Future Directions for Nature Conservation

Summary of the Draft *A Nature Conservation Strategy for Western Australia*

Department of Conservation and Land Management
Western Australia

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Contents

1: The Nature Conservation Strategy in Brief

This booklet summarises the much more comprehensive *A Nature Conservation Strategy for Western Australia* (draft of February 1992). Both that publication and the strategy itself are referred to in this document simply as 'the strategy'. The larger document may be consulted for fuller explanations and background.

The objective of the strategy is to provide guidelines by which we can **conserve for ever the widest possible range of native landscapes, ecosystems and species (including their genetic variability), in natural habitats in Western Australia.**

The proposed actions outlined in the strategy are:

1 To complete Western Australia's conservation reserve system by selecting, reserving and managing viable protected areas broadly representative of the natural ecosystems and species of the State and including areas with special landscape, cultural and educational values.

2 To promote, encourage and assist nature conservation on private and other lands and waters beyond lands set aside for conservation, in particular by expanding liaison with rural communities to develop regionally based nature conservation plans.

3 To protect, conserve and manage threatened species, ecosystems and communities by conducting and applying research and protecting and managing key areas and critically endangered species.

4 To control processes that are threatening large areas of habitat and/or many species. These will include dieback, introduced animals (especially foxes, goats, cats and rabbits), bushland weeds and inappropriate fire regimes.

5 To promote and assist the integration of nature conservation with economic activity according to the principles of ecologically sustainable development.

6 To promote the appreciation and awareness of the natural environment and of effective nature conservation in the well-being of human society.

7 To develop new ways of attracting resources to nature conservation.

Chapter 6 of this document explains these actions more fully. Chapters 2 to 5 provide the context in which the actions have been devised.

2: What is the Strategy for?

The fundamental objective of the nature conservation strategy is to suggest guidelines by which the Western Australian community can:

> CONSERVE IN PERPETUITY THE WIDEST POSSIBLE DIVERSITY OF INDIGENOUS LANDSCAPES, ECOSYSTEMS AND SPECIES (INCLUDING THEIR GENETIC VARIABILITY), IN NATURAL HABITATS IN WESTERN AUSTRALIA.

Many useful steps towards this objective have already been achieved, and others are in train at present. Nevertheless, losses of species and of other forms of biological diversity are still occurring in parts of the State. Now is an opportune time to review past achievements and present priorities. We need to ensure that the new emphasis on ecologically sustainable development can maintain Western Australia's outstanding natural values, especially the diversity of living things and the ecosystems in which they live, at State, regional and local levels.

The aims of this new strategy are as follows:

1 To establish a vision for nature conservation in Western Australia, in which ecologically sustainable management across all lands and waters can ensure that the State's biological diversity is maintained.

2 To review the conservation objectives of the Department of Conservation and Land Management (CALM), to ensure that strategies for the maintenance of the State's biological diversity are in place.

3 To review the major issues involved in nature conservation in Western Australia, the scientific and social bases upon which it is managed, and the constraints within which it is conducted.

4 To act as a resource document for:

- staff members of CALM who are responsible for protecting the State's biological diversity;
- staff of other government agencies with whom CALM works to pursue the goals of nature conservation;
- the interested public who wish to understand the basis for nature conservation management in Western Australia, and perhaps influence or be involved in that management.

Why Conserve Biological Diversity?

Biological diversity is the living material of natural resources. It consists of species of organisms, their genetic variability, and the ecosystems in which they live. Maintaining biological diversity is a primary task of nature conservation.

The Earth is only suitable for human habitation because it has been conditioned by other organisms over millennia. Humans depend for their sustenance, health, and enjoyment of life on fundamental biological processes and resources. Our political, social and economic institutions, and our knowledge and culture, have been developed in a largely hospitable environment provided by existing biological life-support systems.

The role of any given ecological communities and species, now and in the future, in maintaining these systems is largely unknown, as is the contribution of biological diversity itself. We do not know what effect the loss of particular species, or the overall loss of biological diversity, will have on ecological processes on which humans depend.

It is also important to maintain the full range of genetic diversity of a species. Small populations may lose genetic diversity over time, leading to reduced fitness; this may lead to the eventual decline of the species. Without genetic variability a population cannot evolve or adapt to changing environments, and is therefore vulnerable to new conditions: for example, climatic change or new diseases.

