28th March 2006

The Secretary
The Senate Environment, Communications,
Information Technology and the Arts References Committee
Parliament House
Canberra ACT 2600

Dear Secretary of the Committee,

Re: Inquiry into Australia's national parks, conservation reserves and marine protected areas

Humane Society International (HSI) wishes to lodge a submission to the Inquiry into Australia's national parks, conservation reserves and marine protected areas.

Australia is facing a crisis in the decline of biological diversity. The national reserve system will play a fundamental role in preventing or slowing down that alarming rate of decline.

HSI is a key member of the National Biodiversity Alliance (NBA) an alliance of Australia's leading biodiversity conservation organisations. The NBA proposes that the Commonwealth Government adopt a new **National Biodiversity Initiative**. This initiative presents a cost effective approach to biodiversity conservation. It aims to avert Australia's decline in biodiversity and protect our natural resources. The initiative also aims to expand the National Reserve System (NRS) to achieve 80% comprehensiveness by 2010. We have enclosed a copy of the initiative.

Australia currently has one Global Biodiversity *Hotspot*, occurring in the south west of Western Australia, first described by Professor Norman Myers. A new biodiversity *hotspot* is now being proposed for eastern Australia. We have enclosed a draft map of that *hotspot*, which is being further refined by Australian and international scientists. Currently there are 15 National Biodiversity *Hotspots*, recognised in an ongoing Commonwealth Government program. We have enclosed a map and description of these places.

In further developing the NRS, it is our view that Australia's global and domestic biodiversity *hotspots* should be taken into account. There is also a need to review and refine the present 15 domestic *hotspots*, and to undertake an urgent identification of Australia's marine biodiversity *hotspots.*

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Should you require any further information on our submission please don't hesitate to contact me at HSI's Sydney office

Yours sincerely,

Michael Kennedy*
Director
Humane Society International

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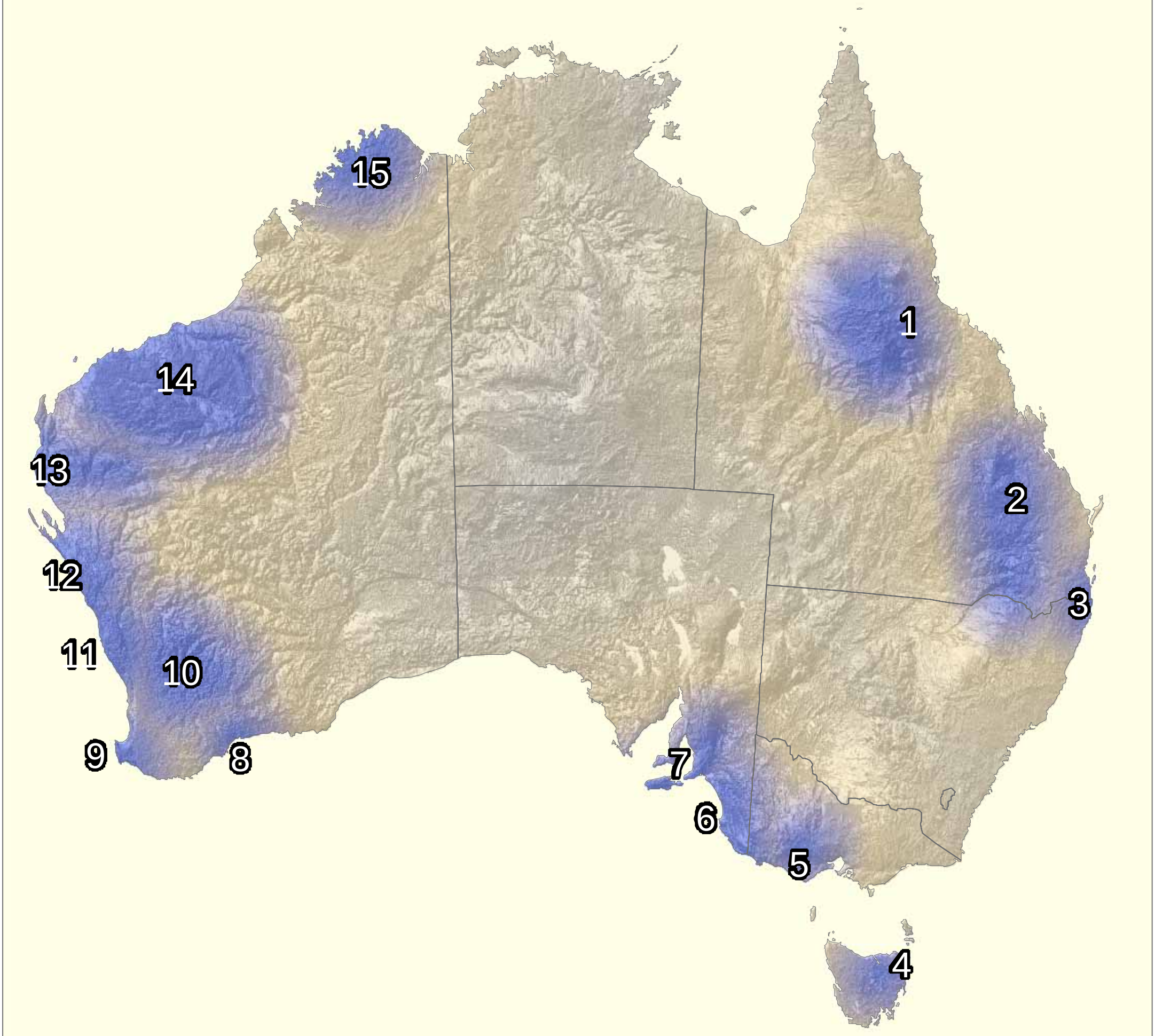
*Member – Australian Heritage Council
Member – Commonwealth Expert Committee on Biodiversity *Hotspots*
Member – Regional Natural Heritage Program Taskforce (Regional *Hotspots*)
Past Member – Biological Diversity Advisory Committee
Past Member - Commonwealth Endangered Species Advisory Committee
Past Member – National State of the Environment Reporting Council
Past Member – Biological Diversity Advisory Council

