



Southwest Australia  
Ecoregion Initiative

## **CONSERVATION THROUGH COLLABORATION**

**An initiative driven by a consortium**

**with representatives from:**

Botanic Gardens and Parks Authority  
Conservation Council, WA  
Conservation Commission  
Community Groups  
Consortium for Health and Ecology, Edith Cowan University  
CSIRO Sustainable Ecosystems  
Department of Conservation and Land Management  
(including the Western Australian Herbarium)  
Department of Environment  
Department for Planning and Infrastructure  
Department of Agriculture  
Forest Products Commission  
Greening Australia, WA  
National Trust of Australia, WA  
School of Environmental Science, Murdoch University  
State Sustainability Unit  
University of Western Australia  
Water Corporation  
Western Australia Local Government Association  
Western Australian Museum  
West Australian Local Government Association  
WWF Australia

## Introduction

Representatives from a consortium of agencies, non-governmental organisations, research centres and other groups are working together to develop an ecoregional approach to biodiversity conservation in Southwest Australia. Among the aims of the Southwest Australia Ecoregion Initiative is to develop a tangible, long-term Biodiversity Vision for the Ecoregion - to guide cooperative conservation action in the Ecoregion over the next half century.

This group has established a Steering Committee, which includes a number of individual community representatives, in order to progress the Initiative. The committee is chaired by representatives from WWF Australia and the Department of Conservation and Land Management. A number of other agencies, organisations and individuals not listed on the cover-page of this document, have also expressed their support for the Initiative, whilst not opting to be closely involved at this stage. This includes the group of Regional Chairs of the NRM Councils.

## Background

The **Southwest Australia Ecoregion** is one of the top 25 “biodiversity hotspots” of the world. It encompasses 9 IBRA regions ranging from the northern sandplain heaths to the Swan coastal plains and wetlands, the tall forests to the woodlands and granites of the Wheatbelt and the mallee and heaths of the south coast. The Southwest Australia Ecoregion is characterised by “an exceptional concentration of endemic species undergoing an exceptional loss of habitat”. More than 4000 species of endemic plants and 100 endemic vertebrates have been recorded in the region, with other plant species believed to be yet discovered. Many of these endemics are rare and endangered, giving Southwest Australia the highest concentration of rare and endangered species on the Australian continent.

The protection of these natural assets and the ecological integrity of this region is vital as a basis for sustainable development. The indirect impacts of vegetation clearing on private and public assets through dryland salinity, is a stark example. Poor management and neglect of native vegetation, encroachment of urban and peri-urban development and degradation of precious soil and water resources also lead to the depletion of this critical natural capital.

An **ecoregion** is a relatively large unit of land or water that contains a distinct assemblage of natural communities sharing a large majority of species, dynamics and environmental conditions. They are suitable units for conservation planning. Examples in WA include Southwest Australia, the Kimberley and the Central Arid ecoregions.

**Ecoregion conservation** uses a broader view of biodiversity and addresses overarching threats i.e. those operating over multiple areas within and outside an ecoregion. The basic approach is for a biodiversity vision and targets to be clearly defined as a first step, through a process of identifying and assessing biological attributes and key processes, the direct and over-arching threats and conservation status. This vision forms a basis for establishing priority areas and issues for action. It also helps to identify any synergies or contradictions with visions, objectives and attitudes of other stakeholder groups. Through further assessments, the legal, policy, institutional, financial, social and economic aspects of the region and their links to biodiversity can be outlined and refined. This leads to an improved understanding of what interventions, tools and approaches to biodiversity conservation might be the most feasible and desirable. The final action plan would identify key strategic actions (e.g. institutional) and priority projects (e.g. landscape, site-scale). It would clarify *who* should take action, *which* tools and approaches are needed and a suitable timeline for implementation.

### **Need for a shared vision and coordinated approach to action**

There is a recognition that the protection of these unique values will require better coordinated strategies between government agencies and non-government organisations that address conservation of both the private and public estate. There is also a need for better integration of policies and economic instruments that influence the behaviour of the public and private sector in natural resource management, to overcome policy contradictions and address market failures.

The Southwest Australia Ecoregion has been recognised as a global priority in a number of international reports, including the widely publicised 'Global Biodiversity Hotspots'. The planet's top 25 Biodiversity Hotspots were selected based on such key criteria as the high numbers of species per unit area, very high levels of endemism, and a high degree of threat to those species.