Species or genetically inherited characteristics which are currently unimportant may become important in the future. In the absence of much better knowledge, simple caution suggests that we should maintain as much biological diversity as possible to keep as many options as possible open for this and future generations.

Loss of biological diversity is a significant and complex problem. It can only be prevented if everyone understands the issues and the whole community becomes involved in appropriate actions.

The many reasons for conserving biological diversity can be grouped under two basic principles. The first principle is ethical. This generation has a responsibility to allow future generations at least the same richness of biological resources and opportunities as we now enjoy. Furthermore, the World Conservation Strategy of 1980 called for new ethics that would embrace plants and animals as well as people, provide a structure for humans to live in harmony with nature, and offer an ecological perspective on the world's economic and social systems. These ethics would go beyond science and economics in attributing value to life-enhancing contributions of nature, and in deliberately assuming responsibility for the integrity of the earth's living communities.

The second principle is practical. Biological diversity supports human survival and enjoyment in many ways, notably through **food**, **health**, **industry**, and basic **life support**.

- **Food**: Agriculture uses all three levels of biological diversity (species, genes and communities). Plant breeders are constantly looking for new species and new genetic stock, to protect cultivated plants against diseases or pests, to increase crop yields, and to provide new products. For example, disease resistance has to be reintroduced into many commercial crops every 5 to 15 years, because within this time pests and diseases evolve ways around the plant's defences. Often, wild varieties provide the only source of such genes, and must therefore be conserved at all costs.

- **Health**: Extracts from plants, animals and micro-organisms have always provided humanity with medicines. The World Health Organisation has estimated that 80% of people in developing countries rely on traditional medicine, and most of the drugs developed in western countries, even if now manufactured synthetically, have their origins in plants. Searches for new drugs continue in ecosystems around the world, including Western Australia.

- **Industry**: We depend on natural products from the moment we clean our teeth in the morning until we slide between our sheets at night. Timber is the biggest contributor to industry with a world trade value of $50 billion per annum, well ahead of fish products (worth $15 billion). Natural starches are used in fabrics, glue, soaps, cosmetics, medicines, photographic film, explosives, colourings, car tyres, plastics, and even the preservation of human blood plasma. Natural fats and oils contribute to chemical manufacture, cosmetics, adhesives, inks, rust-preventers, foods, beverages, lubricants, polishes, linoleum, sunscreen compounds and many medicines.

- **Life Support**: Other species, often unseen and unknown, are integral parts of ecosystems that provide us with indispensable free services - the life-support systems of our planet. They provide the oxygen we breathe, maintain the quality of the atmosphere, influence the climate, regulate fresh water supplies, generate and maintain the topsoil, dispose of wastes, generate and recycle nutrients, control pests and diseases, pollinate crops and provide a genetic store from which we can benefit in the future.

3: Extinction in Western Australia

Evolutionary biologists believe that, while extinctions are a natural part of evolutionary processes, most extinctions now are being caused by human activities. These activities are starting to reduce the world's stock of biological diversity.

Since the arrival of non-Aboriginal people, Australia unfortunately provides many striking examples of an increased rate of extinction. In only 200 years, 18 species of endemic mammals have become extinct (7% of Australia's total mammal fauna); this is about half of all the mammal species that have been recorded as becoming extinct world-wide during historical times.

In Western Australia 11 (8%) of the original 140 species of terrestrial mammals are presumed extinct. A further six species are extinct on the mainland and now occur only on offshore islands. No marine species are known to have become extinct, although three species of marine mammals are on the State's list of threatened fauna and three more are declared in need of special protection.

At least 100 species of Australian vascular plants, 0.7% of the total, have become extinct, primarily from areas cleared for farming. Of the 52 species and one subspecies presumed extinct in Western Australia (0.6% of the State's named flora), approximately 80% are from the agricultural lands in the south west of the State. It is likely that some species of plants disappeared before they were collected.

The above data compare unfavourably with only 27 extinct plant species recorded in the whole of Europe (0.2%), 39 in southern Africa (0.2%), and 74 in continental USA (0.4%). (We should note, however, that the other continents have been more intensively used by human beings for much longer than Australia, and many extinctions may have gone unrecorded.)