Biodiversity Hotspots



1 Einasleigh and Desert Uplands

2 Brigalow North and South

3 Border Ranges North and South

4 Midlands of Tasmania

5 Victorian Volcanic Plain

6 South East of South Australia and South West Victoria

7 Mt Lofty / Kangaroo Island

8 Fitzgerald River Ravensthorpe

9 Busselton Augusta

10 Central and Eastern Avon Wheat Belt

11 Mount Lesueur Eneabba

12 Geraldton to Shark Bay sand plains

13 Carnarvon Basin

14 Hamersley / Pilbara

15 North Kimberley

Map produced by ERIN, Department of Environment and Heritage, Canberra, August 2003.

Australia's 15 National Biodiversity Hotspots

1. Einasleigh and Desert Uplands (Queensland)

In this region of North Queensland, the high ranges and plateaus of Einasleigh contrast sharply with the plains and low ranges of the Desert Uplands. Einasleigh basalt lava flows and lava tunnels provide habitat for threatened and geographically restricted plants and animals. Water enters the Great Artesian Basin aquifers here and important artesian spring complexes contain endemic plants, snails and fish including the Edgbaston Goby and the plant Salt Pipewort (*Eriocaulon carsonii*). Ecologically and geologically important wetlands include Lake Buchanan and Lake Galilee. In the Desert Uplands alone there are 22 rare or threatened animals, including the Masked Owl and the Julia Creek Dunnart, and 29 rare or threatened plants.

Current threats come from unsustainable grazing pressure, feral animals and in some areas tree clearing. Changing fire regimes and exotic weeds which accompany more intensive grazing have the potential to affect bird species such as the endangered Buff-breasted Button-quail, now restricted to only a few sites.

2. Brigalow North and South (Queensland and New South Wales)

The inland plains of the Brigalow belt originally supported vast vegetation communities dominated by Brigalow (*Acacia harpophylla*). On the western slopes of the Great Dividing Range there are large tracts of eucalypt woodlands and the hotspot is also a stronghold for large numbers of endemic invertebrates.

This hotspot includes populations of the endangered Bridled Nail-tail Wallaby and the only remaining wild population of the endangered Northern Hairy-nosed Wombat, now limited to around 110 individuals. The area contains important habitat for rare and threatened species including the Bulloak, the Jewel Butterfly, Brigalow Scaly-foot, Glossy Black-Cockatoo, Greater Long-eared Bat, Large Pied Bat, Eastern Long-eared Bat and the threatened community of semi evergreen vine thickets The hotspot provides important habitat for star finches and golden tailed geckos.

Broad-scale clearing for agriculture and unsustainable grazing is fragmenting the original vegetation, particularly on lowland areas, encouraging weed invasion and putting at risk woodland and grassland birds and the natural water cycle. Inappropriate fire regimes and predation by feral animals, in particular pigs, cats and foxes, pose additional threats to local biodiversity.

3. Border Ranges North and South (Queensland and New South Wales)

This sub-tropical and temperate hotspot is one of Australia's most diverse areas - and it is *the* most biologically diverse area in New South Wales and southern Queensland. It has a variety of significant habitats: subtropical rainforest, wet sclerophyll forest, mountain headlands, rocky outcrops and transition zones between forests.

These habitats support a huge variety of bird and macropod species. Many are rare or threatened: the Richmond Bird-wing Butterfly, Fleay's Frog, Hastings River Mouse, Long-nosed Potoroo, Spotted-tailed Quoll, Eastern Bristle Bird, Rufous Scrub-bird and the critically endangered Coxen's Fig parrot. Notable birds such as Albert's Lyrebird and the Paradise Riflebird make their home here, and in the south-east Queensland rainforests live a rich variety of primitive plant species, many of them similar to fossils from Gondwana.

This region's high population growth, with associated urban and tourist developments along the coast, is a major cause of habitat loss and fragmentation. Although most remaining natural areas are protected, they are under considerable threat from weeds, fire and recreational use.

4. Midlands of Tasmania

Predominantly a large plateau basin, this hotspot includes 10 endemic plant species, two endemic freshwater mussels and endemic freshwater snails and caddisflies. There are 32 nationally threatened species and more than 180 plants and animals listed as threatened at the state level. Twelve wetlands are listed on the Directory of Important Wetlands in Australia and 10 wetlands are of regional significance. Less than 2 per cent of the area is protected.