**Biodiversity Hotspots** have been defined as areas with exceptional concentrations of endemic species, which are undergoing exceptional loss of habitat. As many as 44% of all species of vascular plants and 35% of all species in four vertebrate groups are confined to 25 hotspots comprising only 1.4% of the land surface of the Earth. This opens the way for a 'silver bullet' strategy on the part of conservation planners, focusing on these hotspots in proportion to their share of the world's species at risk." Biodiversity hotspots for conservation priorities. Myers N., Mitterweier R.A. et al. *Nature* 403, 853 - 858 (2000)

A number of other major organisations have also identified the global and national significance of the Southwest Australia Ecoregion, including Birdlife International, Conservation International, IUCN and WWF. (See Appendix 1).

Some institutional steps have recently been taken to promote ecologically sustainable development as the preferred model in Western Australia. For example:

- the development of a State Sustainability Strategy for Western Australia;
- the establishment of a State Natural Resource Management Council (NRM);
- the bringing together of environmental protection and water resources responsibilities into one agency the Department of Environment (DoE) ; and
- the formation of community-based Regional Natural Resource Management (NRM) groups.

However, it has recently been recognised that if there is to be a coordinated approach and an integrated framework for natural resource management, it will be necessary to develop, among the parties involved, a shared vision of what future landscapes may look like and an agreed approach to implementing that vision. The government response to the Salinity Task Force report (2002) included two specific recommendations relevant to this task (Recommendations 1 and 7 – see Appendix 3 for full wording):

*The report emphasised the importance of an "agreed vision for future landscapes ... that recognises the richness and vulnerability of biodiversity, the threat of salinity and climate change."*

*There was also a commitment to develop "a tangible long-term vision for the landscape of the South West of Western Australia with an estimate of the budget needed to achieve it"*  
The Response further recommended the establishment of a government-NGO working group, representing all major stakeholders to develop *"a Nature Conservation, Native Vegetation and Biodiversity Strategy"* for Southwest Western Australia - for endorsement by the Cabinet Standing Committee on Environmental Policy.

Whilst regional plans (developed through Regional NRM Councils) will be the main conduit for the implementation of natural resource management activities in future, it is felt that the development of an ecoregion-wide biodiversity assessment and agreement over priorities for conservation action at a Southwest Australia Ecoregion level will add significant, tangible outputs to this process, highlighting issues which require cross-regional collaboration. Equally, the Southwest Australia Ecoregion Initiative outcomes will provide greater focus on biodiversity issues and priorities for action than is likely to be possible in the State Biodiversity Strategy. In this context, this initiative aims to draw from the State level strategy and inform the regional strategies for biodiversity in Southwest Australia, adding value to both.

### **A possible way to take the vision and strategic action forward**

A growing consortium of organisations with an interest in these issues have convened on a regular basis since early 2001 to explore collective views of what a truly sustainable landscape might look like in Southwest Australia. They have developed a first draft of such a vision and have, at a preliminary level, canvassed possible pathways for turning this vision into reality. The draft Vision, Goals and Landscape Design Elements are appended to this paper.

### **The shared purpose for the consortium is:**

“To develop a partnership approach to ecoregional Natural Resource Management that considers both the public and the private estate and which aligns with and complements new and existing initiatives.”

Based on the experience from elsewhere in Australia and overseas, it is proposed that a number of key principles underpin the ecoregional approach we take for Southwest Australia.

It should be:

- Relevant to, and owned by, the whole community;
- Bold and ambitious;
- Adaptive and evolving; and
- Collaborative and cooperative.

To be successful, this approach must be based on a new NRM culture based on Government and NGOs working in partnership to support community-owned initiatives.

It should provide integrated outcomes that are relevant at the whole landscape scale and at the property scale.

It should address the triple bottom line ie. to enable social and economic decisions to be made within the constraints imposed by the environment.

The **Southwest Australia Ecoregion Initiative Steering Committee**, using collaborative processes, aims to achieve the following:

1. To act as the catalyst for the development of a conservation assessment for the Southwest Australia Ecoregion, together with an implementation framework incorporating actions and priorities for implementation;
2. To provide a forum for interaction, influence and collaboration between partnering organisations;
3. To facilitate the engagement of networks and organisations outside the partner groups;
4. To promote consistency and linkages between policy processes and initiatives including regional and local strategies and plans;
5. To raise the profile, maintain support and influence for the conservation of the SWAE, within the State, nationally and internationally;
6. To develop a mechanism to endorse the Initiative and to implement actions under partnering organisation responsibilities;
7. To identify an implementation framework incorporating actions, priorities and investment frameworks for the strategy; and
8. To develop a process for acquiring the funds necessary to develop the strategy.