As shown in the Table (p. 6), there are also many species in danger of extinction in Western Australia. The terrestrial mammals are worst affected, with 21% of extant species declared threatened. Currently, 259 taxa* of vascular plants are declared threatened, of which 232 are listed as species, 21 as subspecies, and 6 as varieties. They constitute about 3% of the extant flora. A further 1 200 species and other taxa of vascular plants are included on the

* A taxon (plural taxa) is any of the levels or categories into which living organisms are classified (e.g. genus, species, subspecies, variety).

Priority Flora List (a list of taxa of uncertain conservation status which require further survey, research or monitoring). A single species of moss is also declared threatened.

Table: Plants and animals declared threatened in Western Australia (numbers are numbers of species unless otherwise indicated)

Group	Presumed Extinct in WA	Extant but Threatened in WA
Mammals	11 terrestrial	27 terrestrial 3 marine
Birds	2	30 species, 4 subspecies
Reptiles	0	6 species, 1 subspecies
Amphibians	0	2
Fish	0	2
Vascular Plants	52 and 1 subspecies	232 and 27 other taxa

Regionally, extinctions have been much higher in some areas than in others. In the deserts, for example, 33% of mammals are extinct, and 90% of all medium-sized mammals (those with a body weight between 35 g and 5 500 g) are either extinct or threatened. The number of threatened plants is highest in the agricultural areas of the south-west.

As noted in Chapter 1 of the draft strategy, over 98% of the State's species are either invertebrate animals or lower, non-vascular plants. We have no idea of the status of more than a handful of these species, but given the scale of alteration to many ecosystem types, it is likely that some of them have become extinct, and probably many others have become threatened.

Extinctions continue. The extinct mammals, for example, did not all disappear last century; recent studies have shown that most extinctions have occurred only in the past 40 to 50 years.

Reductions in biological diversity do not only result from extinctions. Loss of genetic diversity within species through reduced population or reduced geographic range is also important. Loss of ecosystem diversity can also result from environmental changes, and may bring with it loss of species and genetic diversity.

4: Causes of Extinction

Several processes have led to species becoming threatened or extinct in Western Australia. Often, because extinctions happened some time ago and were not studied at the time, the exact reason for a particular species becoming extinct is not known. In many cases there were probably several contributing factors. Some of the accepted reasons for species extinctions are discussed briefly below and in more detail in Chapter 9 of the draft strategy.

Habitat Destruction

Clearing land for agriculture, urban or other developments is a major cause of extinctions in Australia. Most species cannot exist outside a natural or semi-natural ecosystem. In addition, clearing can lead to the loss of species from habitat remnants. Examples of this are when the remnants are too small to support a viable population, when a population disappears because of a local event (such as a fire) and cannot reinvade across farmland, or when the remnant supports a plant population but not its pollinator.

Habitat Change and Degradation

Among the most significant causes of habitat change and degradation are changed fire regimes, salination, drainage, erosion, grazing by exotic (i.e. introduced) herbivores (both domestic and feral), the addition of nutrients and other pollutants, the presence of weeds (both from outside Australia and from other parts of Australia), and introduced plant diseases.

Of these factors fire is probably the least understood by the public. Much of the native life of Australia is adapted to survive fire. However, changes to fire regimes (involving fire frequency, season, size, etc.) have contributed to changes in ecosystems and to the disappearance of species; in many parts of Australia, indeed, there have been major changes to fire regimes resulting from the replacement of Aboriginal land management practices by those of Europeans. The conservation of some threatened species and many habitats will depend on appropriate fire management. This is currently taking place in the Gibson Desert, where Aboriginal burning regimes are being reintroduced in a joint project between CALM and Aboriginal communities with funding assistance from Western Australian Petroleum Pty Ltd.

Introduced ('Exotic') Animals

Many mammals, birds and some invertebrates introduced into Australia have the potential to cause, or have caused, extinctions. Introduced herbivores that

have gone wild and caused significant environmental degradation include rabbits, goats, cattle, buffalo, pigs, donkeys and camels.

Three introduced species of rat prey on, and can devastate populations of, ground-dwelling and ground-nesting animals. Two exotic predators, the cat and the European red fox, are abundant; and studies have shown that the fox is implicated in the disappearance of remnant populations of many threatened mammals. Although less complete, accumulated evidence shows that predation by feral cats can also cause the decline and even loss of populations of some species of birds and mammals.