The Midlands was one of the first areas of Australia cleared for agriculture and still supports extensive agriculture and plantation forestry. Widespread land clearing has resulted in severe habitat fragmentation with only small and scattered remnants of native vegetation remaining. Vegetation loss and degradation, soil erosion, dryland salinity and invasion by weeds such as willows and gorse, are seriously threatening endemic invertebrates, native orchids and numerous nationally threatened plant species. The new threat posed by foxes is potentially devastating to local biodiversity, including the endangered Eastern Barred Bandicoot.

5. Victorian Volcanic Plain

The Victorian Volcanic Plain is a flat to undulating area stretching west from Melbourne to Portland. It is characterised by fertile volcanic soils that were originally covered with open grasslands, grassy woodlands, large shallow lakes and wetlands. After European settlement most of the plains were converted to pasture, and the region is still dominated by grazing with extensive agricultural crops and plantation forestry.

This hotspot includes 65 species listed as nationally threatened and 173 threatened in Victoria. Nine lakes are recognised as internationally important under the Ramsar Convention on Wetlands and 26 lakes listed in the Directory of Important Wetlands in Australia. Coastal saltmarsh provides important over-wintering habitat for the endangered Orange-bellied Parrot. The remaining areas of native vegetation, although fragmented, are crucial for the continued existence of endemic orchid species.

The degradation of vegetation and habitat, predation by foxes and cats, changing fire patterns, weed invasion and the total grazing pressure of domestic stock, kangaroos and feral rabbits all pose major threats to this region's biodiversity.

6. South Australia's South-East/ Victoria's South-West

This hotspot straddles the South Australia -Victoria. Border. Extensive clearing has occurred in South Australia, with Victoria holding more extensive areas of remnant vegetation.

South Australia's Coorong salt marshes are among many wetlands which are home to a wide variety of threatened and endemic species. The Coorong is especially important as over-wintering habitat for the endangered Orange-bellied Parrot. The relatively undisturbed saltmarsh of the Glenelg River is an important breeding site for wetland and coastal seabirds.

Wetlands and wetland species have been dramatically affected by vegetation clearance and changed drainage. Dryland salinity is a major concern in the north, causing dieback of native vegetation and pasture, and increasingly saline wetlands. Habitat fragmentation and degradation are key threats to native plants and animals. Feral animals such as rabbits, foxes, cats, goats and deer threaten native plants and animals through

grazing, competition and predation. Exotic weeds, such as bridal creeper, African boxthorn, radiata pine and Salvation Jane also represent significant threats.

7. Mt Lofty/ Kangaroo Island (South Australia)

The Mt Lofty Ranges have been extensively cleared for grazing and dryland agriculture. The Ranges are a centre for declining woodland birds, such as the endangered Southern Emu-wren and the South Australian subspecies of the Glossy Black-Cockatoo. Their survival depends on native vegetation remnants.

Kangaroo Island has proportionally the greatest area of original natural vegetation in South Australia's agricultural zone. Yet eight of the ecosystems in the Kangaroo Island subregion (which includes some small satellite islands) are listed as threatened at the state level. Four animals are nationally listed: the Glossy Black Cockatoo, Kangaroo Island Dunnart, Southern Brown Bandicoot and the Heath Rat. Conservation reserves protect much of Kangaroo Island and it is one of the largest areas in Australia free of rabbits and foxes. Despite this protection, mammals are still threatened by cats and dogs, changed fire patterns and habitat fragmentation.

There are 14 nationally threatened plants on Kangaroo Island. Most are poorly conserved with the largest populations occurring on roadsides in the extensively cleared agricultural areas of the island. These plants, which include the endangered Pink- lipped Spider-orchid and White Spider-orchid, face threats such as weed invasion, dryland salinity, changed fire patterns, root rot fungus, and unsustainable grazing pressure.

A Dibbler (Parantechinus apicalis) found in the Fitzgerald River Ravensthorpe hotspot, Western Australia. Photo: Tony Friend

8. Fitzgerald River Ravensthorpe (Western Australia)

This hotspot's landforms vary from sand plains along the coastal section - subject to grazing and dryland cropping - to the peaks of the Ravensthorpe Ranges.

Coastal shrublands and heathlands host remnant populations of south-western Australian birds. The offshore islands form crucial habitat for marine mammals and breeding sites for birds such as the Cape Barren Goose and the Noisy Scrub-bird, which has been successfully translocated to Bald Island.

Threats within this hotspot include habitat fragmentation, feral animals, unsustainable grazing pressure and weed invasion. Many species and ecosystems are very localised and so are especially vulnerable to fire. Salinity, rising water tables and the root-fungus *Phytophthora cinnamomi* threaten remaining areas of vegetation, even those in conservation reserves. Sedimentation and increased salinity are affecting the wetlands.

Wildflowers in the Busselton Augusta hotspot, Western Australia. Photo: Arthur Mostead

9. Busselton Augusta (Western Australia)

The heathlands and shrublands of the coastal plains support hundreds of different plants per square kilometre - many of them endemic and endangered - and a wide range of native invertebrates. In the south, forests and woodlands with high rainfall are habitat for another highly diverse range of plants and animals.

Over-grazing pressure, changed fire regimes and habitat fragmentation have the potential to affect these landscapes and threaten the viability of species such as Carnaby's Black-Cockatoo, the Chuditch (or Western Quoll) and Brush-tailed Phascogale.

The area has many caves systems with significant aquatic invertebrates found only in Western Australia. Changes in groundwater movement could potentially cause significant stress to the threatened cave communities.