**Anticipated outcomes:**

A landscape-scale “ecoregional approach” has the potential to produce the following outcomes:

1. A clearer understanding of the root causes of biodiversity loss and landscape change in the region, how they interact and the best “entry points” for actions to address policy and market failure;
2. Development and articulation of desired future scenarios for the Southwest Australia Ecoregion, together with a vision, goals and objectives that inspire all organisations that can influence the region;
3. Biodiversity targets that reflect priorities for conservation drawn up at the ecoregion level – to inform state and regional group Natural Resource Management plans, all levels of government and NGO strategic plans;
4. Coordinated strategies and initiatives for protected areas and effective conservation on all land tenures, that influence business and implementation plans; and
5. A greater local, regional, national and international awareness of the conservation challenge in Southwest Australia and an increased ability to attract funds to the partnership, linked to the joint action plan.

The biodiversity vision being presented is but one component of a broader landscape vision that encompasses social and economic outcomes. It is intended that the Steering Committee will guide cooperative conservation action for Southwest Australia drawn from an analysis of the Ecoregion's biodiversity, as well as socio-economic factors. (See 'Next Steps' below.)

The development of a collaborative Vision, conservation guidelines, and conservation actions for the Southwest Australia Ecoregion is expected to take approximately 12 to 24 months. After investigating a variety of approaches and models from around the world in preliminary meetings, the Interim Steering Committee of the Southwest Australia Ecoregion Initiative has recommended the development of a process similar to that used in Southwest South Africa for the CAPE Floral Kingdom. The collaborative nature and means of bringing together biodiversity and socio-economic objectives within the CAPE approach, has been strongly endorsed by the Steering Committee. In addition, the CAPE initiative shares many similarities with the Southwest Australia Ecoregion, for example in terms of landscape characteristics, threats to biodiversity, root causes of biodiversity loss and administrative elements. While it has been agreed that the CAPE model<sup>1</sup> is a suitable template, it is also agreed that the strategy being developed for Southwest Australia will need to be flexible and the process tailored to local needs.

Preliminary dialogue has already occurred between key individuals in the CAPE project and the Southwest Australia Ecoregion Initiative and opportunities for collaboration and technical exchanges, that will have mutual benefit, have been identified. As in the CAPE, it has been recognised that there is a need for a biodiversity framework in Southwest Australia for individual projects to 'fit-into'; and a need for an action plan that is more focused on the region than the State Biodiversity Strategy. Conservation projects - from individual sites to catchments, corridors and regions - and plans and strategies on a range of scales, will be able to be identified in context within a broad Southwest Australia Ecoregion strategy. It is intended that with this framework, these projects and plans will keep their existing identity but will be strengthened by being recognised as integral components of a larger strategy and collaborative action.

<sup>1</sup>Reference to CAPE Strategy: <http://fred.csir.co.za/extra/cape/>

## Appendix 1

### The Ecoregion in a National and International Context

Relevant international, national and state strategies with which the Southwest Australia Ecoregion strategy should align, or which highlight the significance of the Ecoregion's biodiversity, include:

#### National/State

1. 1996 National Strategy for the Conservation of Australia's Biological Diversity
2. 1997 Partnership Agreement between the Commonwealth of Australia and Western Australia for the Natural Heritage Trust
3. 1998 Western Australian State of the Environment Report
4. The National Objectives and Targets for Biodiversity Conservation 2001 - 2005
5. Bush Plan/ Bush Forever
6. The RFA, and associated planning documents, eg. the Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia
7. The State Salinity Taskforce Report, and the Government's response - which provide a number of relevant policy positions. (See Appendix 3).
8. The Australian Terrestrial Biodiversity Assessment 2002 – which calls attention to the urgency to step up conservation action in Southwest Australia, highlighting the Avon Wheatbelt, Jarrah Forest and Esperance Plains bioregions as amongst those most important for the conservation of species that have disappeared from most of their ranges. The Avon Wheatbelt is identified as being in the “highest stress class”, with ecosystems of high biodiversity declining rapidly. The report recognises that merely consolidating a reserve system will not achieve biodiversity goals, due to the degree of fragmentation and Key Threatening Processes such as grazing, secondary salinisation, dieback and invasive species. The Audit report also recognises that there is a major resource gap for addressing biodiversity conservation in Southwest Australia.
9. Australia's Biodiversity Hotspots Report, 2003, Department of Environment and Heritage – identified five (5) biodiversity hotspots encompassing much of Southwest Australia - out of 15 nationally.
10. A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions, 2004, CALM

#### NOTE

Major instruments signed by the Commonwealth and WA are:

- Convention on Biological Diversity;
- National Strategy for the Conservation of Australia's Biological Diversity; and
- National Objectives and Targets for Biodiversity Conservation, 2001-2005.