In addition, the presence of exotic species can lead to changed competitive relationships, to the detriment of native species. Even less obviously destructive species such as the house mouse, which is locally common, and feral honeybees, which are widespread throughout Australia, may be significant in this regard.

Australian waters have not escaped the influence of exotic species. Several species of freshwater fish have been introduced to our streams, and at least one, the brown trout, has been shown to be capable of eliminating local populations of small native fish.

Introduced ('Exotic') Plants

Weeds have replaced and are replacing native plants over wide areas. Examples include the invasion of exotic grasses into many areas of remnant vegetation in south-west Australia, the invasion by the annual herb Ward's weed (*Carrichtera annua*) of much of the Nullarbor Plain, the replacement of river gums with athel trees (*Tamarix* species) in river courses in central Australia, the invasion of mesquite (*Prosopis* species) in the Pilbara, the degradation of many Swan Coastal Plain communities by veldt grass (*Ehrharta* species), wild oats (*Avena* species) and cape tulip (*Homeria* species), and the choking of wetlands near Perth by bulrush (*Typha orientalis*) and watsonia.

Some introduced plants, including Australian plants from other parts of the continent and even other parts of the State, both displace native plants and eliminate native animal species that are not adapted to using them for food or shelter. In addition, introduced plants, especially grasses, may significantly increase the risks and effects of fire.

Many of the most damaging invasions of weeds are concentrated on wetlands, floodplains and streamlines (i.e. the better watered parts of the environment) throughout Australia. This is of profound ecological significance because of the key role that these habitats play in the survival strategies of many Australian plants and animals.

Introduced Plant Diseases

Several introduced plant diseases are threatening Western Australian plants. The major problem is dieback, caused by the microscopic, soil-borne fungi belonging to the genus *Phytophthora*, especially *P. cinnamomi*. *Phytophthora* species attack plants via the roots. They kill their hosts by killing the fine roots that take up water, or by girdling major roots or the base of the trunk. Plants most susceptible to the disease are from four families which provide many of Western Australia's most unique and characteristic species, such as banksias, dryandras, darwinias (the 'mountain bells'), feather flowers, and many species of heath and pea. These four families account for a very high proportion (over 50%) of the plants in ecosystems of the south-west of Western Australia. Plants from several other families are also affected. Many threatened plant species could become extinct through infection by *Phytophthora* in the coming decades. For example, all known populations of *Banksia brownii*, the feather-leaved banksia, are infected; and all infected plants die.

Another significant plant disease is canker, caused by wind-borne spores of several fungi (some probably introduced). The scarlet banksia, *Banksia coccinea*, is currently being severely affected by this disease.

Direct Effects of Humans

No vertebrate species are thought to have become extinct because of hunting since European settlement in mainland Australia. Nevertheless, direct killing contributed significantly to the extinction of the thylacine in Tasmania, and unregulated harvesting drove a number of species of marine mammals to dangerously low levels earlier in this century. Two spectacular species which occur in Western Australia, the humpback whale and the right whale, have made appreciable recoveries in only the last ten years.

Uncontrolled hunting or collecting has the potential to cause extinctions of rare or localised species. Species that take many years to reach maturity and have a low reproductive potential, for example cockatoos, may be severely affected by collecting or hunting. The collection of plants for the wildflower trade or for horticulture also has the potential, if uncontrolled, to cause loss of genetic diversity or extinctions.

5: Some Achievements So Far

Nature conservation has been an increasingly significant factor in the Western Australian community for many years, especially in the last 30 years. At the same time, the State has been growing and developing increasingly quickly and there have been many conflicts between development and conservation interests over that time. There is now considerable recognition throughout the community that development and conservation must go hand in hand for both to be successful.

1 A valuable system of conservation reserves on land, totalling over 19 million hectares (more than 7% of the State) and including many of the State's major ecosystems and outstanding scenic areas, is in place (see map, p. 13).

Since the formation of CALM in 1985, eight National Parks (Mt Augustus, Mt Franklin, Lesueur, Purnululu, Shannon, Tuart Forest, Waychinicup and West Cape Howe) have been declared along with many additions to existing parks. Thirty-nine conservation parks proposed in the south-west forest regions are close to gazettal, and an area of over half a million hectares has been added as nature reserves since CALM's formation. Several pastoral leases, including Mt Hart in the Kimberley, have also been purchased to fill recognised gaps in the reserve network. In addition, over 400 nature reserves have been given greater protection by upgrading from B or C class to A class.