10. Central and Eastern Avon Wheatbelt (Western Australia)

The dominant vegetation of this area includes woodlands of Wandoo, York Gum, Salmon Gum, Casuarina and some areas of proteaceous scrub heaths. The woodlands contain many of Western Australia's threatened plants and birds. The area is particularly rich in endemic plants - Grevilleas, Hakeas, Eucalypts, Acacias, Eriostemons, and the Asteracea family - and invertebrates, particularly ground-dwelling spiders.

Most of the native vegetation has been cleared for agriculture and grazing, leading to extensive salinity problems over one-third of the area. Remnant vegetation, wetlands, river systems, populations of species and ecosystems are in poor condition, and the fragmentation of vegetation means an increased threat of weeds, fire, and feral animals.

Sedimentation, salination and other pressures such as water diversion and water pollution threaten the area's nationally important wetlands.

11. Mount Lesueur-Eneabba (Western Australia)

The Mount Lesueur-Eneabba hotspot supports a large number of distinct, species-rich and endemic communities. There are more than 250 indigenous plant species, many living in the heaths and scrub-heaths. The hotspot is a stronghold for reptiles, especially small lizards, and home to the threatened Dibbler, a small carnivorous marsupial.

The offshore islands are important refuge areas for nesting sea turtles, the West Australian Tammar Wallaby and rare breeding seabirds.

Pastoralism dominates much of the region, and the total grazing pressure of stock and feral herbivores such as rabbits is causing land degradation, high sediment levels in rivers and fragmentation of remaining vegetation.

12. Geraldton to Shark Bay sand plains (Western Australia)

Extensive heaths and scrub-heaths, strongholds for native plants and animals, characterise much of the hotspot.

Sandplains are most extensive in the north, where the area overlaps the edges of the Carnarvon Basin hotspot. The sand plains are home to a diverse range of endemic plants and many reptiles, including a number of endemic small skinks and the Western Australian Carpet Python.

Pastoralism, with some cereal cropping, dominates much of the region, and grazing pressure from stock and rabbits has led to land degradation and fragmentation of vegetation. Unsustainable grazing is also causing high sediment loads in rivers and extensive salination across the area.

13. Carnarvon Basin (Western Australia)

The Carnarvon Basin is a relatively flat area dominated by hummock grasslands, Acacia shrublands and woodlands. Sea turtles breed in the conservation reserves of the Shark Bay World Heritage area and the offshore island groups. Seabirds and endangered mammals no longer found on the mainland have made this area their refuge. Aquatic and terrestrial cave-dwelling animals live in the caves and sinkholes of the Cape Range.

Extensive unsustainable sheep grazing is degrading the landscape, and the damage is exacerbated by feral herbivores such as rabbits. On the coastal margin, sedimentation (from grazing) and increased salinity levels pose a threat to lakes, creeks, mangrove and coastal flats. Degradation will potentially affect vegetation communities away from the coastal zone.

14. Hamersley-Pilbara (Western Australia)

The Hamersley-Pilbara hotspot provides habitat for a number of threatened, endemic and fire-sensitive species and communities. The Hamersley Range provides relatively protected habitats for many species including the Ghost Bat, Mulgara and Spectacled Hare-wallaby, and the aquifers support endemic cave-dwelling animals. The Pilbara is home to small marsupials such as the Little Red Antechinus and the Pebble-mound Mouse. The arid climate favours endemic reptiles including gecko and goanna species. The coastal islands are refuges for vulnerable species that are rare or extinct on the mainland, such as the Western Chestnut Mouse, and are breeding sites for turtles and seabirds.

The Pilbara's large coastal plains and inland ranges support an extensive sheep and cattle grazing industry. The effects of past over-grazing are exacerbated by the total grazing pressure of current stock and introduced species such as rabbits, contributing to land degradation.

15. North Kimberley (Western Australia)

The North Kimberley has a variety of rare features including mound springs, swamp rainforests and the Airfield Swamp, a large wetland with a paperbark forest. Populations of the endangered Gouldian Finch live here, and endemic and threatened mammals include the Golden Bandicoot, Scaly-tailed Possum and Monjon (a rock wallaby).

This area consists mainly of Aboriginal land and pastoral grazing leases and is characterised by savanna woodland. With grazing has come changed fire regimes and a continuing general deterioration of the landscape. Extensive dry season fires have damaged sensitive tropical and sub-tropical forests and woodlands. Rainforest patches provide refuges for invertebrates, now under threat from fire and stock. Feral cats are common and feral pigs populations are expanding, while colonisation by cane toads is a future threat.

Go back to the overview about Australia's National Biodiversity Hotspots

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National Biodiversity Alliance

Proposal for a new

National Biodiversity Initiative

Securing Australia's Nationally Important Biodiversity and Ecosystem Services

National Biodiversity Alliance
May 2004

Secretariat

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National Biodiversity Alliance

A number of national and international environment organisations in Australia have formed the National Biodiversity Alliance (NBA) to provide expert policy advice on biodiversity conservation. These groups represent a combined Australian supporter base in excess of 100,000 people. Internationally this figure is in excess of 12 million people. This gives us unique access and links to other national and international scientific and legal advice, in particular the NBA benefits from a Scientific Advisory Panel of eminent Australian biodiversity scientists.

The NBA proposes the Commonwealth Government adopt a new National Biodiversity Initiative.

