes fully sealed (in mid 1986). Proposals have already been made for the construction of large and environmentally questionable tourist developments.

Mining for salt and gypsum is an important economic activity in the area, but it has unquestionably caused significant environmental damage. Although proposals to mine calcium carbonate around the Bay shoreline were not cleared by the State government, the proposed expansion of gypsum mining on the Peron Peninsula gives continued cause for concern.

Professional fishing activities are not a major worry from a conservation viewpoint, and existing operations do not appear incompatible with marine reserve programs. However, amateur fishing and spearfishing activities are likely to damage some of the Bays fragile marine environments. Coral 'patches' are particularly vulnerable.

Although the environments of Dirk Hartog and Faure Islands have been altered by introduced animals, these areas could become very important if properly managed after curtailment of current pastoral operations. The Peron Peninsula and Edel Land also provide opportunities for habitat restoration upon the removal of sheep and goat populations.

Shark Bay is a unique and beautiful region. It contains areas of great scientific interest and outstanding nature conservation values. Although significant environmental damage has already occurred, it is generally local in extent, and in some cases reversible. The area has tremendous recreational and educational potential stemming from its natural resources.

We believe that the State government should, as a matter of urgency, move towards the declaration of a large national park covering the entire area. Multiple use of some marine areas is both feasible and desirable, but certain areas should be set aside to protect the feeding, wintering and calving grounds of dugongs, while other parts of the proposed park Bay are suitable for management as wilderness areas.

It is imperative that action be taken now, before management problems become severe. Proper planning to restrict tourist activities and access is imperative now.

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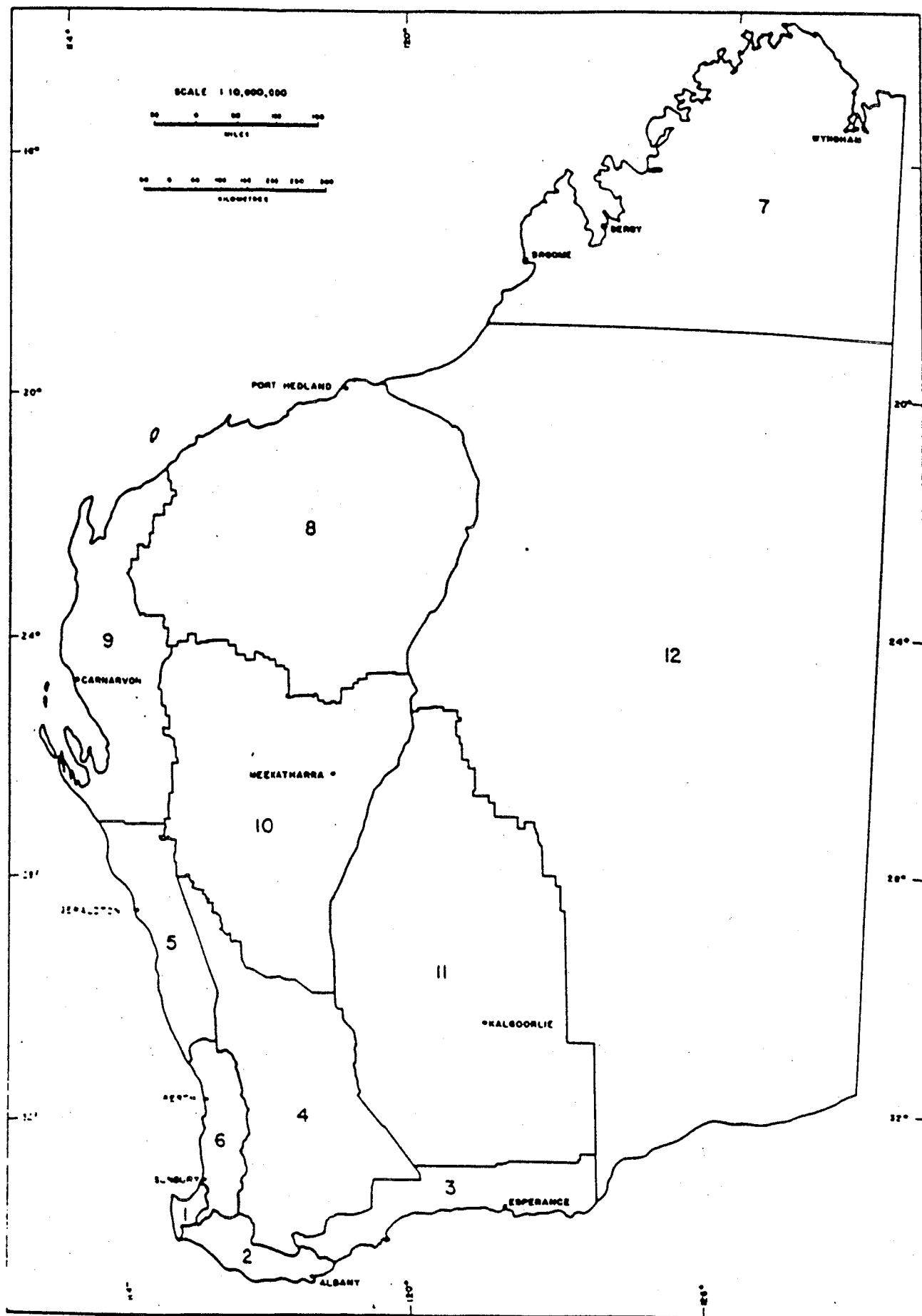


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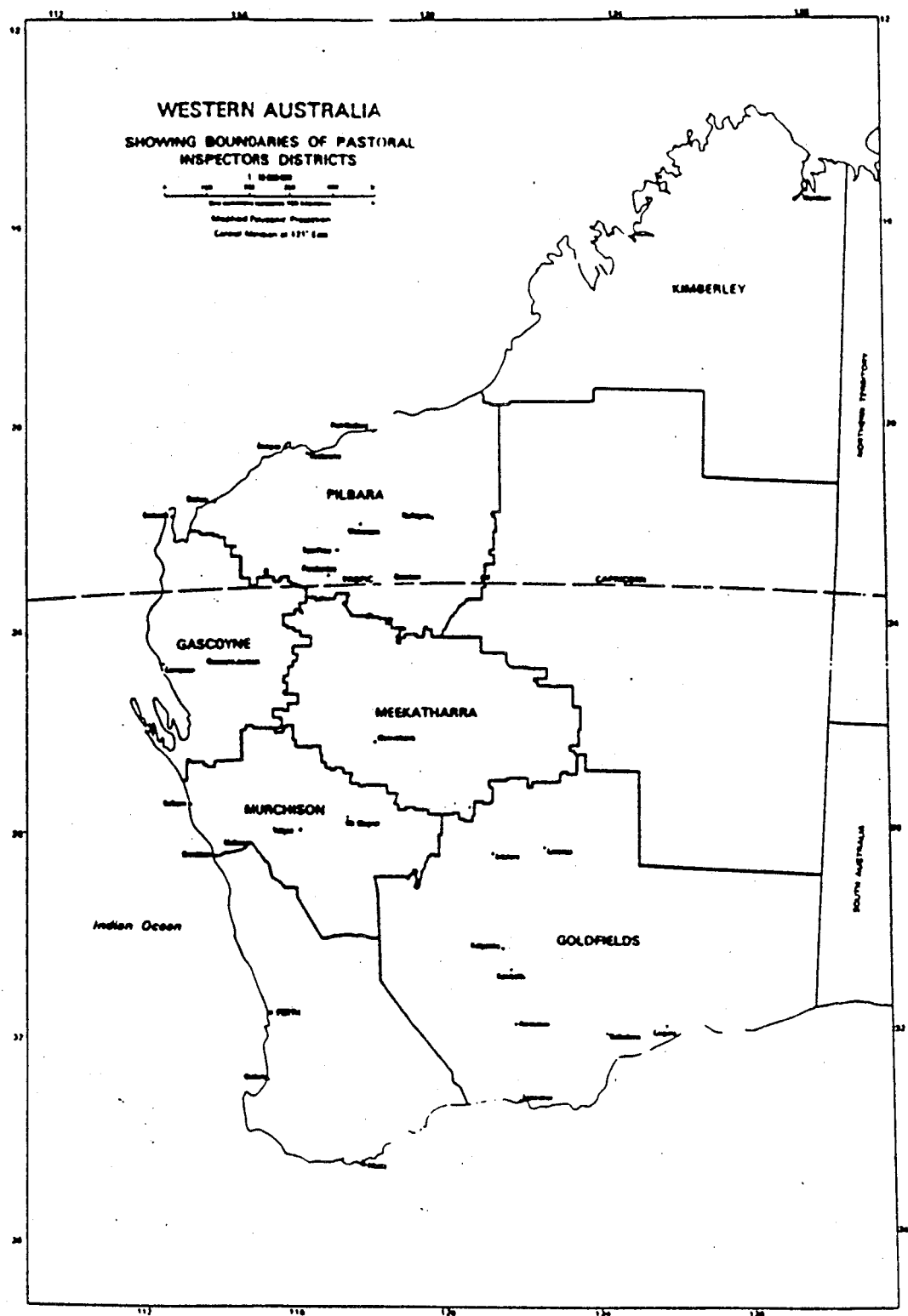
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## APPENDIX 2

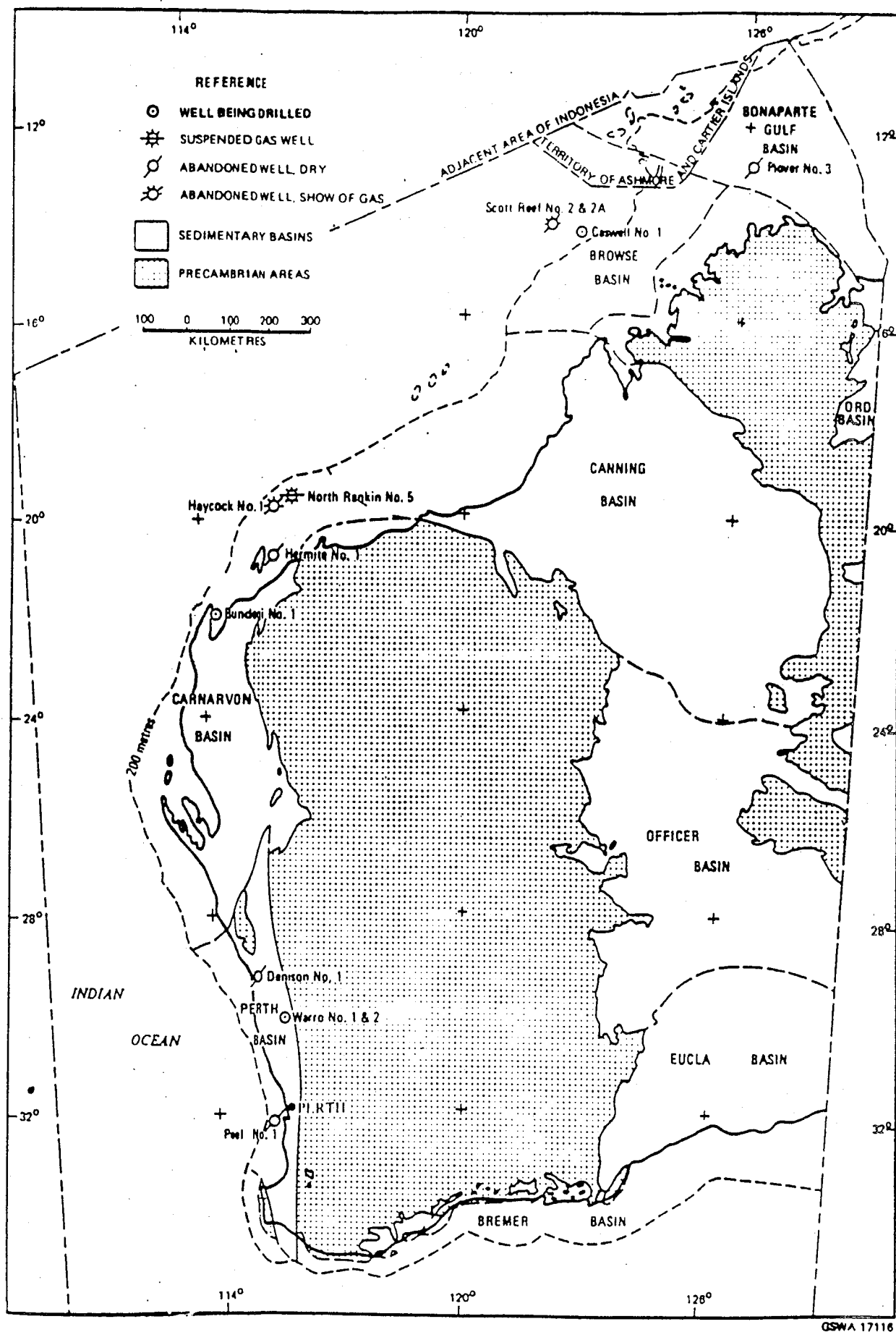


EPA Systems

FROM CTCRC 1974



Western Australia, showing Pastoral Inspectors Districts



GEOLOGICAL MAP INDICATING THE CARNARVON BASIN

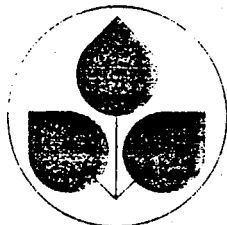
FROM DEPT OF MINES ANN. REPORT 1977

## APPENDIX 3



A SUBMISSION TO  
THE ENVIRONMENTAL PROTECTION AUTHORITY  
IN RESPONSE TO  
THE COMMITTEE OF EXPLORATION AND MINING IN  
NATIONAL PARKS AND NATURE RESERVES  
FROM THE  
AUSTRALIAN CONSERVATION FOUNDATION

20th MARCH 1987



ACF

## 1.0 INTRODUCTION

The Australian Conservation Foundation is Australia's major conservation organisation. Founded in 1965 to promote the interests of conservation, it now has approximately 13,000 members in all States and Territories. The affairs of the Foundation are governed by a Council of 35, elected by the members.