2 Seven marine reserves (totalling over one million hectares), including Shark Bay, Ningaloo and Marmion Marine Parks, have been declared in the last five years. An ongoing Marine Parks and Reserves Working Group has been established to make further recommendations.

3 Detailed biological surveys have been conducted in areas within a high proportion of the State's 21 botanical districts, on which further reserve recommendations have been based.

4 Ten regional and 20 district CALM offices now exist throughout the State to provide management of the conservation estate. Amongst other initiatives, CALM has established a Wildlife Management Branch and is operating a wide-ranging tree establishment program across much of the State.

5 The significance of the introduced red fox in eliminating populations of mammals and ground-nesting birds has been established by research conducted by CALM. These findings have generated nationwide interest in fox control. A major coordinated project with State and Commonwealth

funding to improve the methods available is under way. Methods of control are being applied and further developed, with spectacular recoveries in mammal populations.

Parallel with this, CALM and the Agriculture Protection Board are partners with the CSIRO and other research institutions in the recently announced Cooperative Research Centre for the control of feral animals, which is receiving substantial Commonwealth funding.

6 The importance to nature conservation of fire regimes originally applied by Aboriginal people living in arid parts of the State has been recognised, and a cooperative research project to develop methods of reintroducing locally extinct mammals has begun in the Gibson Desert. This involves CALM, Aboriginal communities and private enterprise (funding assistance from West Australian Petroleum Pty Ltd).

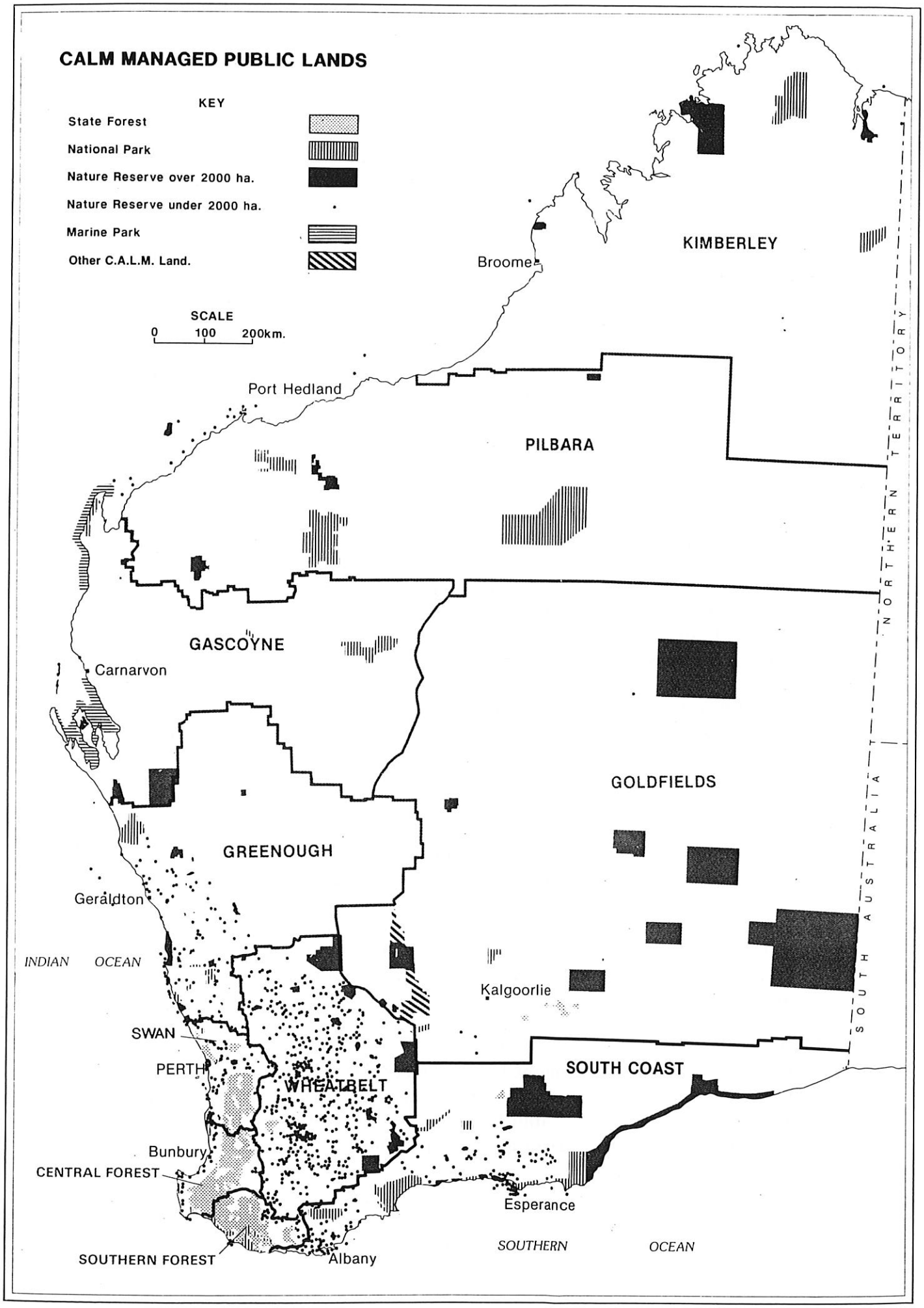
7 Considerable progress has been made in identifying which species of vertebrate animals and vascular plants are threatened with extinction, and there has been much research carried out on threatened species, such as the numbat, western swamp tortoise, noisy scrub-bird, Wongan trigger-plant, matchstick banksia and grass wattle.