Lesueur's Frog, Bush Heritage Currumbin Valley Reserve QLD Wayne Lawler/Ecopix

Australian Bush Heritage Fund

Australian Centre for Environmental Law

australian wildlife conservancy

Birds Australia
Royal Australasian Ornithologists Union

Greening Australia Limited

Humane Society International

WWF Australia

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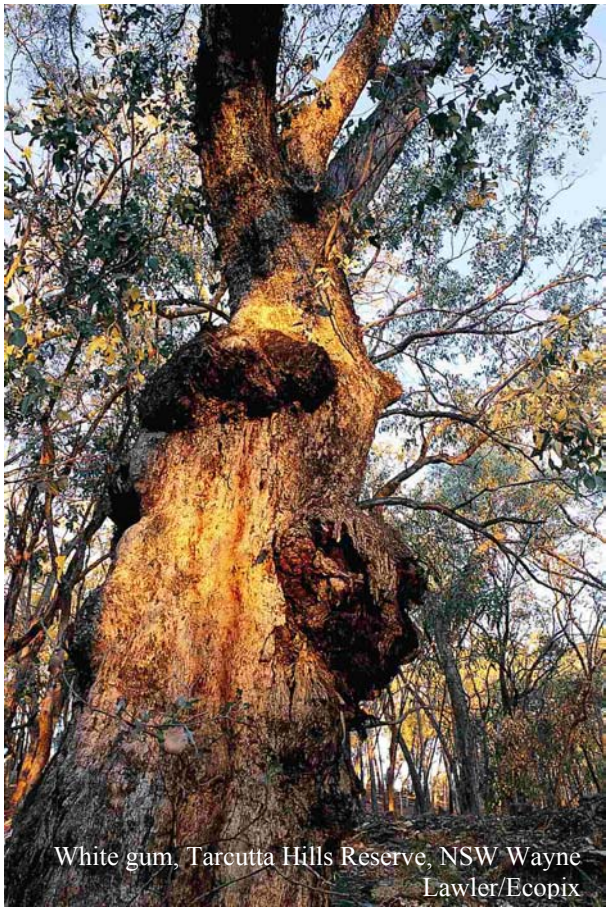
Introduction

The National Biodiversity Initiative aims to improve the condition of Australia's nationally important terrestrial and marine biodiversity assets and prevent their further deterioration.


White gum, Tarcutta Hills Reserve, NSW Wayne Lawler/Ecopix

The National Biodiversity Initiative gives Australia the opportunity to secure nationally important biodiversity and ecosystem services, which provide the foundation of ecologically sustainable development and are fundamental to sustainable agriculture and fisheries. The Initiative is built on three major principles.

First, it is far cheaper to maintain our natural systems than it is to allow them to be damaged, and subsequently inherit a large repair bill. A benchmark report to the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) entitled "Setting biodiversity Priorities" outlined the strong business case to secure rather than repair natural systems.

Second, securing Australia's nationally important biodiversity complements efforts to sustain the health of the landscapes and ecosystems in which they are located. This health fundamentally depends on biodiversity to maintain important natural systems that produce clean water, fertile soil and productive ecosystems.

Third, investments will be highly targeted to maximise the cost-effectiveness of outcomes.

Recent studies give an indication of the resources required to secure Australia's terrestrial biodiversity. The PMSEIC report highlighted that between $300m-$400m is required to consolidate the National Reserve System,[1] while the National Land and Water Resources Audit's (NLWRA) Terrestrial Biodiversity Assessment estimated that an average commitment of $5m per subregion is needed, representing a commitment of $2 billion for land-based programs.[2] A previous study calculated that the investment required to protect biodiversity nationally was $5.2 billion over 10 years.[3] In all likelihood, and taking into account marine biodiversity, a much greater investment is required.

This new initiative builds on the current regional investment in managing natural resources. It provides a means for the scientific identification of biodiversity priorities and targeted investment to achieve cost-effective solutions.

Issues

Despite the recent record investment of over $3 billion in Natural Resource Management (NRM) and environment programs, issues that are constraining the effective conservation of Australia's nationally important natural places and landscapes remain.

- **Australia's biodiversity continues to decline**. Comprehensive and science based evidence presented in the NLWRA *Terrestrial Biodiversity Assessment 2002* and the *State of the Environment Report 2001* highlight that Australia's natural systems are in decline. Significant effort with new policies and additional resources are required to stabilise this downward trend.

- **Many key national targets have not been met**. A forthcoming independent audit of government progress to implement targets set out in the *National Objectives and Targets for Biodiversity Conservation 2001-2005* finds that many targets have not been implemented within the agreed timeframe. Achievement of most national objectives and targets requires a coordinated and sustained national effort, which cannot be delivered primarily through regional-based activities.

- **Regional delivery of NRM has significantly reduced resources to achieve national biodiversity priorities and targets**. The majority of resources under National Heritage Trust 2 (NHT2) are being delivered through regional NRM plans, which has led to:

    - Conservation of national biodiversity assets being traded off against other considerations, which is leading to lack of resources dedicated to their conservation and compromising the achievement of national objectives at the regional level

    - Difficulty in translating national priorities into regional actions

    - Many regional initiatives focussing on symptoms rather than underlying causes

    - High degree of variability of biodiversity expertise between regions leading to varied emphasis on biodiversity objectives

- **There is a lack of a comprehensive understanding of regional biodiversity issues, priorities and a lack of assessment of the cost effectiveness of conservation and integrated natural resource management responses.**

- **Existing NRM programs tend to be reactive with a focus on repairing damaged landscapes.**

- **Biodiversity conservation is poorly integrated into NRM planning**. The NLWRA *Terrestrial Biodiversity Assessment* found that effective integration had occurred in only 1.5% of 384 biodiversity sub-regions. Such low levels of effective integration into natural resource management cannot sustain Australia's immense biodiversity nor underpin the protection of essential ecosystem services.