Since its foundation, the ACF has been closely involved in issues relating to national parks and nature reserves.

## 2.0 THE PURPOSE OF NATIONAL PARKS

National parks and reserves are established for a variety of reasons and serve many functions.

As such, they can be correctly defined as multiple-use areas, not areas 'locked away' as certain industry bodies would have us believe.

It must be stressed, however, that multiple-use does not mean 'open slather' and that activities permitted in these areas must be compatible with the primary purpose of the area.

If this basic principle is not adhered to, one runs the real risk of severely diminishing the multiple benefits derived from national parks and nature reserves, and in some cases losing the benefits altogether.

The definitions of the purpose of national parks and reserves are many. However, all recognised national and international definitions have common elements. These are as follows;

- conservation of species
- recreation for people
- scientific research
- education
- conservation of geological features
- conservation of historical sites, AND
- AREAS FREE FROM EXPLOITATION

Perhaps the two most relevant definitions of purpose come from the International Union for the Conservation of Nature (the IUCN), and the Council of Nature Conservation Ministers (CONCOM). Western Australia is a member of both these organizations and has adopted, supposedly, their definitions of the purpose of national parks. Due to the relevant Western Australian legislation, it is appropriate, in this case, to treat national parks and "A" class nature reserves as one and the same.

The IUCN definition is as follows:

- "National Parks are relatively large land or water areas;
1. which contain representative samples of major natural regions, features or scenery of national or international significance where plant and animal species, geomorphological sites and habitats are of special scientific, educational and recreational interest,

2. They contain one or several entire ecosystems, that are not materially altered by human exploitation and occupation.

3. The highest competent authority of the country has taken steps to prevent or eliminate as soon as possible exploitation or occupation in the area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which led to its establishment." (1)

The CONCOM definition, though more succinct supports the IUCN's basic premise of areas BEING FREE OF EXPLOITATION:

"A national park is a relatively large area set aside for its features of predominantly UNSPOILT natural landscape, flora and fauna, PERMANENTLY dedicated for public enjoyment, education and inspiration and protected from ALL INTERFERENCE OTHER THAN ESSENTIAL MANAGEMENT PRACTICES, so that its natural attributes are PRESERVED." (author's emphases). (2)

## 2.1 The Western Australian Situation

Although the Government pays lip service to these definitions, the reality is a very different story.

In terms of mining and mineral exploration, Governments have shown clearly that they are prepared to ignore these ENDORSED definitions. A list of parks and reserves currently being explored or ear-marked for exploration includes:

Rudall River National Park  
Hammersley Range National Park  
Nambung (Pinnacles) National Park  
D'Entrecasteaux National Park  
Fitzgerald River National Park, as well as  
The Queen Victoria Springs Nature Reserve.

Generally speaking, the national park and reserve system in W.A. is undermanaged and badly underfunded. As a consequence, the State has not reaped the benefits that flow from a well managed, secure system of national parks and reserves.

In short, the State Governments have chosen to place conservation well down the list of priorities.

## 3.0 BENEFITS OF A NATIONAL PARK

Although parks and reserves are set aside primarily for the conservation of species and ecosystems, benefits can flow provided these areas are well managed.

### 3.1 Socio-economic Benefits

Socio-economically, the state can benefit substantially from parks and reserves. Because we are a largely city based population, national parks and other wild areas offer an increasing number of people opportunities to alleviate the stresses compounded by an urban existence.

They offer people an opportunity to maintain both physical and mental health. They offer us opportunities to 'get back to nature', 'discover our roots', and experience inspiration. In essence, accessibility to natural areas is part of human culture.

From an economic view point, parks and reserves generate income and economic spin-offs from visits. The following figures from 1970 illustrate the demand that existed almost 20 years ago for parks, particularly in countries more heavily industrialized than ours.

Country	No. Visits to National Parks
U.S.A.	172,006,400
Japan	284,000,000 (3)

Japan estimates put the amount of money spent on such visits at approximately U.S.\$1.4 billion. (4)

In Australia figures for national park visits are also encouraging, showing a sharp increase in usage:

State	Year	Trend
NSW	1978/79 - 1981/82	doubled to 14.3 million visits
QLD	1975 - 1980	increased, 2.13m to 3.8 million (5)

Studies in Queensland (Cooloolo National Park) suggest that the economic spin-offs for local communities around national parks are substantial. (6)

After conservation and recreation, both Canada and Japan have two secondary aims for their park system:

1. the attraction of foreign tourists and foreign exchange, and
2. the development of local peripheral communities.

In addition to this income potential, the conservation of natural areas has other benefits to offer society.

### 3.2 Preservation of the Gene Pool

Perhaps the biggest benefit derived from a representative national park and reserve system is the preservation of the gene pool.

Biologists are beginning to look at the accelerating rate of species extinction as an environmental crisis. (7)

Genes cannot be manufactured at present, they can only come from nature. The maintenance of a gene pool through retention of biological diversity is essentially an investment in the future.

The maintenance of essential 'services' provided by nature is fundamental to the continuing existence of humanity. 'Services' include things such as rainfall, water quality, maintenance of

4.  
the ozone layer, soil productivity, agricultural production, forestry, fisheries and clean air.

Technology is not able to replicate the essential processes on which we rely.

The maintenance of areas in their natural state serves as 'genetic banks' for the storage of biological 'capital'. (8)

Essentially, gene pools may provide us with the means to minimise future environmental impacts, repair existing ones and adapt to future unavoidable ones.

Pharmaceutical production and its inherent benefits rely to a large extent on the maintenance of the gene pool.

It has been illustrated that 40% of all 'ethical' drugs are derived from nature. In the U.S. alone, it is estimated that the 1980 market value of these drugs was U.S.\$8 billion. (9)

In terms of drugs and pharmaceuticals, Australia is a relatively untapped source.

Obviously, future generations have a stake in stemming the impoverishment of biological resources.

The best way to protect an otherwise disappearing species would be a series of preserved habitats.

The preservation of ecological and genetic diversity that national parks and reserves can facilitate, transcends aesthetic, moral or sentimental considerations. In fact, it is a matter of absolute necessity for survival. (10)

The opportunity for education that is offered by national parks and reserves could enhance our knowledge of essential life support systems on which we rely. In a sense, these areas can be use not only as a biological bank, but as a library to counter "ecological illiteracy".

### 3.3 The Western Australian Situation

These benefits are not being realised in Western Australia. To derive benefit from our park system they must be managed and resourced appropriately. This Government, like its predecessors does not provide either adequate funding or resources to enhance the system.

For example, the States tourism promotion campaign relies heavily on the promotion of the natural environment. The posters, advertisements and brochures promote WA's natural environment as the central attraction.

In reality, the Government is doing the bare minimum to maintain the tourist industry's basic infrastructure -- national parks.

STATE	STAFF/10,000 ha	\$/ha
*NSW 83/84	1.85	10.76
VIC 83/84	3.62	10.08
*SA 83/84	6.41	2.40
WA 83/84	0.23	0.94
* incl all conservation parks and reserves (11)		

National parks and nature reserves are still being treated as a 'free good', lacking protection, management and resources needed to maintain its viability.

Because of this irresponsible attitude, the State's national parks and reserve system is vulnerable to criticism from sectors of society primarily concerned with utilisation, exploitation and profit.

#### 4.0 MINING AND AUSTRALIA'S ECONOMIC FUTURE

Australia's dependence on natural resource exploitation is seen by many as the reason for our prosperity.

Mining and mineral processing accounted for about 50% of export earnings last year.

Manufacturing accounted for a miserly 10% of export earnings.

The massive development of the mining, mineral processing and energy export sector has however been paralleled by a long term pattern of declining terms of trade.

Recent collapses in commodity prices have underlined the significance of this trend. We believe that the blow-out in the current account deficit is linked directly to a fundamental problem. The Australian economy has over developed its natural resources sector at the expense of manufacturing.

A large part of the public sector, foreign debt, for example, is directly attributable to massive infrastructure in developments for the resources boom of the early 1980s.

The solution to this problem as advocated by the Australian Mining Industry Council (AMIC) is to massively expand and diversify production of basic mineral and energy commodities. This argument is severely flawed economically, environmentally and socially.

To pursue the economic pathway of increased mineral exports is simply to entrench the structural economic crisis that we now face.

Insufficient capital resources are being put into the development of an environmentally appropriate export competitive manufacturing sector because the financial structure of the economy continues to favour the resource sector.

The mining industry is using Australia's present economic situation as a 'lever' to gain access to areas such as national parks. The expansion of mining to include national parks and nature reserves will not cure Australia's economic problems. Any short term benefits derived from mining in national parks would pale in significance when compared with the loss of the integrity of the national park system.

The national park and nature reserve system constitutes one of the State's most precious natural resources. The ACF believes that sacrificing the potential long term sustainable benefits these areas have to offer society for the sake of purely short term monetary gain would be extremely irresponsible.

#### 5.0 THE INCOMPATIBILITY OF MINING WITH NATIONAL PARKS AND NATURE RESERVES

By its very nature, mining destroys the physical environment. How destructive it need be depends on the method and scale of mining, but in some degree at least, it involves scarring the earth, and usually the accumulation or production of wastes, often toxic in character. (12)

A change to the physical and biological characteristics of a local area is certain, and it will certainly be for the worse, aesthetically and in terms of its effects on existing ecosystems.

Exploration also causes considerable damage to natural areas. Arid lands in particular are badly affected. Seismic lines already scar large areas of W.A., including several parks and reserves. Rehabilitation of these has been largely ignored. It is extremely difficult to rehabilitate them in any case.

#### 6.0 THE COMMITTEE ON EXPLORATION AND MINING IN NATIONAL PARKS AND NATURE RESERVES

This committee was established to report on appropriate Government policy concerning exploration and mining activities in national parks and nature reserves in W.A.,.

Broadly summarised, the Committee's report, known as the Bailey Report, recommends allowing mineral exploration and mining in the State's National park and nature reserve system.

##### 6.1 Terms of Reference

Although the recommendations of the Bailey Report are unacceptable, they are not unexpected.

From the time that the terms of reference of the Committee were announced, it was obvious that THE GOVERNMENT HAD EVERY INTENTION of allowing mineral exploration and by association, full-scale mining in W.A.'s national park and reserve system.



Basically, the terms of reference called for a review of current regulations that allow mining and exploration in our parks and reserves.

Summarised, the terms of reference are:

- to examine the adequacy of the Mining Act and regulations to control the environmental impact of exploration and mining in national parks and reserves,

- to examine procedures to be followed to set and review environmental conditions placed on mining and exploration in national parks and reserves,

- the means of authorising the mining industry's access to national parks and reserves, and

- whether exploration should be allowed in national parks and reserves without a tenement being held.

NOWHERE in the terms of reference is the option of NOT allowing mining and exploration considered.

NOWHERE is there any attempt to alter the historic LEGISLATIVE BIAS that has favoured the mining industry in matters of land use and access.

The Committee ASSUMES from the outset that mining and exploration are APPROPRIATE LAND USES to be carried out in a national park or reserve. The PURPOSE for which national parks and reserves are gazetted is IGNORED by the Bailey Committee from the outset.

This being the case, the establishment of the Committee can only be interpreted as an attempt to satisfy the aspirations of the mining lobby at the expense of our natural heritage.

By ignoring the purpose of national parks and reserves, the State Government has successfully LIMITED THE AGENDA for debate to only THEIR PREFERRED OPTIONS.

The Bailey report cannot be described as a policy review for this reason, but merely an attempt to FORMALIZE and ENTRENCH the EXISTING POLICY inherited from the Court administration.

## 6.2 The Recommendations

The Australian Conservation Foundation, the Conservation Council of Western Australia and other conservation groups are opposed to mineral or petroleum exploration or production in national parks, nature reserves, other conservation areas and state forests.

At present in WA, access to explore in national parks and reserves is granted on an ad hoc basis. The Committee's recommendations seek to define a procedure by which these areas are opened formally for exploration.

Should the Government adopt this procedure as policy, it could only be interpreted as an attempt to legitimise the mining industry's claim that it has a 'right' of access to minerals where ever they occur in the State.

Exploration being the first step in full production mining, the Report's recommendations would also undermine the 1986 legislative amendment to the Mining Act which now requires the approval of Parliament before production mining is allowed in any of the State's National Parks or 'A' Class Reserves.