8 New techniques have been developed for managing threatened species and their habitats. Several critically threatened species can now be reintroduced, with a high likelihood of success, to areas from which they have become extinct. Successfully translocated species include the numbat, western ringtail possum, noisy scrub-bird, woylie, and greater stick-nest rat. Captive breeding and propagation of threatened species has also progressed rapidly with breakthroughs in breeding species such as the western swamp tortoise and the chuditch.

9 Most WA islands have very high nature conservation values and these have been recognised by incorporating many of them into the conservation estate. Management techniques have been developed and applied to control introduced animals such as rabbits, black rats and foxes.

10 There is now a representative system of conservation reserves throughout the area of State forest. Procedures have been developed to ensure that the rest of the forest is managed in a way which maintains biological diversity and other natural (and social) values across the whole forest ecosystem.

11 In the last five years many areas of remnant bushland on farms have been fenced, and many catchment-based conservation plans, some including the provision of biological corridors, have been established in agricultural areas. This has been made possible by a combination of high community support for land care in rural areas and the provision of resources from both State and Federal Governments.


CALM MANAGED PUBLIC LANDS
KEY
State Forest
National Park
Nature Reserve over 2000 ha.
Nature Reserve under 2000 ha.
Marine Park
Other C.A.L.M. Land.
SCALE
0 100 200km.
KIMBERLEY
Broome
Port Hedland
PILBARA
GASCOYNE
Carnarvon
GOLDFIELDS
GREENOUGH
Geraldton
INDIAN OCEAN
Kalgoorlie
SWAN
PERTH
WHEATBELT
SOUTH COAST
Bunbury
CENTRAL FOREST
Esperance
SOUTHERN FOREST
Albany
SOUTHERN OCEAN
NORTHERN TERRITORY
SOUTH AUSTRALIA

6: Proposed Actions

Nature conservation has progressed rapidly in Western Australia in recent decades, but although much has been achieved, much remains to be done.

The emphasis in the past has been on establishing a system of reserves dedicated to nature conservation (and a valuable system now exists - see map, p. 12) and to identifying major threats to species and ecosystems and ways of alleviating their effects.

The major tasks ahead are twofold: to build on the existing system to make it include more of the State's species and ecosystems, and to involve the whole community in land management of a type consistent with nature conservation (i.e. ecologically sustainable management).

In the past, the greatest threat to biological diversity in our State has probably been land clearing. Now that the development of land has almost ceased, the greatest threats are from land degradation, inappropriate fire regimes, and some of the exotic species of animals, plants and diseases that have become established since settlement.