- **Decline in funding for national biodiversity programs.** Funding for key national biodiversity programs has decreased in NHT2.

The National Biodiversity Initiative responds to the PMSEIC report recommendation that it is more cost effective to be pro-active and protect existing assets than to be reactive and repair damaged landscapes. This pro-active approach will differentiate this initiative from existing NRM programs and shift the overall balance of effort and expenditure towards more cost-effective approaches.

Black-striped Wallaby and joey at Bush Heritage Carnarvon Station Reserve, Qld. Photo: Wayne Lawler/Ecopix

Outcomes and Objectives


Native Hibiscus, Chereninup Creek Reserve, WA
Barbara Madden

Objective

To develop a major new biodiversity conservation initiative to secure Australia's national biodiversity assets and ecosystem services by 2010. It will be a new initiative that complements and enhances existing programs.

Desired Outputs

- Develop and achieve new national biodiversity conservation targets for 2006-2010
- Systematically assess the broad conservation needs of all of Australia's 85 terrestrial bioregions
- Effectively integrate national biodiversity conservation priorities into regional NRM and marine planning processes
- Develop the knowledge and information required to ensure cost-effective implementation and maximise outcomes and ability to audit the outcomes
- Effectively conserve natural systems that support nationally important biodiversity
- Expand the National Reserve System to achieve 80% comprehensiveness by 2010
- Effectively manage Australia's World and National Heritage estate
- Ensure the recovery of Australia's nationally threatened species and threatened ecological communities
- Protect all Australian wetlands of international and national importance
- Identify and effectively manage regionally important wetlands, heritage rivers and reaches
- Secure terrestrial and marine biodiversity hotspots
- Protect priority migratory species habitats
- Develop an effective early warning and rapid response system for weeds and invasive pest animals, and eradicate priority 'sleeper weeds' and invasive pest animals

Key Features

Focus on Securing National Biodiversity Assets

The National Biodiversity Initiative will focus on preventative action to maintain nationally important biodiversity assets and ecosystem services. The key foci include places, ecological communities and species of national environmental significance, biodiversity hotspot regions and establishing the National Reserve System to be representative of Australia's marine and terrestrial biodiversity.

A Strategic Implementation Document (page 10)

A team of biodiversity experts and Department of Environment and Heritage (DEH) officers will develop a Strategic Implementation Document over 6-9 months to guide the roll out of the National Biodiversity Initiative. The Strategic Implementation Document will design programs specifically geared to achieving national biodiversity conservation priorities. The Strategic Implementation Document will not be a static agenda – it will be a living document – revised by the expert team as scientific information advances and priorities shift.

A Bioregional Assessment Program (page 13)

The scientific information to underpin the Strategic Implementation Document and its roll out will be provided through a bioregional framework. Detailed information on biodiversity priorities at a bioregional level has been missing from much current NRM planning.

A program will be implemented to systematically assess biodiversity assets and conservation issues for each bioregion and subregion across Australia over the next 6 years and identify biodiversity priorities.

Complement other National Initiatives

The National Biodiversity Initiative will complement and reinforce the National Water Initiative, the National Action Plan for Salinity and Water Quality, the Natural Heritage Trust and Australia's Oceans Policy. As well, other delivery opportunities will be assessed such as through local government to contribute to bioregional/subregional biodiversity objectives.

Resources Required

	$AUD over 6 years
Regional Assessments	200 million
Regional Implementation	2 billion
Marine Assessment and Implementation	1 billion*
Total	**3.2 billion**

*** This figure to be refined as part of the Strategic Implementation Document process.**

The Initiative will comprise both new and additional funds and reallocation of funds for relevant existing programs currently under NHT Bushcare Program. There will be major reinvestment and re-invigoration of DEH programs, both existing and new programs, which be the national drivers for the Initiative.

The Initiative should be designed so that notional Program funding is made in year 1, pending the development of the 'strategic implementation document'. Once priorities are identified, the final funding allocations for the Initiative could then be made to specific Program elements.

Incentives to Landholders

To ensure widespread participation in the Initiative by private landholders, substantial funds would be available for a range of incentive measures.

Enabling Legislation

The full range of provisions available under the *Environment Protection and Biodiversity Conservation Act* (EPBCA) should be used to provide the enabling legislation. For example to make use of the Minister's ability to prepare bio-regional plans, recovery and threat abatement plans including multi-species plans, wildlife conservation plans, strategic assessments and negotiation of conservation agreements with landholders. Improvements to the EPBCA may also be required. State and territory planning instruments would also be employed in cooperation with state and territory governments.

Administrative Arrangements

The Initiative should be administered solely by the Minister for Environment and Heritage through the Department of Environment and Heritage, preferably through an Office of Biological Diversity to ensure strong vertical integration and accountability between national policy targets and enabling programs. Appropriate structures will be developed to seek partnerships with State and Territory Governments and to co-ordinate the implementation of this Initiative.