The ACF believes that the Government should build on this earlier initiative. National Parks and other conservation areas need substantially more protection not less.

Although the Bailey Report contains 18 recommendations, 5 are of particular concern to the ACF.

### 6.3 Recommendation 1

"The Committee recommends that geoscientific survey work should be permitted without holding an exploration license in National Parks and A class nature reserves under permit issued by the Minister for Conservation and Land Management."

This form of survey work is the first stage of defining an ore body. As such it constitutes the 'thin edge of the wedge' being the initial stage of what could be full scale production mining.

Exploration can be destructive in its own right. Vehicular access, test drilling, associated infrastructure and general sample collection are destructive by their very nature and are therefore unacceptable inside national parks and nature reserves.

Being concerned with the presence/absence of marketable minerals, such a survey would not contribute in any way to the improved management of conservation area and would be of little value to anyone other than those who seek to exploit mineral deposits.

If any survey work is to be carried out in a National Park or Reserve it should be done by the National Parks and Nature Conservation Authority (NPNCA) as part of a management plan.

This recommendation would allow survey work to be carried out by private mining companies or the Department of Mines (DOM) without any public consultation.

### 6.4 Recommendation 2

"The Committee recommends that exploration licenses should not be granted over a National Park or A class nature reserve unless that park or reserve has individually either been declared open for the granting of exploration licenses or reclassified as provided for in Recommendation 4. The Committee further recommends that areas of the highest biological or landscape value should not be declared open for the granting of exploration licenses."

This recommendation is the basic premise of the report. In it the committee advocates allowing exploration programmes into the State's National Parks and Reserves. The Committee attempts to justify this stance with assurances that such activities will not be permitted in the areas of highest value. How can this be guaranteed?

In essence this recommendation contradicts the statement on page 8 of the report which supports the International Union for the Conservation of Nature's (IUCN) assertion that conservation areas should include and protect whole ecosystems.

What recommendation 2 advocates is a park system pock marked and scarred by exploration activities. Such activities would be supposedly confined to areas of 'lesser value'. This is the identical argument used by GeoPeko to gain access to Stage 3 of Kakadu National Park.

The argument that parts of national parks and nature reserves have 'less value' is irrelevant if a park or reserve is designed to protect an ecosystem or part thereof. 'Lesser value' is a purely subjective term with no justification in this context as each section of a national park or nature reserve is of equal value because each plays a vital role in maintaining the health and integrity of the whole area.

### 6.5 Recommendation 3

"The Committee recommends that if the Mines Department believes that a particular National Park or A Class Nature Reserve or part thereof is of sufficient prospectivity, then they should submit to the Environmental Protection Authority (EPA) a proposal to open the area for the granting of exploration licenses. A programme of non-destructive research should then be carried out with the objective of compiling an inventory of the biological, landscape and geological resources of the area."

This recommendation vaguely defines a procedure whereby mining companies or the DOM can apply to have a park (or part thereof) opened. It advocates an additional administrative 'loop' to the existing mechanism for gaining access to explore in a national park or nature reserve.

The purpose of this loop is an attempt to reassure the sceptical that damage to an area will be minimal. An undefined 'inventory' is proposed which would involve a 'non-destructive' programme of research.

There are several problems with this proposal.

Firstly, and most importantly, by approving such a recommendation the Government would be putting in place a formal mechanism by which an exploitative industry could gain access to a national park or reserve. Where as at present no such mechanism exists this proposal would have the effect of appearing to legitimise the industry's self-perceived 'right' to get access to these areas.

Secondly, the task of compiling the inventory is given to private consulting firms chosen by the proponent, be it the DOM or a mining company. The objectivity of such an inventory compiled in this manner is questionable.

Thirdly, the compilation of an inventory would be co-ordinated by an inter-departmental committee consisting of officers of the Department of Conservation and Land Management (CALM), the Department of Conservation and Environment (DCE) and incredibly the DOM. The committee would assess the inventory before it is submitted to the EPA to make its recommendations to the Minister for CALM. There are several major problems arising from the procedure and structure of this co-ordinating committee.

If the inventory is to be both objective and beneficial to the management of the area, the EPA in conjunction with officers of the NPNCA should be responsible for its compilation and it should be made available for public comment as part of a management plan.

Why is the DOM suggested for inclusion on the committee? It should be excluded because of its vested interest.

The DOM's inclusion on this committee amounts to nothing more than insurance for the proponent. If there was disagreement over the assessment of a consultant's inventory prior to its submission to the EPA, it is unlikely that anything less than a consensus would be acceptable. Thus the DOM on behalf of either its client or itself could substantially influence the assessment in favour of opening a park or reserve.

#### 6.6 Recommendation 4

"The Committee recommends that in reporting to government the Environmental Protection Authority would recommend:

that the area in question not be declared open for the granting of exploration licences if it is considered to be of the highest biological or landscape value; or

that the area in question be declared open for the granting of exploration licenses subject to appropriate conditions but remain part of the National Park or nature reserve if it is considered to be of intermediate biological and landscape value; or

that the area in question be removed from the national park and A class nature reserve system if it is considered to be of low biological and landscape value."

The clear implication of this recommendation is that the committee has opted for a grading of areas within parks and reserves to facilitate exploration. In doing so they recommend the EXCISION of areas of a national park or reserve considered to be of low biological or landscape value. Criteria to define what is of low value cannot be enshrined in legislation. The opportunity for abuse is obvious.

Additional values not taken into account include economic, ecological, scientific, educational and recreational.

Similar ambiguity applies to areas subjectively termed 'intermediate' biological and landscape value.

The adoption of this recommendation would make the concept of 'swiss cheese' parks and reserves a reality in WA.

#### 6.7 Recommendation 11

"The committee recommends that the Government initiate a public review of the national park and nature reserve boundaries, with a view to rationalization. This process should have as its primary objective the setting of ecologically sensible and manageable boundaries while maintaining the values and area of the reserve system. A secondary objective would be to avoid areas of high prospectivity wherever this can be accomplished without prejudice to the primary objective.

The Committee further recommends that the review proposed be undertaken by the Department of Conservation and Land Management in liaison with the Mines Department and Department of Conservation and Environment."

This recommendation is extremely dangerous because rationalisation of boundaries will not be carried out on purely ecological grounds but will also aim to avoid areas of mineral prospectivity.

The following points about this recommendation must be made,

- \* criteria for such a rationalisation can not be entrenched in legislation and is a matter of administration. Therefore it is open to alteration without public consultation and can be abused.

- \* a future government could use rationalisation to excise areas from national parks and nature reserves to allow access to mineral deposits defined earlier under recommendations 1, 2, 3, and 4 ,

- \* consistantly the Report refuses to acknowledge the influence of the mining industry. The proposed formula for the rationalisation of boundaries could be used by the industry as a vehicle to gain access to deposits currently inside Parks and reserves.

- \* finally, the undefined procedure to rationalise park boundaries would no doubt include a direct input from the DOM which is totally unacceptable. National parks and nature reserves must be managed by authorities that would ensure that these areas are managed in a manner consistant with their purpose.

#### 6.8 'B' and 'C' Class Nature Reserves

The Committee recommends that geo-scientific survey work, ground disturbing exploration and productive mining activities should be permitted in these areas.

The Committee assumes that by virtue of their classification, 'B' and 'C' class reserves are of lesser value than other

conservation areas. This is not necessarily the case.

Like national parks and 'A' class reserves, 'B' and 'C' class reserves are vested under the Land Act (1933) for a specific purpose, one being the conservation of flora and fauna.

Once again the Bailey Report ignores the concept of purpose by recommending these areas be explored and mined. Mining and exploration is totally incompatible with the conservation of flora and fauna and as such should not be permitted in these areas.

For this reason, the ACF does not make a distinction between 'A', 'B' or 'C' class reserves in this instance.

Another important criticism of this recommendation is the total absence of public consultation regarding permission to explore and mine in these areas.

#### 6.9 Proposed National Parks and Nature Reserves

No mining or exploration should be permitted in areas proposed for national park, 'A', 'B' or 'C' class reservation. All such areas should be given the protection necessary to maintain their viability, integrity and the purpose for their pending reservation.

#### 7.0 ADDITIONAL POINTS

\* The Petroleum Act is not addressed by the Committee even though Petroleum exploration, one of the most destructive forms of exploration. Petroleum leases cover large areas of the State including extensive areas of national parks and reserves.

\* It is apparent that the committee has attempted to separate mineral exploration from production mining by recommending a different approval mechanism for exploration. As Kakadu National Park has demonstrated the mining industry is committed to getting access to reserved areas with a view to mine. It is unrealistic to suggest, as the committee does, that if an ore body is defined it may not be mined. Indeed if mining is not the ultimate aim, why allow access to explore in the first instance?

The Committee presents on page 56 what it regards as 'the simple choice'. Either we accept these recommendations and 'thus achieve a more representative reserve system', or we strive for greater security with no hope of getting any more national parks and reserves.

What the Committee is saying is that we should compromise our existing national parks and reserves in the faint hope with NO guarantee that additional areas will be gazetted. This would give us a system of 'swiss cheese' reserves, severely diminished in value and would have set a disastrous precedent for future national parks and reserves. The ACF does not accept such a compromise.

Our aim should be to achieve the HIGHEST standard of security,

excluding exploration and mining in accordance with IUCN and CONCOM criteria. We must secure our existing national parks and nature reserves first thus avoiding a dangerous precedent and giving us a sound basis to get other areas secured.

The public will demand additional areas in the future. Areas of significance will speak for themselves. The Conservation Through Reserves Committee proposals give us a sound basis from which to add to our existing reserve system.

The Bailey Committee has attempted to make the compromise look as rational and appealing as possible. However, the vague assurances given in its recommendations are totally unrealistic and would open up of our national parks and reserves to mining.

#### 8.0 CONSTITUTIONAL AMENDMENT, THE ULTIMATE SECURITY

The combined conservation groups in WA have proposed that the Government amend the State Constitution Act and insert a 'No Mining' provision which would prohibit exploration and production mining from the State's conservation areas.

Unlike the Federal Constitution, the State legislation would not require a referendum to insert a 'No Mining' provision. However, if it were inserted in a certain manner, such a provision would require a referendum for repeal or amendment.

The ACF and Conservation Council have received sound legal advice on the matter and there appears to be nothing stopping the Government, other than lack of resolve and pressure from the mining industry, from moving to amend the WA constitution in this manner.

A 'No Mining' clause entrenched in section 73(2)(e) of the State Constitution Act is consistent with the conservation movement's policy. It would provide our currently vulnerable park and reserve system with the security it needs to survive.

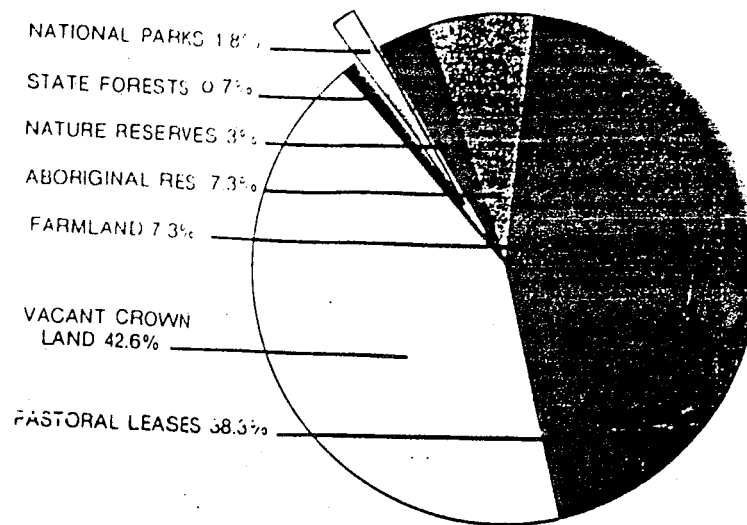
The mining industry has been campaigning to gain access to our few parks and reserves. Now is not the time for the government to back down. The Government should move to enhance the security of our conservation areas.

Furthermore, the Federal Government's failure to implement a gold tax will increase incentive to explore for and mine gold deposits which will further pressure our park system. The recent pegging of the Fitzgerald River National Park is a case in point.

By proposing a Constitutional amendment we have offered the Government a viable constructive alternative to the Bailey Committee's recommendations. Such an amendment is consistent with both the Department of CALM's policy on mining in National Parks and Reserves and all the nationally and internationally recognised definitions of the purpose of such areas.

Only 1.8% of WA is gazetted national park. If A class reserves are added, the figure 'jumps' to 5.6%. The mining industry has access

to all pastoral leases and areas of vacant crown land, about 81% of the State. On freehold land, the miners can mine at will and can mine subject to special conditions.



Land use in Western Australia (13)

## 2.0 PUBLIC ACCESS

The industry has incorrectly accused the environmentalists of wanting increasing areas of the state 'locked away'. These accusations are in response to moves by a broad range of conservation organisations and individuals seeking to have more areas set aside as national parks free of exploitation.