Within the overall objective established at the beginning of this document, CALM's vision for nature conservation in Western Australia encompasses the following achievable goals:

- There will be strong and continuing community support for nature conservation.
- Western Australia will maintain, in perpetuity, viable and significant examples of the whole spectrum of its natural areas and biological assets.
- Nature conservation and management will be integrated with all development, industrial and natural resource management activities in the State.
- There will be a constructive and mutually beneficial partnership between CALM and the farming and pastoral industries, so that the nature conservation values of private and leasehold land are fully realised.
- The resources available to CALM, combined with resources from the wider community (including the Aboriginal community), will enable the proper management of lands and waters for nature conservation throughout the State.
- There will be sufficient scientific research conducted to provide the knowledge to properly manage species, lands and waters for nature conservation.

To achieve these goals, the following key actions are required:

i) **To complete the conservation reserve system by selecting, reserving and managing viable protected areas broadly representative of the natural ecosystems and species of Western Australia and including areas with special landscape, cultural and educational values.**

This will be achieved by:

- continuing to support the implementation of the EPA Red Book and other existing recommendations for additional conservation reserves;
- undertaking detailed ecological surveys of those parts of the State that are poorly known at present, e.g. the Austin, Carnarvon and Ashburton Botanical Districts and marine areas, and recommending and implementing new conservation reserves where needed; and
- identifying and protecting the most threatened habitats by reservation of public land or, in the case of private land, by land purchase, or by negotiation with landholders as necessary.

ii) **To promote, encourage and assist nature conservation on private and other lands and waters outside the conservation estate.**

This will be achieved by:

- helping landowners and managers to protect and manage remnant vegetation as components of regional conservation systems;
- promoting management of rangelands in pastoral areas which is compatible with nature conservation by sustainable grazing of native plant species, and the protection of ungrazed reference areas; and
- encouraging local government authorities to provide for nature conservation through their town planning schemes.

iii) **To protect, conserve and manage threatened species, ecosystems and communities by conducting and applying research and protecting and managing key areas and critically endangered species.**

This will be achieved by:

- continuing to review the lists of threatened species of plants and animals and to develop priorities for research and management through the application of ranking systems;
- reserving or otherwise protecting key habitats of threatened species and managing these areas as needed; and
- conducting research to elucidate the reasons for the decline of particular threatened species and developing ways of preventing further declines through the preparation, implementation and monitoring of Recovery Plans.

iv) **To control processes that are threatening large areas of habitat and/or many species.**

This will be achieved by:

- continuing to develop and apply techniques to protect native ecosystems from plant diseases, especially dieback caused by *Phytophthora* species;
- expanding and applying research into the control of exotic (i.e. introduced) animals, especially foxes, rabbits and feral cats;
- developing procedures for the control of important bushland weeds and the prevention of introduction of plants from other countries that have the potential to threaten native plant communities; and
- developing and applying fire regimes that are appropriate to the conservation of the biological diversity of different parts of the State.

v) **To promote and assist the integration of nature conservation with economic activity according to the principles of ecologically sustainable development.**

This will be achieved by:

- developing appropriate management prescriptions for operations on CALM-managed public lands;
- providing technical advice to other agencies and to industry;
- assisting with the review of environmental impact procedures and environmental impact statements;
- providing information to all sectors of society concerning the nature conservation aspects of ecologically sustainable development;
- ensuring as far as possible that natural resource managers do not degrade the biological assets of the State; and
- promoting the inclusion of environmental costs in financial planning.

vi) **To promote the appreciation and awareness of the natural environment and the role of effective nature conservation in the well-being of human society.**

This will be achieved by:

- preparing and disseminating information on Western Australia's natural heritage and nature conservation;
- involving the public in nature conservation through volunteer programs and participation in policy making and planning; and
- assisting education authorities to teach students about nature conservation.

vii) **To develop new ways of attracting resources to nature conservation.**

This will be achieved by:

- seeking funds from sponsorship, philanthropy, partnerships and cost-sharing schemes;
- promoting the application of the user-pays principle; and
- promoting the allocation of appropriate resources from the State, consistent with the degree of public support.

Western Australia has a remarkably diverse range of plants and animals, many of which occur nowhere else in the world. It is of global significance in terms of biological diversity.

In order to maintain this biological diversity, we will need to build on the progress that has already been made. We will need the knowledge to manage the ecosystems and the endangering processes on conservation reserves and other land. We will also continue to require some specific actions to prevent the extinction of critically endangered species.

It is a task for the whole community, not just one or a few government agencies.

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