Economic Benefits

Experience in Australia has generally shown that it is seven times more cost effective to conserve intact native ecosystems instead of attempting to restore them after they have been cleared or markedly degraded.[4]

The report to the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) entitled *Setting Biodiversity Priorities* highlighted the most cost-effective investments that Australia can take to secure and maintain its biodiversity assets. Many would no doubt be included in the NBI Strategic Implementation Document, such as:

- **Implement fire management regimes in native vegetation which promote a diversity of fire patterns** is estimated to result in a collateral benefit of $3,000m

- **Consolidation of the National Reserve System** is estimated to result in a collateral benefit of $2 billion over 10 years, mostly due to increased tourism and recreation

- **Eradication of new outbreaks of naturalised plant species** that pose a danger to the environment results in a collateral benefit of about $100m, though this estimate is difficult to calculate since the actual species and their impacts are not known in advance

Chereninup Creek Reserve, WA. Barbara Madden

On the other hand, the cost of repairing damaged ecosystem services is very large. The repair bill for salinity and water logging due to removal of the biodiversity that regulated groundwater flow (another ecosystem service) is the most expensive one facing Australia at the moment. Estimates of the size of the repair bill vary from $20-$65 billion over 10 years.

National Implementation

Strategic Implementation Document

The National Biodiversity Initiative, through the Strategic Implementation Document, would define the National Objectives and Targets for Biodiversity Conservation and describe how these should be achieved. A dedicated team of biodiversity experts and DEH officers would be established to develop the Strategic Implementation Document, which would be expected to take 6-9 months.

The team would review progress to implement the current nationally agreed *National Objectives and Targets for Biodiversity Conservation, 2001-2005*, and develop a set of new and revised national strategic priorities, objectives and targets for 2006-2010. New National Objectives and Targets would be outcome rather than process oriented. Several of the 2001-2005 Objectives and Targets that were outcome oriented will likely be renewed.

Importantly, the Strategic Implementation Document will include a detailed action plan to set out how the Objectives and Targets 2006-2010 can be achieved, through existing and new DEH programs and delivery vehicles. This would provide the information to ensure comprehensive delivery of biodiversity outcomes as part of a truly integrated national and bioregional approach.

The Strategic Implementation Document would be a living document that would need to evolve over time to accommodate new information, new techniques and different levels of funding rather than be seen as a static agenda.

Development and evolution of the Strategic Implementation Document will be closely informed by the Bioregional Assessment Program (see page 13). Considerable information is already available at the national level, especially from the material collated through the National Land and Water Resources Audit's *Terrestrial Biodiversity Assessment 2002*. The team would analyse this information to provide strategic advice and detailed recommendations on how DEH programs could best be delivered to meet the 2001-2005 and proposed 2006-2010 National Objectives and Targets, at both national and regional levels.

The Strategic Implementation Document will focus on:

- bioregional assessment and planning to identify biodiversity conservation needs and to develop effective plans to achieve biodiversity conservation outcomes
- assessing opportunities for preventative action to identify where significant gains can be achieved from modest investments
- clearly defining costs and responsibilities for implementation
- defining clear outcomes that can be expected from each stage of investment and performance indicators that measure achievement of milestones and the eventual target
- developing and implementing a cooperative bioregional planning approach with State and Territory conservation agencies to ensure that planning activities are not duplicated.

The Strategic Implementation Document will propose effective tools and delivery mechanisms for each of the National Targets and Objectives for Biodiversity Conservation.

Examples of such mechanisms might be:

Objective: *Expand the National Reserve System to achieve 80%* comprehensiveness by 2010'.
Tools: a cooperative Australian Government - State/Territory Government - conservation NGO program to purchase lands for NRS and an Australian Government grants mechanism to assist landowners manage Indigenous Protected Areas

Objective: *Secure priority migratory species habitats*
Tools: a directly targeted capacity buildi
ng
mechanism for migratory species habitats on private land, targeted incentive mechanism, to enhance management of migratory species habitats on private land, cooperative Australian Government - State/Territory Government - conservation NGO mechanism to acquire or secure priority migratory species habitats.

Objectives: *Secure priority migratory marine species*
Tools: targeted marine protected areas for critical habitat sites and fisheries bycatch mitigation strategies delivered through existing regional marine planning programs and EPBCA strategic assessments and through new mechanisms such as EPBCA Wildlife Conservation Plans and Threat Abatement Plans.

Objectives: *Secure nationally threatened ecological communities*
Tools: rapid identification of threatened ecological communities and comprehensive listing coupled with a financial incentives program for recovery for private landholders.

Developing the Strategic Implementation Document will be an opportunity for DEH to evaluate performance and outcomes of existing programs, particularly in terms of actual biodiversity gains, reorganise and improve their effectiveness and identify areas where new strategies are needed.

The Minister's Biological Diversity Advisory Committee and Threatened Species Scientific Committee should also provide expert assistance in the development of the Strategic Implementation Document.

The Initiative will complement the National Action Plan for Salinity and Water Quality; indeed it may use some of the same regional delivery mechanisms already employed by these national initiatives.

The *Environment Protection and Biodiversity Conservation Act* would provide the legal framework for the National Biodiversity Initiative, based on the Minister's ability to prepare bioregional plans under Section 176, and making use of the full gamut of EPBCA planning and protection provisions.