National parks are for the benefit of ALL people. Provided some basic regulations are respected, there is no restriction of access to any individual. These areas can hardly be described as 'locked away'.

However, should a mine be established in a park, accessibility to the public would be severely restricted. Bauxite mining in the Jarrah Forest is a case in point. Large areas of public forest have been alienated from public use by these operations.

A similar situation would arise if national parks were mined. Large areas of a park including the actual mine site, associated infrastructure (such as areas devoted to haulage roads, conveyor belts, overburden and waste dumps) would be off limits to the public.

After the operation becomes uneconomic, and it must be pointed out that a mines 'life' varies from decades to centuries, areas can NOT be returned to their NATURAL state.



The industry term rehabilitation must be distinguished from restoration. Rehabilitation merely refers to stabilization and the establishment of a vegetative cover. It does NOT mean the area will be returned to its natural condition. The best we can expect is that an area will vaguely resemble the original.

Thus areas subjected to mining would be diminished in value for recreation, conservation, scientific study of natural ecology, education and gene pool preservation.

#### 10.0 SUMMARY

Three points in summary;

- if a national park or a reserve is to fulfill its role and provide the benefits to society it is capable of generating, must be protected from inappropriate landuses such as mining. Only when such security is provided can the long term viability of these areas be guaranteed.

- Mining and associated activities by their very nature are incompatible land uses inside a national park or reserve. Conservation is a valid and increasingly necessary land use in itself. Gone are the days when parks and reserves were declared over lands designated 'worthless' by a society dominated by the pioneer mentality (though many would say that mentality persists today).

- For the good of all Australians, present and future, long term land use strategies based on SUSTAINABILITY must replace the short term pragmatism that dominates present decisions, as epitomised by the recommendations of the Bailey Committee.

#### 11.0 RECOMMENDATIONS

The ACF recommends that:

1. the State Government reject the recommendations of the Committee on Exploration and Mining in National Parks and Nature Reserves,

2. the State Government should take immediate steps to enact legislation prohibiting exploration and mining in the State's national parks and reserves,

3. the State Government should publicly re-affirm its commitment to national and international definitions of national parks and nature reserves which it has previously endorsed,

4. the State Government should take immediate steps to ensure that the State's national parks and nature reserves are managed in accordance with their stated purpose, and that adequate resources and funding are allocated to the relevant department to guarantee the system's long term viability,

5. the State Government should gazette all remaining EPA 'Red Book' recommendations and other areas of conservation significance at the earliest possible date and provide these

areas with immediate protection from inappropriate land uses such as mining and exploration,

**6. the State Government should commence negotiations for the relinquishment of all existing mining and exploration tenements in national parks, nature reserves and other areas of conservation significance as per recommendation 5.**

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## 12.0 BIBLIOGRAPHY

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2. McMichael, D.F. "An International Perspective," in The Value of National Parks." Preceedings from the Second National Wilderness Conference. Victoria, 1979. ACF Pp 36-43.
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APPENDIX 4

#### 6. PRESERVATION OF NATURAL STATE PENDING REVIEW:

For each natural area in the identification program, the current natural state prevailing at the commencement of the identification program, should be preserved until either -

- a) the identification process is completed in respect of that natural area, or
- b) where the area is nominated for inclusion on the World Heritage list, the nomination has been duly considered and a decision made by the World Heritage Committee as to its inclusion or non-inclusion on the World Heritage list, whichever comes last in time.

#### 7. RESTRICTION ON ACTIVITIES IN NATURAL AREAS PENDING REVIEW:

No action or activity should be undertaken or caused to be undertaken in any natural area, in the identification program, which would or would be likely to impair the area to such an extent that a subsequent nomination of the area for inclusion on the world heritage list, if forthcoming, would or would be likely to be rejected as a result of the impairment to the area.

#### 8. STATE AND TERRITORY LEGISLATION:

Each State and Territory Government should enact legislation similar in effect to the World Heritage Properties Conservation Act (Cth) to protect each area, within its jurisdiction which has national and/or world significance including world heritage areas.

#### 9. COMMONWEALTH-STATE CO-OPERATION:

The Australian Government, and each of the State and Territory governments should co-operate each with the other to protect natural areas of national and/or world heritage value and in particular in the identification and nomination of natural areas for inclusion on the World Heritage list.

#### 10. IN THE EVENT OF NON CO-OPERATION BY STATES OR TERRITORIES:

If any State or Territory Government fails to co-operate with respect to any natural area of national and/or world heritage value, the Australian Government should, in accordance with its national and international obligations, exercise its constitutional powers to protect that area by invoking the provisions of legislation such as the World Heritage Properties Conservation Act and/or by such other means, including financial, as may be appropriate.

#### 11. IN THE EVENT OF NON CO-OPERATION BY AUSTRALIAN GOVERNMENT

If the Australian Government fails to co-operate with respect to any natural area of national and/or world heritage value within the jurisdiction of a State or Territory, the relevant State or Territory Government should protect that natural area by whatever means as are appropriate including legislative protection.

#### 12. PROMOTION OF WORLD HERITAGE AND WORLD HERITAGE AREAS:

The Australian Government and each of the State and Territory Governments should promote, both in Australia and overseas, public understanding and appreciation of the concept of world heritage, in general, and of the world heritage areas in Australia, in particular.

#### 13. TOURISM

Tourism that is compatible with the ongoing protection of the natural areas should be encouraged in and around natural areas of national and/or world heritage value.

## SUPPORTING STATEMENT

### 1. IDENTIFICATION OF WORLD HERITAGE AREAS

The Australian Government has not undertaken an adequate review of natural areas in Australia in order to identify possible World Heritage areas. Nominations to date have been sporadic and on an ad hoc basis.

The Convention concerning the protection of the World's Cultural and Natural Heritage, 1972, requires the Australian Government, as a party to the Convention, to identify and delineate areas of natural heritage in Australia (Arts. 3,4,5) and to submit them for inclusion on the World Heritage list (Art.11). This identification program must commence immediately, before the natural areas are modified to such an extent that they lost their national and world heritage value.

In 1979, the Australian Conservation Foundation undertook a comprehensive process of review of natural areas in Australia culminating in an initial inventory of 99 sites of national and world heritage value (1). This report and revised ACF lists should form the basis to the Australian Government's identification program.

### 2. ASSISTANCE OF STATE GOVERNMENTS AND PUBLIC:

In order to foster co-operation and to obtain as much relevant information as possible on each of the natural areas, in the identification program, the Australian Government should work together with the States and Territories and members of the public in the identification program. Governmental authorities and departments concerned with the protection of the environment and the non-governmental environment movement can also provide invaluable assistance.

### 3. NOMINATION OF IDENTIFIED WORLD HERITAGE AREAS:

Once an area has been identified as being eligible for World Heritage listing, it should be nominated as soon as a supporting statement has been prepared. Nomination of any particular area should not be delayed until the whole identification program is completed.

### 4. ENSURING NOMINATED AREAS ARE LISTED:

Once a natural area is nominated for inclusion on the World Heritage list, every effort should be made to ensure that the area is listed. This may be done initially by ensuring that the submission supporting the nomination of the area is as well-researched, well-presented and persuasive as possible and subsequently by lobbying the relevant decision-makers to support the nomination. This is the joint responsibility of all those involved in the identification program, but in particular the Australian and State and Territory Governments.

### 5. PROTECTION OF NATURAL AREAS

Natural areas which are identified as eligible for listing on the World Heritage list (whether or not they are ultimately listed) are clearly of national significance and should be protected. Where one area is not substantially modified, it is best protected by granting it national park status. Where the area is substantially modified, another reserve or zoning status might be more appropriate, providing this status adequately preserves the natural and other values of the area.

### 6. PRESERVATION OF NATURAL STATE PENDING REVIEW:

The whole process of identification and subsequent nomination of world heritage areas would be frustrated if any natural area being reviewed were to be modified before the process is completed with respect to that area. It is, therefore, necessary to require the preservation of the natural status quo pending the outcome of the process.

### 7. RESTRICTION ON ACTIVITIES:

There should not be an absolute prohibition of all activities in the natural areas, in the identification program, as this would be unnecessarily restrictive. However, the natural status quo needs to be preserved pending the outcome of the program. The natural areas should thus be protected from actions or activities which would or would likely be sufficiently destructive or extensive (viewed cumulatively in time and space) that they might result in

the area no longer being of sufficient world heritage value to be included on the World Heritage list.

## 8. STATE AND TERRITORY LEGISLATION

Whilst ultimate and on-going protection of areas of natural and/or world significance can only come from a genuine caring and responsible attitude concerning such areas by humans, as an initial step the areas should be protected by legislation. Recent experience shows that without legislative protection these areas have been and will continue to be damaged. Legislation can also be used as a catalyst for changing attitudes to be more caring and responsible concerning natural areas.

## 9. COMMONWEALTH-STATE CO-OPERATION

Experience in the past with respect to important natural areas shows that tensions and conflicts can develop over intervention by an Australian Government to protect a natural area within State or Territory boundaries. To avoid such tensions and conflicts in the future, both the Australian Government and each of the State and Territory Governments must co-operate with one another and work together as a team to fulfil the nation's obligations to protect the nation's and the world's heritage occurring within Australia.

## 10. IN THE EVENT OF NON CO-OPERATION BY STATES OR TERRITORIES:

Notwithstanding the advocacy of co-operation, a rift may develop between the Australian Government and a State or Territory Government threatening a natural area. In such an event, Australia as a nation would be in breach of its international obligations (2) if it failed to intervene and protect a natural area of world heritage status. The Australian Government should employ all the legal, administrative and financial measures as are available to it to protect the area.

## 11. IN THE EVENT OF NON CO-OPERATION BY AUSTRALIAN GOVERNMENT

If, for any reason, the Australian Government is unwilling to co-operate in the protection of a natural area of national and/or world significance, this does not mean that the State or Territory Government in whose jurisdiction the area lies need not also protect the natural area. It is still the responsibility of the relevant State or Territory Government to protect the nation's and the world's heritage and it should do so by whatever means as are appropriate. The most effective means is usually to dedicate the area as a national park.

## 12. PROMOTION OF WORLD HERITAGE AND WORLD HERITAGE AREAS:

The preservation, both in the short-term and long-term, of world heritage areas depends upon public support. By an on-going program of environmental education, people may come to an understanding and appreciation of the value of world heritage area and of the concept of world heritage. It is an object of the non-governmental environmental movement to promote this appreciation and understanding, but governments too should actively involve themselves in this environmental education process. The Australian Government should, as the nation's representative, emphasize the national and international value of world heritage areas and that all Australians, whether in the same State or Territory as the areas or in another, should feel proud and privileged that the areas occur in Australia and feel a special responsibility for the protection of the areas.

## 13. TOURISM:

An important means of fostering an appreciation of world heritage areas is to encourage both Australian and overseas visitors to visit the areas. Providing visitation and associated development are carefully regulated, tourism and protection of the natural area are compatible. Management plans should be prepared for all areas as soon as possible and should be subject to public comment.

## REFERENCES

- (1) Australian Conservation Foundation, Australia's Natural Heritage
- (2) Commonwealth of Australia v State of Tasmania (Franklin Dam Case) 46 ALR 625 per Mason, Murphy, Brennan and Deane JJ.

ADOPTED: Council Meeting No. 49 17 March, 1985 (C49:12)

## APPENDIX 5

DRAFT LEGISLATION

SHARK BAY MARINE AND TERRESTRIAL PARK BILL 1987

A BILL FOR

AN ACT to establish a Shark Bay Marine and Terrestrial Park and to make provision for the protection and management of the Shark Bay Region and any matters concerned therewith.

PART I PRELIMINARY

Title

1. This Act may be cited as the Shark Bay Marine and Terrestrial Park Act 1987.

Commencement

2. This Act shall come into operation on the day fixed by proclamation.

Interpretation

3.(1) In this Act, unless the contrary intention appears -

"agreement" includes a treaty or convention;

"aircraft" means a machine or apparatus that can derive support in the atmosphere from the reactions of the air or from buoyancy, but does not include a hovercraft;

"animal" means any member, alive or dead, of the animal kingdom (other than man), and includes -

(a) eggs or parts of eggs; and

(b) the skin, feathers, shell or any other part of an animal;

"Australian coastal sea" means any sea or waters the sovereignty in respect of which is declared by the Seas and Submerged Lands Act 1973 to be vested in the Crown.

"Authority" means the Shark Bay Marine and Terrestrial Park Authority established by this Act;

"Chairperson" means the Chairperson of the Authority;

"Committee" means the Shark Bay Marine and Terrestrial Park Consultative Committee established by this Act;

"continental shelf of Australia" has the same meaning as in the Seas and submerged Lands Act 1973;

"Convenor" means the convenor of the Shark Bay Marine and Terrestrial Park Consultative Committee established by this Act;

"Director" means the Director of National Parks and Wildlife;

"hovercraft" means a vehicle designed to be supported on a cushion of air;

"inspector" means -

(a) a person appointed as an inspector under section 43; or

(b) a person referred to in section 44;

"Marine and Terrestrial Park" means the Shark Bay Marine and Terrestrial Park established by this Act;

"member" means a member of the Authority;

"member of the Committee" means member of the Consultative Committee established by this Act;

"the Ministers" means the Commonwealth Minister for Environment, the Commonwealth Minister for Science, the Western Australian Minister for Environment and the Western Australian Minister for Tourism, or their deputies.