These instruments do not identify biogeographic priorities.

## International

1. Birdlife International. 1996. Biodiversity priority areas for conservation: endemic bird areas of the world.
2. Conservation International. 1997. Global Biodiversity Hotspots.
3. International Council for Bird Preservation. 1992. Putting biodiversity on the map: priority areas for global conservation.
4. IUCN, WRI, CI, WWF, WB. 1990. Conserving the world's biological diversity.
5. UNEP. 1995. Global Biodiversity Assessment.
6. World Conservation Monitoring Centre. 1992. Global biodiversity: status of the Earth's living resources.
7. WWF & IUCN. 1994. Centres of Plant Diversity: a guide and strategy for their conservation.
8. WWF. 1997. The Global 200: A representation approach to conserving the Earth's distinctive ecoregions.

In response, a variety of organisations are currently using ecosystem/bioregional approaches to conservation, including:

- CI - Ecosystem Conservation;
- IUCN - Ecosystem-based Management;
- UNESCO - Biosphere Reserves;
- WRI - Bioregional Planning; and
- WWF and TNC - Ecoregion-based Conservation.

The Global Strategy for Plant Conservation was adopted by CBD COP6 (Convention on Biological Diversity Conference of Parties (Decision VI/9)) in April 2002. Australia is a party to the Convention, and thus have adopted the Strategy.

## FURTHER NOTES

It may be better to cluster these reports, since there is some overlap. For example, the CI Hotspots approach was based on the initial work of Norman Myers (1988;1990; 2000), and is reflected in the following studies:

IUCN, WRI, CI, WWF, WB. 1990; and

Conservation International. 1997.

The current Myers study has been published as: Myers, N. 2000. Biodiversity hotspots for conservation priorities. *Nature*. 403:853-858.

Note that most of the studies tend to use a limited number of taxa: vascular plants, birds, mammals, reptiles, butterflies.

Other studies to consider include:

Hallingback, T. and Nodgett, N. (compilers). 2000. Mosses, Liverworts, and Hornworts. IUCN/SSC Bryophyte Specialist Group. IUCN: Oxford.

- which identifies Southwest Australia as a bryophyte hotspot.

## Appendix 2:

### Preliminary Scoping of a Biodiversity Vision for Southwest Australia:

#### **Preamble**

In the past, different groups/organisations/agencies engaged in bioregional planning in Southwest Australia appear to have been using different elements and value systems or taking different approaches. The Southwest Australia Ecoregion Initiative consortium aims to establish a vision of what a broad group of stakeholders want the landscape of Southwest Australia to look like and the different elements that might be taken into account in bioregional planning at the Southwest Australia Ecoregion level.

Bioregional planning is a concept whereby a landscape design is developed, but successful implementation is dependent on the activities being undertaken at the site or activity scale being integrated to achieve a common focus. This approach considers the individual and cumulative impacts of the full suite of land use activities across the Ecoregion, and then draws on this information to prepare specific management-orientated landscape designs and guidelines to help conserve biotic systems. 1.

It is also recognised that the degree of vegetation cover over areas of the Southwest Australia Ecoregion means that full achievement of biodiversity goals in all areas is not possible. This Southwest Australia Ecoregion Initiative aims to identify the appropriate activities to maintain and enhance biodiversity in the Ecoregion, recognising that the degree of success will vary across the landscape. Each level of success is, however, important in the overall achieving of biodiversity conservation and the complementary social and economic benefits within the Ecoregion.

The use of a vision and broad objectives or desirable outcomes allows a planner or proponent to check that activities are consistent with the goals and objectives at the ecoregion scale - or at least that they are not in conflict with the objectives (including the compromising of future opportunities).

#### **Southwest Australia Ecoregion Initiative Mission:**

*Nature conservation is an integral component of land and water use and management activities in all landscapes of the Southwest Australia Ecoregion.*

#### **Southwest Australia Ecoregion Initiative Draft Biodiversity Vision:**

*A diverse and continuous mosaic of natural landscape features distributed across the landscape, interspersed with a diversity of socially and economically productive land uses, which support the natural diversity and natural functioning of that landscape*

#### **Our Goals:**

##### **1. Ecological**

*Key goal: Protect and where necessary restore ecological processes, ecosystem functioning, and the biological, geological and cultural diversity of the Southwest Australia Ecoregion through ecologically sustainable land management practice.*

## Specific goals:

- ◆ Represent all dominant vegetation associations in protected areas or areas managed for conservation across all landscape units
- ◆ Maintain stable populations of all species that naturally occur, across their distributional range