The Initiative should also investigate improved financial incentive mechanisms, including further taxation incentive measures.

Brolgas, Pulchera Waterhole, Ethabuka Reserve, QLD. Wayne Lawler/Ecopix

Such a nationally driven and strategic action plan has been the missing link between the 2001-2005 Objectives and Targets for Biodiversity Conservation and current regional delivery vehicles. It is a necessary step to translate National Objectives and Targets, which to a regional body often read as a vague call to action, into meaningful conservation options at the regional level. The bioregional assessments will provide detailed information on biodiversity priorities, a level of detail missing from current regional planning.

Regional Implementation

Bioregional Assessment Program

Bioregional Assessments would be used as the primary tool for translating National Biodiversity Objectives and Targets into conservation options at the regional level.

The Bioregional Assessments would be undertaken for each of Australia's 85 terrestrial* bioregions and include:

- identification and assessment of biodiversity values and their status/condition and trend across a range of biodiversity assets
- identification of threatening processes and assessment of their relative significance
- identification of priority options for conservation and sustainable management including such factors as cost effectiveness, assessment of opportunities and constraints including environmental, socio-economic and other constraints.

  *Recognising the information base for the marine environment lags behind that for terrestrial environments, it is accepted that at this stage systematic marine bioregional assessments are probably not feasible.

Bioregional conservation options to include integrated responses in terms of:

- protected area requirements
- measures for the protection of key species, ecological communities and landscapes including threatened species and ecological communities, endemic species, migratory species, wetlands from regional to international importance, heritage rivers and reaches, riparian zone management and areas of high ecosystem service values
- priority NRM measures for the mitigation of threatening processes, including fire regimes, invasives, stocking regimes, etc. and to promote effective management, eg. incentives, environmentally sustainable management systems, capacity building
- other specific nationally important targets and matters of national environmental significance
- the integration of these responses across the landscape

This bioregional assessment and planning approach cannot be delivered solely through regional NRM planning for reasons outlined in the issues section.

After systematic assessment of biodiversity conservation needs**, conservation options should be brought to the table as part of the negotiation process with other NRM objectives that define multiple benefits and transparently consider any trade-off scenarios.** Conservation options and production needs should be assessed using benefit-cost or similar analyses.

The recently identified biodiversity hotspot regions based on threat and conservation values should be included in the process to develop the initial priorities for this approach. The hotspot analytic approach should also be extended to identify coastal and marine priorities. **Where funding restraints do not allow for each bioregion to be assessed systematically, bioregions considered biodiversity hotspots would be prioritised**.

Conservation options from the results of bio/subregional planning should **be interpreted with the advice of biodiversity experts and translated into new DEH delivery frameworks** and making use of existing regional delivery frameworks where relevant, such as NAP/NHT regions, catchments/catchment management organisations, local government planning, regional marine planning etc.

Bioregional assessments will be carried out pragmatically and in co-operation with State and Territory conservation agencies **to avoid duplication and to maximise opportunities for implementation**.

The range of bioregional/subregional case studies carried out through the NLWRA *Terrestrial Biodiversity Assessment 2002* and available on the Australian Natural Resource Atlas provide a valuable starting point to describe the requirements for bioregional assessments. The EPBC Act provisions for bioregional plans offer a legal basis for biodiversity planning at this scale.

Wongai ningaui, Ethabuka Reserve. Wayne Lawler/Ecopix

Alignment with Existing Initiatives

Existing NRM Regional Plans
The National Biodiversity Initiative will make use of existing NRM delivery mechanisms. Where NRM/NHT regional planning is not going to be an effective delivery vehicle, the Strategic Implementation document will propose DEH develop strategies outside existing mechanisms.

NHT Programs
A significant re-organisation and financial strengthening of the Natural Heritage Trust should be undertaken, strategically redirecting the program, so that the NHT becomes an implementation vehicle for the National Biodiversity Initiative.

State and Territory Government Programs
Developing bioregional assessments in cooperation with State and Territory conservation agencies will ensure that planning activities are not duplicated and maximise opportunities for implementation of this National Biodiversity Initiative.

Australia's Oceans Policy
The National Biodiversity Initiative will make use of and inform the regional marine planning and other processes under Australia's Oceans Policy.

Relationship of National Programs

The National Biodiversity Initiative will promote national programs with dedicated funding that will cross cut bioregional assessments and assist in direct implementation and through regional delivery mechanisms such as:

- protected areas – National Reserve System and World Heritage Areas
- ecosystem and species conservation and recovery at several scales
- rivers and wetlands
- regional marine planning

The requirements to meet these national program objectives will be an essential part of bio/subregional plans together with NRM actions for biodiversity and will provide thresholds for accreditation and funding.

Conclusion

Biodiversity is not an adjunct to natural resource management. At a fundamental level biodiversity is the resource being managed. It is biodiversity that provides clean air, water and fertile soils and it is biodiversity that is harvested in fisheries for example. When biodiversity is lost, ecosystems break down and essential ecosystem services falter. Current regional planning processes have tended to treat biodiversity conservation as an additional rather than core consideration and when pitched against other local and regional issues 'biodiversity' has not been adequately addressed.

The National Biodiversity Initiative seeks to address the alarming decline in Australia's biodiversity: it is this unique heritage that underpins our nation's continued prosperity and identity.

Loggerhead Turtle Mon Repos Beach courtesy of Carolyn Robins

References

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