"National Parks Act" means the National Parks and Wildlife Conservation Act 1975;

"operations for the recovery of minerals" includes prospecting or exploration for minerals;

"operation for the recovery of petroleum" includes prospecting or exploration for petroleum;

"park" means a park declared under the National Parks Act;

"part-time member" means a member of the Authority appointed as a part-time member;

"plan of management" means a plan of management under the National Parks Act;

"plant" means any member, alive or dead, of the plant kingdom or of the fungus kingdom, and includes seeds and parts of plants;

"regulations" means regulations made and in force under this Act;

"reserve" means a reserve declared under the National Parks Act;

"right" does not include sovereign rights;

"special zone" means a zone declared by a zoning plan to be a special zone;

"Shark Bay Region" means the area described in the schedule;

"this Act" includes the regulations;

"vessel" means a ship, boat, raft or pontoon or any other thing capable of carrying persons or goods through or on water, and includes a hovercraft;

"vehicle" includes

(a) every conveyance, not being a train, vessel or aircraft, and every object capable of being propelled or drawn, on wheels or tracks, by any means; and

(b) where the context permits, an animal being driven or ridden;

"zone" means a zone created by a zoning plan;

"zoning plan" means a zoning plan prepared in pursuance of section 32.

(2) In this Act, a reference to the sea-bed includes a reference to the surface of any coral formation, and a reference to the sub-soil includes a reference to the coral beneath the surface of any such formation.

(3) In this Act, a reference to public notice is a reference to notice published -

(a) in the Gazette; and

(b) in each State and Territory, in a newspaper circulating throughout that State or Territory.

#### Crown Bound

4. This Act binds the Crown in right of the Commonwealth or of any State.

Where the provisions of this Act are inconsistent with any of the provisions of any other Act, the provisions of this Act shall prevail.

Object of this Act

5. (1) The chief objects of this Act are to preserve Shark Bay marine and terrestrial environments in their natural state and to provide a means to achieve harmonisation between environmental protection and the provision for the social and economic needs of the community; and to make provision for and in relation to the establishment, control, care and development of a marine and terrestrial park in the Shark Bay Region in accordance with the provisions of this Act.

(2) It is the intention of the Parliament that this Act shall have effect in respect of a part of the Shark Bay Region or a part of the Marine and Terrestrial Park (whether or not separately declared under Section 31) to the fullest extent that the Constitution permits irrespective of the extent of the effect of the operations of this Act in respect of any other part of the Shark Bay Region or of the Marine and Terrestrial Park.

PART 11 - ESTABLISHMENT, FUNCTIONS AND POWERS OF THE  
SHARK BAY MARINE AND TERRESTRIAL PARK AUTHORITY

Shark Bay Marine and Terrestrial Park Authority

6. There is established by this Act an Authority by the name of the Shark Bay Marine and Terrestrial Park Authority.

Functions of Authority

7. (1) The functions of the Authority are -

- (a) to make recommendations to the Minister in relation to the care and development of the Marine and Terrestrial Park including recommendations from time to time, as to -
  - (i) the areas that should be declared to be parts of the Marine and Terrestrial Park and
  - (ii) the regulations that should be made under this Act;
- (b) to carry out by itself or in co-operation with other institutions and persons, and to arrange for any other institutions or persons to carry out, research and investigations relevant to the Marine and Terrestrial Park;
- (c) to prepare zoning plans for the Marine and Terrestrial Park in accordance with Part V;
- (ca) to furnish information and advice to the Minister in respect of matters relating to the Marine and Terrestrial Park, including -
  - (I) information and advice in relation to any agreement (including any proposed agreement) between the Commonwealth and Western Australia on such matters;
  - (ii) information and advice on the following matters;
    - (A) whether the Commonwealth should grant financial assistance to Western Australia in respect of a matter relating to the Marine and Terrestrial Park;
    - (B) the amount and allocation of such assistance;
    - (C) the terms and conditions (if any) on which such assistance should be granted; and
- (iii) information and advice on the following matters;
  - (A) whether it is desirable that Western Australia should make payment

- to the Authority in respect of a matter relating to the Marine and Terrestrial Park;
- (B) the amount and allocation of such payment;
  - (C) the terms and conditions (if any) on which such payment should be given;
  - (cb) to receive and disburse moneys appropriated by the Parliament for payment to the Authority for the purpose of payment of the moneys to Western Australia by way of financial assistance to Western Australia in respect of matters that relate to the Marine and Terrestrial Park;
  - (cc) to receive and disburse moneys paid to the Authority by Western Australia under an agreement between -
    - (i) the Commonwealth and Western Australia;
    - (ii) Western Australia and the Authority; or
    - (iii) the Commonwealth, Western Australia and the Authority
  - (cd) to provide, and arrange for the provision of, educational, advisory and information services relating to the Marine and Terrestrial Park;
  - (d) such functions relating to the Marine and Terrestrial Park as are provided for by the regulations;
  - (e) to prepare a nomination of the Shark Bay Marine and Terrestrial Park or region for inclusion in the World Heritage List; and  
do all things necessary to ensure that the requirements for nomination are met; and  
ensure that prior to consideration of the nomination no detriment or degradation occurs in or to the Shark Bay Marine and Terrestrial Park;
  - (f) to recommend to the Minister that Interim Protection Orders be made for protection of the Shark Bay Region.

#### Powers of Authority

8. (1) The Authority may do all things that are necessary or convenient to be done for or in connexion with the performance of its functions and, in particular, may -
- (a) enter into contracts;
  - (b) occupy, use and control any land or building owned or held under lease by the Commonwealth and made available for the purposes of the Authority;
  - (c) acquire, hold and dispose of real or personal property;

- (c) acquire, hold and dispose of real or personal property;
- (d) accept gifts, devises and bequests, made to the Authority, whether on trust or otherwise, and to act as trustee of moneys or other property vested in the Authority upon trust; and
- (e) do anything incidental to any of its powers.

(2) Notwithstanding anything contained in this Act, any moneys or property vested in the Authority upon trust shall be dealt with in accordance with the powers and duties of the Authority as trustee.

(3) The Authority has power to perform any of its functions in co-operation with Western Australia, with an authority of that State or with a local governing body in that State.

#### Part 111 - CONSTITUTION AND MEETINGS OF THE AUTHORITY

##### Nature of Authority

##### 9. (1) The Authority -

- (a) is a body corporate with perpetual succession;
- (b) shall have a common seal; and
- (c) may sue and be sued in its corporate name.

(2) All courts, judges and persons acting judicially shall take judicial notice of the common seal of the Authority affixed to a document and shall presume that it was duly affixed.

##### Membership of Authority

##### 10. (1) The Authority shall consist of a Chairperson and 2 other members.

(2) The members shall be appointed by the Governor-General, the Chairperson being appointed as a full-time member and the other members being appointed as part-time members.

(3) Subject to sub-section (4), one of the part-time members shall be a person appointed on the nomination of the Western Australian Government

##### (4) Where -

- (a) the Commonwealth Government has invited the Western Australian Government to nominate to the Minister a person to be appointed to a vacant office of part-time member (whether or not the office has been previously filled); and
  - (b) at the expiration of 3 months after the invitation, the Western Australian Government has not nominated a person having the qualifications referred to in sub-section (5) for appointment to the office,
- a person other than a person nominated by the Western Australian Government may be appointed to the office notwithstanding that, upon the appointment, there will not be a part-time member who is a person appointed on the nomination of the Western Australian Government.

- (5) A member shall be a person with qualifications or extensive experience in a field related to the function of the Authority.
- (6) The performance of the functions or the exercise of the powers of the Authority is not affected by reason only of there being a vacancy or vacancies in the membership of the Authority.
- (7) The appointment of a member is not invalidated and shall not be called in question by reason of a defect or irregularity in, or in connexion with, the member's selection or appointment.

Period of appointment of members of Authority

11.(1) Subject to sub-section (2), a member shall be appointed for such period, not exceeding 5 years, as is specified in the instrument of appointment, but is eligible for re-appointment.

(2) A person who has attained the age of 65 years shall not be appointed or re-appointed as the Chairperson and a person shall not be appointed or re-appointed as the Chairperson for a period that extends beyond the date on which he/she will attain the age of 65 years.

Remuneration and allowances of members of Authority

12. (1) A member shall be paid such remuneration as is determined by the Remuneration Tribunal, but, if no determination of that remuneration by the Tribunal is in operation, he shall be paid such remuneration as is prescribed.

(2) A member shall be paid such allowances as are prescribed.

(3) This section has effect subject to the Remuneration Tribunals Act 1973.

Leave of absence of Chairperson

13. The Minister may grant leave of absence to the Chairperson on such terms and conditions as to remuneration or otherwise as the Minister determines.

Resignation of members of Authority

14. A member may resign his office by writing signed by him and delivered to the Governor-General, but the resignation does not have effect until it is accepted by the Governor-General.

Acting Chairperson and members

15. (1) the Minister may appoint a person, including a part-time member, to act as Chairperson -

- (a) during a vacancy in the office of Chairperson, whether or not an appointment has previously been made to the office; or
- (b) during any period, or during all periods, when the Chairperson is absent from duty or from Australia or, for any other reason, is unable to perform the duties of his office,

but a person appointed to act during a vacancy shall not continue so to act for more than 12 months.

(2) Where a person is acting as Chairperson in accordance with paragraph (1) (b) and the office of Chairperson becomes vacant while that person is so acting, the person may continue so to act until the Minister otherwise directs, the vacancy is filled or a period of 12 months from the date on which the vacancy occurred expires, whichever first happens.

- (3) The Minister may appoint a person to act as a part-time member -
- (a) during a vacancy in an office of part-time member, whether or not an appointment has previously been made to the office; or
  - (b) during any period or during all periods when a part-time member is acting as Chairperson, is absent from duty or from Australia or, for any other reason, is unable to perform the duties of his office,
- but a person appointed to act during a vacancy shall not continue so to act for more than 12 months.
- (4) The Minister may -
- (a) determine the terms and conditions of appointment, including remuneration and allowances, of a person appointed to act as Chairperson or as part-time member; and
  - (b) at any time terminate an appointment under this section.
- (5) The appointment of a person to act as Chairperson or as part-time member ceases to have effect if he resigns the appointment by writing signed by him and delivered to the Minister, but the resignation does not have effect until it is accepted by the Minister.
- (6) While the appointment of a person to act as Chairperson or as part-time member remains in force, he/she has, and may exercise, all the powers and shall perform all the functions of the Chairperson or a part-time member, as the case may be.
- (7) The validity of anything done by a person appointed under this section shall not be called in question on the ground that the occasion for his/her appointment had not arisen or that the appointment had ceased to have effect.

#### Termination of appointment of members of Authority

16 (1) The Governor-General may terminate the appointment of a member by reason of misbehaviour or physical or mental incapacity.

- (2) If a member -
    - (a) being the Chairperson, engages in paid employment outside the duties of his office without the approval of the Minister;
    - (b) being the Chairperson, is absent from duty, except on leave granted by the Minister, for 14 consecutive days or for 28 days in any 12 months;
    - (c) is absent, except on leave granted by the Minister or otherwise with the permission of the Minister, from 3 consecutive meetings of the Authority;
    - (d) becomes bankrupt or applies to take the benefit of any law for the relief of bankrupt or insolvent debtors, compounds with his creditors, or makes an assignment of his/her remuneration for their benefit; or
    - (e) fails to comply with obligations under sub-section (3)
- the Governor-General shall terminate the appointment of the member.
- (3) A member who has a direct or indirect pecuniary interest in a matter being considered or about to be considered by the Authority, otherwise than as a member of, and in common with the other members of, an incorporated company which consists of more than 25 persons and of which he/she is not a director, shall, as soon as possible after the relevant facts have come to his/her knowledge, disclose the nature of his/her interest at a meeting of the Authority.

(4) Sub-section (3) applies to and in relation to a person acting as Chairperson or as a part-time member.

#### Meetings of Authority

17. (1) The chairperson shall convene such meetings as he/she considers necessary for the performance of the functions of the Authority.

(2) The Chairperson shall, on receipt of a request in writing signed by the other members, convene a meeting of the Authority.

(3) At a meeting of the Authority, 2 members constitute a quorum.

(4) The Chairperson shall preside at all meetings of the Authority at which he/she is present.

(5) If the Chairperson is not present at a meeting of the Authority, the members present shall choose one of themselves to preside at the meeting.

(6) Subject to sub-section (8), questions arising at a meeting of the Authority shall be determined by a majority of the votes.

(7) The member presiding at a meeting of the Authority has a deliberative vote, and, subject to sub-section (8), in the event of an equality of votes, also has a casting vote.

(8) Where only 2 members are present at a meeting of the Authority and they differ on a question arising at the meeting, that question shall be deferred until the next meeting at which 3 members are present.

(9) In relation to a time when a person is acting as Chairperson, references in this section to the Chairperson shall be read as including references to that person.