**2. Socio-economic**

*Key goal: The values, needs, and aspirations of people living in the Southwest Australia Ecoregion are an integral part of nature conservation planning and management*

## Specific goals:

- ◆ Nature conservation practices on private and public lands contribute to the productivity, values and aspirations of rural economies, support vibrant rural and urban communities and enhance property values
- ◆ Economic policy instruments are revised to remove inappropriate incentives and disincentives and to ensure that nature conservation is rewarded
- ◆ Nature conservation outcomes are an integral part of strategic and regional environmental planning
- ◆ Land managers and public authorities cooperate in the conservation and management of public and private lands for nature conservation

**3. Cultural**

*Key goal: The Aboriginal and European cultural heritage values of the Southwest Australia Ecoregion are integrated into nature conservation planning and management*

## Specific goals:

- ◆ Nature conservation recognises the role of traditional owners as land custodians and is open and inclusive to Indigenous input
- ◆ Nature conservation becomes part of local culture through development of a sense of place or identity with the local environment
- ◆ European cultural heritage values are included in nature conservation planning

**Landscape Design Elements**

The following *landscape design elements* need to be addressed in order to achieve the above goals:

1. Habitat of sufficient quality and quantity to support species that have the greatest requirements for habitat area, floristic diversity, and structural complexity and to provide a range of microhabitats to support species with specific niche requirements such as minimum habitat area, complex ground cover, water bodies;
2. Sufficient amount of connecting vegetation that facilitates the persistence of viable continuous populations of all species native to the Southwest Australia Ecoregion. This vegetation should be viewed as linear habitat for dispersal-limited species rather than simply “corridors” for mobile species;
3. Native vegetation along all drainage lines of suitable configuration to act as habitat for lowland and riparian-dependent species and to absorb edge effects from adjoining land uses;
4. Management regimes designed to manage or reduce known or potential threats and opportunities such as hydrological imbalance (and salinity), dieback, weeds, inappropriate fire regimes, soil erosion and sedimentation of aquatic ecosystems, nutrient loading of drainage systems, feral predators/competitors, and grazing; and

5. An appropriate configuration of landscape elements that will accommodate, as far as possible, the impact of climate change on native species and ecosystems.

## Appendix 3

### Recommendations from the Government Response to the State Salinity Task Force (2002):

#### *Recommendation 1: Leadership and Vision*

##### **Salinity Taskforce recommendation:**

The State Government, through the CSC on Environmental Policy, establishes a tangible long-term vision for the landscape of South West of WA, with an estimate of the long-term State budgetary requirement for achieving the vision.

##### **Government Response:**

***Government supports the need for a vision and for sustainable rural landscapes and believes it should be developed in partnership with rural communities. This will be a key task for the new NRMC.***

Further comments made in connection with this in the Government Response, include:

- The extreme biodiversity of southwest Australia and the threat to biodiversity from salinity and climate change will affect regional sustainability – therefore it is important that an agreed vision for future landscapes be developed that recognises these issues
- The Salinity Investment Framework will help develop a realistic and achievable vision of what rural landscapes might look like.
- Projects like Living Landscapes are good examples of partnership approaches aimed at transforming the landscape through an ecosystem approach to sustainable natural resource management.
- Regional NRM strategies will need to be continually refined or adjusted to reflect new or better information
- Government, industry and community partnerships will be needed to ensure continued investment from State and Federal Governments in managing salinity

#### ***Recommendation 7: Managing salinity's impacts on biodiversity, public assets and communities***

##### **Salinity Taskforce recommendation:**

The Department of Conservation and Land Management should establish a working group to develop a nature conservation, native vegetation and biodiversity strategy for public and private lands across SWWA. This should involve the other NRM departments, farmers, local government, CSIRO, GAWA, WWF and the Conservation Council. It should be endorsed by the Conservation Commission, the proposed NRMC and the Cabinet Standing Committee on Environmental Policy.

##### **Government Response:**

***The Department will establish a working group, representing all major stakeholders, to develop a nature conservation, native vegetation and biodiversity strategy for eventual endorsement by the Cabinet Standing Committee on Environmental Policy. The strategy will strengthen links with NGOs to enhance off-reserve biodiversity conservation and identify opportunities for integrating off-reserve activities with on-reserve initiatives.***

Further comments made in connection with this, include:

- Salinity poses the single greatest threat to the world-class biodiversity of southwest Australia

- Opportunities to expand the networks of non-government naturalists and scientists to assist the department's biological survey and conservation program, will be explored
- The government will build on the work of the Native Vegetation Working Group and make recommendations.