(10) In relation to a time when a person is acting as Chairperson or as a part-time member, references in this section to a member shall be read as including references to that person.

#### Retention of Public Service rights

18. If the Chairperson was, immediately before his/her appointment, an officer of the Australian Public Service or a person to whom the Officers' Rights Declaration Act 1928 applied -

(a) the Chairperson retains his/her existing and accruing rights;

(b) for the purpose of determining those rights, his/her service under this Act shall be taken into account as if it were service in the Australian Public Service; and

(c) that Act applies as if this Act and this section had been specified in the Schedule to that Act.

#### Superannuation

19. (1) For the purposes of sub-sections 4 (3A) and (4) of the Superannuation Act 1922, the Chairperson shall be deemed to be required, by the terms of appointment, to give the whole of his/her time to the duties of the office of Chairperson.

(2) For the purposes of the Superannuation Act 1922, the termination under sub-section 16 (1) of this Act of the appointment of the Chairperson by reason of physical or mental incapacity shall be deemed to be retirement on the ground of invalidity.

(3) Nothing in this Act authorizes the provision of superannuation benefits otherwise than under the Superannuation Act 1922 for a person appointed or employed under this Act.

#### PART IV -THE SHARK BAY CONSULTATIVE COMMITTEE

##### Shark Bay Consultative Committee

20. There is established by this Act a committee by the name of the Shark Bay Consultative Committee.

##### Functions of Committee

21. (1) The functions of the Committee are -

- (a) to furnish advice to the Minister, either of its own motion or upon request made to it by the Minister, in respect of matters relating to the operation of this Act; and
  - (b) to furnish advice to the Authority in respect of matters relating to the Marine and Terrestrial Park, including advice as to the areas that should be parts of the Marine and Terrestrial Park, referred to it by the Authority.
- (2) The Authority shall comply with all reasonable requests of the Committee for information relevant to the functions of the Committee.
- (3) When the Minister is furnished with advice by the Committee, the Minister shall cause particulars of the advice to be given to the Authority.

##### Membership of Committee

22. (1) The Committee shall consist of -

- (a) a member of the Authority; and
  - (b) such number of other members, not being more than 12, as the Minister from time to time determines.
- (2) Subject to sub-section (4), not less than one-third of the number of members referred to in paragraph (1) (b) shall be persons nominated for appointment by the Western Australian Government.
- (3) Before appointing any member or members referred to in paragraph (1) (b) at a time when there are not already members nominated by the Western Australian government not less in number than one-third of the number of members for the time being determined by the Minister in accordance with that paragraph, the Minister shall, in writing, invite the Western Australian Government to nominate a person or persons for appointment to the Committee, but so that the number of persons nominated is not to exceed the number of appointments that are to be made or the number sufficient to cause the membership of the Committee to comply with sub-section (2), whichever is the less.
- (4) To the extent that the Western Australian Government does not nominate a person or persons in accordance with an invitation under sub-section (3) within 3 months after receipt of the invitation, the Minister may appoint to the vacant place or places a person or persons not nominated by that Government.
- (4A) The member of the Committee referred to in paragraph (1) (a) shall be appointed by the Authority by writing under its common seal.
- (5) The members of the Committee referred to in paragraph (1) (b) shall be appointed by the Minister.



(6) A member of the Committee referred to in paragraph (1)(b) may be appointed to represent a Department or authority of the Commonwealth or an organisation, being a Department, authority or organisation with proven environmental interests in the Shark Bay Region or the Marine and Terrestrial Park, and the Minister shall ensure that, as far as practicable, Departments and authorities of the Commonwealth with those interests are so represented.

(7) A member of the Authority is not eligible to be a member of the Committee referred to in paragraph (1)(b).

(8) The performance of the functions of the Committee is not affected by reason only of there being a vacancy or vacancies in the membership of the Committee.

(9) In this section, a reference to a member of the Authority shall, where a person is acting as Chairperson or as a part-time member, be read as including a reference to that person.

#### Tenure of members of Committee

23. (1A) The member referred to in paragraph 22 (1)(a) holds office during the pleasure of the Authority.

(1) The members of the Committee referred to in paragraph 22 (1)(b) shall be appointed for 3 years but are eligible for re-appointment.

(2) If a member of the Committee referred to in paragraph 22 (1)(b) ceases to hold office before the expiration of the period of the appointment, another person may, in accordance with section 22, be appointed in his/her place until the expiration of that period.

#### Remuneration of members of Committee

24. (1) A member of the Committee shall be paid such remuneration as is determined by the Remuneration Tribunal, but, if no determination of that remuneration by the Tribunal is in operation, a member shall be paid such remuneration as is prescribed.

(2) A member of the Committee shall be paid such allowances as are prescribed.

(3) This section has effect subject to the Remuneration Tribunals Act 1973.

(4) If the Chairperson of the Authority or a person acting as Chairperson of the Authority is a member of the Committee, sub-section (1) does not apply to that Chairperson.

#### Convenor of the Committee

25. (1) The Committee shall elect one of its members, other than the member referred to in paragraph 22 (1)(a), to be the Convenor of the Committee.

(2) The member elected as Convenor of the Committee holds office until the expiration of his/her term of office as a member that is current at the time of his/her appointment, but ceases to be Convenor if he/she ceases to be a member, and may resign his/her office of Convenor by writing signed by him/her and delivered to the Minister.

(3) A person is eligible to be re-elected as the convenor of the Committee.

#### Resignation of members of Committee

26. (1) The member of the Committee referred to in paragraph 22 (1) (a) may resign his/her office by writing signed by him /her and delivered to the Chairperson of the Authority or, if the member is the Chairperson of the Authority, to another member of the Authority.

(2) In relation to a time when a person is acting as Chairperson of the Authority, references in sub-section (1) to the Chairperson of the Authority shall be read as references to that person.

(3) A member of the Committee referred to in paragraph 22 (1) (b) may resign his/her office by writing signed by him/her and delivered to the Minister.

#### Termination of appointment of members of Committee

27. (1) the Minister may terminate the appointment of a member of the Committee referred to in paragraph 22 (1) (b) by reason of misbehaviour or physical or mental incapacity.

(2) If a member of the Committee referred to in paragraph 22 (1) (b) is absent, except with the permission of the Minister or the Convenor of the Committee, from 3 consecutive meetings of the Committee, the Minister may terminate the appointment of the member.

(2A) The member of the Committee referred to in paragraph 22 (1) (a) ceases to hold office if he/she ceases to be a member, or acting member, of the Authority.

(3) If a member of the Committee appointed in accordance with sub-section 22 (6) ceases, by reason of a change in employment, residence or other circumstances, to be, in the opinion of the Minister, an appropriate representative of the Department, authority or organization that he was appointed to represent, the Minister may terminate his/her appointment.

(3A) If the member of the Committee referred to in paragraph 22 (1) (a) fails to comply with obligations under sub-section (5), the Authority shall terminate the appointment of the member.

(4) If a member of the Committee referred to in paragraph 22 (1) (b) fails to comply with his/her obligations under sub-section (5), the Minister shall terminate the appointment of the members.

(5) A member of the Committee who has a direct or indirect pecuniary interest in a matter being considered or about to be considered by the Committee, otherwise than as a member of, and in common with the other members of, an incorporated company which consists of more than 25 persons and of which he/she is not a director, shall, as soon as possible after the relevant facts have come to his/her knowledge, disclose the nature of his/her interest at a meeting of the Committee.

#### Meetings of Committee

28 (1) the Committee shall hold such meetings as are necessary for the performance of its functions.

(2) the Convenor of the Committee may at any time convene a meeting of the Committee and shall ensure that at least 1 meeting is held in each year.

(3) The Minister may at any time convene a meeting of the Committee.

(4) The Convenor of the Committee shall, on receipt of a request in writing signed by 5 other members, convene a meeting of the Committee.

- (5) At a meeting of the Committee, a majority of its members constitute a quorum.
- (6) The Convenor or the Committee shall preside at all meetings of the Committee at which he/she is present.
- (7) If the Convenor of the Committee is not present at a meeting of the Committee, its members present shall elect one of their number to preside at the meeting.
- (8) Questions arising at a meeting of the Committee shall be determined by a majority of the votes of the members of the Committee present and voting.
- (9) The person presiding at a meeting of the Committee has a deliberative vote, and, in the event of an equality of votes, also has a casting vote.

Assistance for the Committee

29 (1) Administrative assistance required for the purposes of the Committee shall be provided by persons who are members of the staff of the Authority.

(2) The Authority shall provide such moneys as are necessary for the performance of the functions of the Committee.

PART V - THE SHARK BAY MARINE AND TERRESTRIAL PARK

Shark Bay Marine and Terrestrial Park

30. There shall be a marine and terrestrial park, to be known as the Shark Bay Marine and Terrestrial Park, consisting of such areas in the Shark Bay Region as are for the time being, declared under section 31 to be part of that Marine and Terrestrial park.

Areas within Marine and Terrestrial Park

31. (1) Subject to sub-section (5), the Governor General may, by Proclamation, declare an area specified in the Proclamation, being an area within the Shark Bay Region, to be a part of the Marine and Terrestrial Park and assign a name or other designation to that area.

(2) Where an area is, for the time being, declared by Proclamation under sub-section (1) to be a part of the Marine and Terrestrial Park -

- (a) the waters of any sea within the area;
- (b) the sea-bed beneath any sea within the area;
- (c) the subsoil beneath any such sea-bed, extending to such depth below the sea-bed as is specified in the Proclamation;
- (d) the sub-soil beneath any land within the area, extending to such below the surface as is specified in the Proclamation; and
- (e) the airspace above the area, extending to such height above the surface as is specified in the Proclamation,

shall be taken to be in the Marine Park and, for the purposes of this Act, part of the area.

(3) Subject to sub-section (4), the Governor-General may, by Proclamation, revoke or amend a Proclamation made under sub-section (1).

(4) A Proclamation made under sub-section (3) by virtue of which any area in the Shark Bay Region ceases to be within the Marine and Terrestrial Park shall not be made except in accordance with a resolution passed by each House of the Parliament in pursuance of a motion of which notice has been given not less than 15 sitting days of that House before the motion is moved.

(5) The Governor-General shall not make a Proclamation under this section except after consideration by the Executive Council of a report by the Authority in relation to the matter dealt with by the Proclamation.

#### Zoning plans

32. (1) As soon as practicable after an area has been declared to be part of the Marine and Terrestrial Park, the Authority shall prepare a zoning plan in respect of that area.

(2) Before preparing a zoning plan in respect of an area in the Marine and Terrestrial Park, the Authority shall, by public notice -

- (a) state that it intends to prepare a zoning plan in respect of that area;
- (b) invite interested persons to make representations in connexion with the proposed plan by such date, not being less than 1 month after the date of publication of the notice in the Gazette, as is specified in the notice; and
- (c) specify an address to which such representations may be forwarded.

(3) A person may, not later than the date specified in the notice, make representations to the Authority in connexion with the proposed plan, and the Authority shall give due consideration to any representations so made.

(4) The zoning plan shall provide that, for the purposes of this Act, the area -

- (a) constitutes a single zone; or
- (b) is divided into 2 or more zones described in the plan,

and shall assign a name or other designation to the zone or each of those zones, as the case may be.

(5) A zone may be declared by the zoning plan to be a special zone and a zone that is so declared shall be managed in accordance with the National Parks Act as if it were a park or as if it were a reserve, and shall be named or designated accordingly.

(6) In respect of a zone, other than a special zone, a zoning plan shall make provision with respect to the purposes for which the zone is to be, or may be, used or entered.

(7) In the preparation of the plan, regard shall be had for the following objects:

- (a) the conservation of the Shark Bay Region
- (b) the regulation of the use of the Marine and Terrestrial Park so as to protect the Shark Bay Region while allowing the reasonable use of the Shark Bay Region;
- (c) the regulation of activities that exploit the resources of the Shark Bay Region so as to minimize the effect of those activities on the Shark Bay Region.

- (d) the reservation of some areas of the Shark Bay Region for its appreciation and enjoyment by the public; and
  - (e) the preservation of some areas of the Shark Bay Region in its natural state undisturbed by man except for the purposes of scientific research.
- (8) When the Authority has prepared the plan, it shall, by public notice -
- (a) state that the plan has been prepared;
  - (b) invite interested persons to make representations in connexion with the plan by such date, not being less than 1 month after the date of publication of the notice in the Gazette, as is specified in the notice;
  - (c) specify an address or addresses at which copies of the plan may be inspected or purchased; and
  - (d) specify an address to which representations in connexion with the plan may be forwarded.
- (9) A person may, not later than the date specified in the notice, make representations to the Authority in connexion with the plan, and the Authority shall give due consideration to any representations so made and, if it thinks fit, alter the plan accordingly.
- (10) The Authority shall thereupon submit to the Minister -
- (a) the plan; and
  - (b) if representations have been made under sub-section (9) - those representations, together with the comments of the Authority on those representations.
- (11) the Minister may -
- (a) accept the plan as so submitted; or
  - (b) refer it to the Authority, together with his suggestions, for further consideration.
- (12) Where the plan has been so referred to the Authority, it shall, as soon as practicable after the receipt of the plan give further consideration to the plan, having regard to the suggestions of the Minister, and again submit the plan, with or without alterations, to the Minister, together with its comments on the suggestions of the Minister.
- (13) When the plan is again submitted to the Minister, he shall, as soon as practicable after receipt of the plan accept the plan as so submitted or after making such alterations as he thinks fit.
- (14) Where the Minister makes alterations to a plan under sub-section (13), he shall prepare a report specifying the alterations and setting out any views expressed by the Authority in respect of the matters to which the alterations relate, and the report shall accompany the plan.

#### Zoning plans to be published

33. (1) The Minister, shall, within 28 days after the Minister has accepted a zoning plan, by public notice state that the plan is to come into operation on a date specified in the notice (not being a date earlier than the date of publication of the notice in the Gazette), and the plan shall come into operation on that date.

(2) A notice referred to in sub-section (1) shall specify an address or addresses at which copies of the plan and report may be inspected or purchased and may contain a description of the zone or zones to which it relates or any other particulars of the plan.

(3) If, before the expiration of 15 sitting days of either House of the Parliament, after the publication of the notice in the Gazette of the coming into operation of the plan, a resolution for the disallowance of the plan has been passed by both Houses of Parliament, the Minister shall direct the Authority to prepare a fresh plan and the Authority shall thereupon reconsider the matter and prepare a fresh plan, and section 32 applies accordingly.

#### Special zones

34. (1) Where a zoning plan provides for a special zone, then, so long as it so provides, the National Parks Act, and the regulations under that Act, apply in respect of the zone as if it were a park or a reserve, as the case may be.

(2) Upon the coming into operation of a zoning plan that provides for a special zone, all right, title and interest held by the Commonwealth in respect of the land (including any sea-bed or any sub-soil) within the zone, but not in respect of any minerals, becomes, by force of this sub-section, vested in the Director.

(3) Sub-sections (1) and (2) do not authorize any operations in a zone that are prohibited by section 38 or authorize provision for such operations in a plan of management.

#### Plan of management in respect of special zone

35. (1) Where the Authority decides that a zoning plan is to provide for a special zone -

- (a) the Authority shall inform the Director of that decision and supply him with particulars of the zone; and
- (b) as soon as practicable after the Director has been so informed, he shall prepare a plan of management in respect of that zone as if it were a park or a reserve, as the case may be, and sub-sections 11 (2) to (16) and, subject to sub-section (3) of this section, sections 12 and 13 of the National Parks Act apply in relation to the plan of management as if it were a plan of management prepared in pursuance of sub-section 11(1) of that Act.

(2) A plan of management in respect of a zone prepared under paragraph 1 (b) shall not provide for any operations in that zone that are prohibited by section 38 of this Act.

(3) Where, but for this sub-section, a plan of management in respect of a zone would come into operation before the coming into operation of the zoning plan in respect of the area constituting, or containing, the zone, the plan of management shall come into operation on the coming into operation of the zoning plan.

Authority, & c., to comply with zoning plans

36. (1) While a zoning plan is in force in relation to a zone, other than a special zone, the Authority shall perform its functions and exercise its powers in relation to the zone in accordance with that plan and not otherwise.

(2) While a zoning plan or a plan of management is in force in relation to a zone, each Minister shall give all such directions and do all such things as can be given or done by the Minister for ensuring that the Department administered by the Minister and each authority of the Commonwealth in relation to which the minister has ministerial responsibilities performs the functions and exercises the powers that it has in relation to the zone in accordance with that plan.

Amendment or revocation of zoning plan

37. (1) Subject to sub-section (3), the Authority may at any time amend a zoning plan.

(2) Subject to sub-section (5), a zoning plan in respect of an area may be revoked by a new zoning plan in respect of that area, but the revocation shall not take effect until the new plan comes into operation.

(3) Where a zoning plan provides for a special zone, the plan shall not be amended so that the whole or part of the special zone ceases to be, or to be included in, a special zone except in accordance with sub-section (4).

(4) The Governor-General, may, by Proclamation, amend a zoning plan that provides for a special zone so that the whole or part of the special zone ceases to be, or to be included in, a special zone

(5) Where a zoning plan provides for a special zone, the plan shall not be revoked except in accordance with sub-section (6).

(6) The Governor-General may, by Proclamation -

- (a) declare that a zoning plan in respect of an area that provides for a special zone shall be revoked on the coming into force of a new zoning plan in respect of that area; and
- (b) direct that a new zoning plan be prepared in respect of that area.

(7) A Proclamation made under sub-section (4) or (6) shall not be made except in accordance with a resolution passed by each house of the Parliament in pursuance of a motion of which notice has been given not less than 15 sitting days of that House before the motion is moved.

(8) If, by virtue of a Proclamation made under sub-section (4) or (6), any area in the Shark Bay region ceases to be within a special zone, all right title and interest held by the Director in respect of the land (including any sea-bed or any sub-soil) in the area becomes, by force of this sub-section, vested in the Commonwealth.

(9) Sub-sections 7 (11) and (12) of the National Parks Act apply in relation to a Proclamation under sub-section (4) or (6) as if it were a Proclamation under sub-section 7(8) of that Act.

(10) Sections 32 and 33 apply in relation to an amendment of a zoning plan or in relation to a new zoning plan in like manner as they apply to a zoning plan required to be prepared in accordance with section 32.

No drilling or mining in Marine and Terrestrial Park

38 (1) this section has effect notwithstanding any law of the Commonwealth or of a State or Territory.

(2) Subject to sub-section (3), no operation for the recovery of petroleum or minerals shall be carried on in the Marine and Terrestrial Park.

(3) Operations referred to in sub-section (2) may be carried on on the Marine and Terrestrial Park by, or with the approval of, the Authority for the purpose of research and investigations relevant to the establishment, care and development of the Marine and Terrestrial Park or for scientific research.

(4) A person who -

(a) contravenes sub-section (2); or

(b) having obtained the approval of the Authority under sub-section (3) for the carrying on of operations for the recovery of minerals and petroleum, carries on operations for the recovery of minerals and petroleum otherwise than in accordance with that approval,

is guilty of an offence punishable, on conviction, by a fine not exceeding \$50,000 for each day during which the offence continues.

#### PART VI - ADMINISTRATION

Staff of Authority

40. (1) The staff of the Authority shall be persons appointed or employed under the Public Service Act 1922.

(2) The Chairperson has all the powers of, or exercisable by, a Permanent Head under the Act so far as those powers relate to the branch of the Australian Public Service comprising the staff of the Authority as if that branch were a separate Department of the Australian Public Service.

(3) For the purposes of sub-sections 25 (5) and (6) of that Act, the Chairperson shall be deemed to be a Permanent Head.

Performance of service by other persons

41. Notwithstanding section 40, the Authority may, with the consent of the Minister and on terms and conditions approved by the Public Service Board, engage persons, not being persons referred to in that section, to provide service for the Authority.



Officers and employees of Western Australia and government authorities

42. (1) The Australian Government may make arrangement with the Western Australian Government for the performance of functions and the exercise of powers under this Act by officers or employees of Western Australia or of an authority of that State or of a local governing body in that State, or by members of the Police Force of that State.

(2) The Authority may make arrangements with the Permanent Head of a Department of the Australian Public Service, or with an authority of the Commonwealth, including the Director, for the performance of functions and the exercise of powers under this Act by officers or employees of the Department or of the authority, as the case may be.

Appointment of inspectors

43. the Authority may, by instrument in writing, appoint -

- (a) a member of the staff of the Authority; or
- (b) a person referred to in section 42, as an inspector.

Inspectors ex officio

44.(a) By force of this section, every member or special member of the Australian Federal Police is an inspector.

- (b) By force of this section, every member or special member of the Western Australian Police is an inspector.

Identity cards

45. (1) The Authority shall cause to be issued to each inspector, other than a member of a police force, an identity card in the form prescribed containing a photograph of the holder.

(2) A person who ceases to be an inspector shall forthwith return his/her identity card to the Authority.

Penalty: \$100.

Arrest without warrant

46. (1) An inspector may, without warrant, arrest any person in the Marine and Terrestrial Park, if the inspector reasonably believes -

- (a) that the person has committed an offence against this Act; and
- (b) that proceedings against the person by summons would not be effective.

(2) Where an inspector (other than a member of a police force who is in uniform) arrests a person under sub-section (1), he shall -

- (a) in the case of a member of a police force - produce, for inspection by that person, written evidence of the fact that he is a member of a police force; or
- (b) in any other case - produce his identity card for inspection by that person.

(3) Where a person is arrested under sub-section (1), an inspector shall forthwith bring the person, or cause him to be brought, before a Justice of the Peace or other proper authority to be dealt with in accordance with law.

(4) Nothing in this section prevents the arrest of a person in accordance with any other law.

Confiscation and forfeiture

47. (1) Where a court convicts a person of an offence against this Act, the court may order the forfeiture to the Commonwealth of any vehicle, vessel, aeroplane or article used or otherwise involved in the commission of the offence.
- (2) An inspector may seize any vehicle, vessel, aeroplane or article that he reasonably believes to have been used or otherwise involved in the commission of an offence against this Act and may retain it until the expiration of a period of 60 days after the seizure or, if a prosecution of an offence against this Act in the commission of which it may have been used or otherwise involved is instituted within that period, until the prosecution is terminated.
- (3) Where a vehicle, vessel, aeroplane or article seized under sub-section (2) and retained for a period exceeding 7 days was not used or otherwise involved in the commission of an offence, any person who has suffered loss or damage by reason of the seizure is entitled to reasonable compensation.
- (4) The Authority may authorize a vehicle, vessel, aeroplane or article under sub-section (2) to be released to its owner, or to the person from whose possession it was seized, either unconditionally or on such conditions as it thinks fit, including conditions as to the giving of security for payment of its value if it is forfeited.
- (5) A vehicle, vessel, aeroplane or article forfeited under this section may be sold or otherwise disposed of as the Authority thinks fit.
- (6) An inspector may seize any animal or plant that he/she reasonably believes to have been killed or taken in contravention of this Act.
- (7) Where an animal or plant has been seized under sub-section (6), the Authority may cause it to be -
- (a) retained; or
  - (b) sold or otherwise disposed of.
- (8) Where an animal or plant seized under sub-section (6) was not killed or taken in contravention of this Act, any person who has suffered loss or damage by reason of the seizure is entitled to reasonable compensation.
- (9) Compensation under this section is payable by the Commonwealth and may be awarded -
- (a) by a court dealing with an alleged offence against this Act in relation to which the vehicle, vessel, aeroplane, article, animal or plant was seized, or
  - (b) by any federal court or court of a State or Territory having jurisdiction in actions for the recovery of debts up to an amount not less than the amount of compensation claimed.

General powers of inspectors

48. (1) An inspector may, in the Marine and Terrestrial Park, search a vehicle, vessel, aeroplane or article for the purpose of ascertaining whether there is in or on that vehicle, vessel, aeroplane or article -

(a) any animal, plant or article in respect of which an offence against this Act has been committed; or

(b) anything that will afford evidence as to the commission of an offence against this Act,

and for that purpose stop or detain a vehicle, vessel or aeroplane.

(2) An inspector may, in the Marine and Terrestrial Park, require

(a) any person found committing, or who is reasonably suspected of having committed, an offence against this Act to state full name and usual place of residence;

(b) any person found committing, or who is reasonably suspected of having committed, an offence against this Act to leave the Marine and Terrestrial park; and

(c) any person who is reasonably suspected of having done an act in respect of which the person is required to hold a licence, permit or other authority under this Act to produce such a licence or permit or evidence of such an authority.

(3) Where an inspector (other than a member of a police force who is in uniform) stops, proposes to search or detain a vehicle, vessel, aircraft or article, that inspector shall -

(a) in the case of a member of a police force - produce, for inspection by the person in charge of the vehicle, vessel or aircraft, written evidence of the fact that he/she is a member of a police force; or

(b) in any other case - produce his identity card for inspection by that person,

and, if he/she fails to do so, he is not authorized to search or detain that vehicle, vessel or aircraft.

(4) Where an inspector (other than a member of a police force who is in uniform) makes a requirement of a person in pursuance of sub-section (2), that inspector shall -

(a) in the case of a member of a police force - produce, for inspection by that person, written evidence of the fact that he is a member of a police force; or

(b) in any other case - produce his identity card for inspection by that person,

and, if he/she fails to do so, that person is not obliged to comply with the requirement.

(5) A person who, without reasonable excuse, fails to comply with a requirement made of him by an inspector under sub-section (1) or (2) is guilty of an offence punishable, upon conviction, by a fine not exceeding \$1,000.

Assaulting, &c., inspector

49. A person who assaults or threatens an inspector acting in the performance of his duties under this Act is guilty of an offence and is punishable -

- (a) upon summary conviction - by a fine not exceeding \$1,000, or imprisonment for a period not exceeding 6 months, or both; or
- (b) upon conviction otherwise - by a fine not exceeding \$2,000, or imprisonment for a period not exceeding 2 years, or both.

Personation

50. A person who, by words or conduct, falsely represents that he is an inspector is guilty of an offence and is punishable -

- (a) upon summary conviction - by a fine not exceeding \$1,000, or imprisonment for a period not exceeding 6 months, or both; or
- (b) upon conviction otherwise - by a fine not exceeding \$2,000, or imprisonment for a period not exceeding 2 years, or both.

#### PART VII - FINANCE

Moneys payable to Authority

52. (1) There are payable to the Authority such moneys as are appropriated by the Parliament for the purposes of the Authority.

(2) The Minister for Finance may give directions as to the amounts in which, and the times at which, moneys referred to in sub-section (1) are to be paid to the Authority.

Application of moneys

53. The moneys of the Authority shall be applied only -

- (a) in payment or discharge of the costs, expenses and other obligations of the Authority or the Committee under this Act; and
- (b) in payment of remuneration, expenses, fees and allowances payable to any person under this Act.

Estimates

54. (1) The Authority shall prepare estimates, in such form as the Minister directs, of its receipts and expenditure for each financial year and, if so directed by the Minister, for any other period and shall submit those estimates to the Minister not later than such date as the Minister directs.

(2) Moneys shall not be expended by the Authority except in accordance with estimates of expenditure approved by the Minister.

Bank accounts

55. (1) The Authority may open and maintain an account or accounts with an approved bank or approved banks and shall maintain at all times at least one such account.

(2) The Authority shall pay all moneys received by it into an account referred to in this section.

(3) In this section "approved bank" means a bank for the time being approved by the Treasurer.

Power to purchase and dispose of assets

56. The Authority shall not, without the approval of the Minister -

(a) enter into a contract involving the payment or receipt of an amount exceeding \$50,000 or, if a higher amount is prescribed, that higher amount; or

(b) enter into a lease of land for a period exceeding 10 years.

Proper accounts to be kept

57. The Authority shall cause to be kept proper accounts and records of the transactions and affairs of the Authority and shall do all things necessary to ensure that all payments out of the moneys of the Authority are correctly made and properly authorized and that adequate control is maintained over the assets of, or in the custody of, the Authority and over the incurring of liabilities by the Authority.

Audit

58. (1) The Auditor-General shall inspect and audit the accounts and records of financial transactions of the Authority and the records relating to assets of, or in the custody of, the Authority, and shall forthwith draw the attention of the Minister to any irregularity disclosed by the inspection and audit that, in the opinion of the Auditor-General, is of sufficient importance to justify his so doing.

(2) The Auditor-General may, at his discretion, dispense with all or any part of the detailed inspection and audit of any accounts or records referred to in sub-section (1).

(3) The Auditor-General shall, at least once in each financial year, report to the Minister the results of the inspection and audit carried out under sub-section (1).

(4) The Auditor-General or a person authorized by him is entitled at all reasonable times to full and free access to all accounts, records, documents and papers of the Authority relating directly or indirectly to the receipt or payment of moneys, or to the acquisition, receipt, custody or disposal of assets, by the Authority.

(5) The Auditor-General or a person authorized by him may make copies of, or take extracts from, any such accounts, records, documents or papers.

(6) The Auditor-General or a person authorized by him may require a person to furnish him with such information in the possession of the person or to which the person has access as the Auditor-General or authorized person considers necessary for the purposes of the functions of the Auditor-General under this Act, and the person shall comply with the requirement.

(7) A person who contravenes sub-section (6) is guilty of an offence punishable, upon conviction, by a fine not exceeding \$200.

Exemption from taxation

59. The Authority is not subject to taxation under the laws of the Commonwealth or of a State or Territory.

PART VIII - MISCELLANEOUS

Annual reports

60. (1) The Authority shall, as soon as practicable after each 30 June, prepare and furnish to the Minister a report of its operations during the year ending on that date together with financial statements in respect of that year in such form as the Minister for Finance approves.
- (2) Before furnishing financial statements to the Minister, the Authority shall submit them to the Auditor-General, who shall report to the Minister -
- (a) whether the statements are based on proper accounts and records;
  - (b) whether the statements are in agreement with the accounts and records;
  - (c) whether the receipt and expenditure of moneys, and the acquisition and disposal of assets, by the Authority during the year have been in accordance with this Act; and
  - (d) as to such other matters arising out of the statements as the Auditor-General considers should be reported to the Minister.
- (3) The Minister shall cause the report and financial statements of the Authority, together with the report of the Auditor-General, to be laid before each House of the Parliament within 15 sitting days of that House after their receipt by the Minister.
- (4) The first report and financial statements of the Authority under this section shall be furnished as soon as practicable after 30 June 1988 and shall relate to the operations of the Authority during the period that commenced at the commencement of this Act and ended on that date.

Delegation

61. (1) The Authority may, either generally or as otherwise provided by the instrument of delegation, by writing under its common seal, delegate to a person any of its powers under this Act, other than this power of delegation.
- (2) A power so delegated, when exercised by the delegate, shall for the purposes of this Act, be deemed to have been exercised by the Authority.
- (3) A delegation under this section does not prevent the exercise of a power by the Authority.

Averment in relation to Marine and Terrestrial Park

62. In any proceedings for an offence against this Act, an averment of the prosecutor, contained in the information or complaint, that -
- (a) the place where the defendant is alleged to have been at the time of the alleged offence was in the Marine and Terrestrial Park or in a specified zone; or
  - (b) the place where an animal, plant, aircraft, vehicle, vessel or article referred to in the information or complaint is alleged to have been at the time of the alleged offence was in the Marine and Terrestrial Park or in a specified zone,
- is prima facie evidence of the matter averred.

63. (1) A provision of the Judiciary Act 1903 by which a court of a State is invested with jurisdiction with respect to offences against the laws of the Commonwealth has effect, in relation to offences against this Act, as if that jurisdiction were so invested without limitation as to locality.
- (2) Subject to section 80 of the Constitution, where a person has committed an offence against this Act outside a Territory and is found in, or brought into, the Territory, a court of the Territory has the same jurisdiction in respect of the offence as it would have if the offence had been committed in the Territory.
- (3) The trial on indictment of an offence against this Act not committed within a State may be held by a court of competent jurisdiction at any place where the court may sit.

#### Prosecution of offences

64. (1) An offence against this Act may be prosecuted summarily or upon indictment or, where the law of the State or Territory in which the proceedings are brought makes provision for an offender who pleads guilty to a charge of an indictable offence to be dealt with by the court otherwise than on indictment, the court may deal with an offender in accordance with that law.

(2) Where proceedings for an offence against this Act are brought in a court of summary jurisdiction, the court may commit the defendant for trial or to be otherwise dealt with in accordance with law or, with the consent of the defendant and of the prosecutor, may, if the court is satisfied that it is proper to do so, determine the proceedings summarily.

#### Enforcement

65. (1) The High Court or the Federal Court may, on the application of the Attorney-General or of any person, grant an injunction restraining a person from doing an act that is unlawful by virtue of this Act.

(2) Where, pursuant to sub-section (1), an application is made to the High Court or the Federal Court for an injunction restraining a person from doing an act, the High Court or the Federal Court, as the case may be, may, if in the opinion of the Court it is desirable to do so, before determining the application, grant an interim injunction restraining the person from doing that act pending the determination of the application.

#### Act to apply subject to international obligations

66. (1) Subject to this section, this Act applies, according to its tenor, to all persons, including foreigners, and to all vehicles, vessels and aircraft, including foreign vehicles, vessels and aircraft, whether or not they are within the limits of Australia and the Australian coastal sea.

(2) This Act has effect subject to the obligation of Australia under international law, including obligations under any agreement between Australia and another country or countries.

#### Regulations

67. (1) The Governor-General may make regulations, not inconsistent with this Act or with a zoning plan, prescribing all matters required or permitted by this Act to be prescribed or necessary or convenient to be prescribed for carrying out or giving effect to this Act.

(2) Without limiting the generality of sub-section (1), regulations may be made -

- (a) conferring functions on the Authority for the purposes of the regulations;
- (b) providing for giving effect to, and enforcing the observance of,

- (c) conferring functions and powers, and imposing duties upon, inspectors;
- (d) providing for services and facilities in, or in connexion with, the Marine and Terrestrial Park;
- (e) regulating or prohibiting acts (whether in the Marine and Terrestrial Park or elsewhere) that may pollute water in a manner harmful to animals and plants in the Marine and Terrestrial Park;
- (f) providing for the protection and preservation of the Marine and Terrestrial Park and property and things in the Marine and Terrestrial park;
- (g) providing for the removal from the Marine and Terrestrial Park of persons unlawfully in the Marine and Terrestrial Park or committing offences against this Act in the Marine and Terrestrial Park;
- (h) providing for the safety of persons in the Marine and Terrestrial Park;
- (i) regulating the conduct of persons in the Marine and Terrestrial Park;
- (j) regulating or prohibiting the carrying on of any trade or commerce in the Marine and Terrestrial Park;
- (k) providing for fees and charges to be imposed by the Authority upon persons using services or facilities provided by the Authority in or in connexion with the Marine and Terrestrial Park;
- (l) providing for the imposition and collection of charges for -
  - (a) the mooring of vessels
  - (b) the landing of aircraft; or
  - (c) the use of vehicles and vessels; and
  - (d) the provision of facilities as laid down in the National Parks Actin the Marine and Terrestrial Park;
- (m) providing for the removal of vehicles, vessels, aircraft and articles in the Marine and Terrestrial Park where they have been left in contravention of the regulations or have been abandoned and for the impounding of such vehicles, vessels, aircraft and articles;
- (n) enabling a person who is alleged to have contravened a provision of the regulations relating to -
  - (i) littering;
  - (ii) the use of vehicles, vessels or aeroplanes
  - (iii) the mooring or landing of vessels;to pay to the Authority, as an alternative to prosecution, a specified penalty, not exceeding the maximum penalty by which a contravention of that provision is otherwise punishable;



- (o) regulating the use of vehicles, vessels and aircraft in, and the passage of vehicles, vessels and aircraft through the Marine and Terrestrial Park;
  - (p) regulating or prohibiting the taking of animals or plants into, or out of, the Marine and Terrestrial Park;
  - (q) providing for the impounding, removal, destruction or disposal of animals found straying in the Marine and Terrestrial Park;
  - (r) regulating or prohibiting the taking into the Marine and Terrestrial Park, and the use in the Marine and Terrestrial Park, of weapons, traps, nets, snares, fishing apparatus and other devices;
  - (s) regulating or prohibiting the laying of baits and the use of explosives and poisons in the Marine and Terrestrial Park;
  - (t) providing for the collection of specimens and the pursuit of research in the Marine and Terrestrial park for scientific purposes;
  - (u) providing for the issue of licences, permits and authorities, the conditions subject to which they are issued and the charging of fees by the Authority in respect of such licences, permits and authorities; and
  - (v) providing for any matter incidental to or connected with any of the foregoing.
- (3) Without limiting the generality of sub-section (1) or (2), the regulations may be expressed to apply to or in relation to -
- (a) the Marine and Terrestrial Park other than special zones;
  - (b) a specified part of the Marine and Terrestrial Park in respect of which no zoning plan is in force;
  - (c) a specified zone, other than a special zone; or
  - (d) a specified part of a zone, other than a special zone.
- (4) Regulations under this Act shall not apply in respect of a special zone.
- (5) Regulations shall not apply to an area within the Marine and Terrestrial park in respect of which no zoning plan is in force if more than 5 years has elapsed since that area became part of the Marine and Terrestrial Park.
- (6) Subject to sub-sections (7) and (8) and to any contrary intention appearing in a law made after the commencement of this Act, a provision of the regulations has full force and effect notwithstanding that it is inconsistent with a law of the Commonwealth made before or after the commencement of this Act.

- (7) A provision of the regulations regulating navigation in the Marine and Terrestrial Park does not have any force or effect to the extent to which it is inconsistent with a law of the Commonwealth, but such a provision shall not be taken for the purposes of this sub-section to be inconsistent with such a law if it can be complied with without contravention of that law.
- (8) A provision of the regulations regulating the flying of aircraft over the Marine and Terrestrial Park does not have any force or effect to the extent to which it is inconsistent with a law of the Commonwealth, but such a provision shall not be taken for the purposes of this sub-section to be inconsistent with such a law if it can be complied with without contravention of that law.
- (9) The power to make regulations conferred by this Act may be exercised -
- (a) in relation to all cases to which the power extends, or in relation to all those cases subject to specified exceptions, or in relation to any specified cases or classes of case; and
  - (b) so as to make, as respects the cases in relation to which it is exercised, the same provision for all those cases or different provision for different cases or classes of case.
- (10) The power to make regulations conferred by this Act shall not be taken not to include the power to make provision for or in relation to a matter by reason only of the fact that -
- (a) a provision is made by this Act in relation to that matter or another matter; or
  - (b) power is expressly conferred by this Act to make provision by regulation for or in relation to another matter.
- (11) The regulations may provide, in respect of an offence against the regulations, for the imposition of -
- (a) a fine not exceeding \$5,000; or
  - (b) a fine not exceeding \$1,000 for each day during which the offence continues.
- (12) The limitation imposed by sub-section (10) on the penalties that may be prescribed by the regulations does not prevent the regulations from requiring a person to make a statutory declaration.