

# **Ecological Society of Australia submission on 'Australia's Biodiversity Conservation Strategy 2010- 2020 Consultation draft'**

**May 2009**

## **EXECUTIVE SUMMARY**

The ESA commends the Australian Government on drafting a revised Biodiversity Conservation Strategy for Australia.

The ESA supports many initiatives outlined in the Strategy, including the improvement of knowledge about biodiversity (Objective 3.1), the establishment of a national monitoring, evaluation and reporting framework (Objective 6.1), the emphasis on establishing conservation linkages (Action 1.1.3), and the continued expansion and management of the National Reserve System (Action 1.1.4). Appendices 7 and 9 provide a good overview of the major threats to biodiversity.

**However, the ESA also has critical concerns about the document. If these are not addressed, the new National Strategy is unlikely to meet its objectives, and will instead preside over the continued decline of Australia's biodiversity.**

Firstly, the Strategy does not identify human population growth, combined with consumption of resources, to be the main cause of biodiversity decline, and no actions are included in the Strategy to address this main causal factor. This is a major omission.

In addition, the Strategy does not make it clear enough that a substantial increase in resources is immediately required to halt Australia's current biodiversity decline. State of the Environment reporting has demonstrated that previous levels of resourcing were not adequate to prevent declines. Current levels of resources are grossly inadequate to halt future declines and to fulfil the aspirations of the Strategy, and this needs to be clearly conveyed to decision-makers.

Another major concern is that crucial information about threatening processes from Appendices 7 and 9 is not translated into targeted threat-abatement objectives and actions in the main body of the strategy.

A number of other comments and suggestions on various aspects of the document are also included under 'Additional comments'.

Overall, the draft strategy has some valuable approaches, but without an emphasis on the threatening processes (including human population growth and consumption) and recognition of the magnitude of the response needed to make a difference, the strategy will preside over the continuing decline of Australia's biodiversity.

## **SUPPORTED INITIATIVES**

This strategy flags some very important initiatives and directions that warrant substantial government and private sector support. Most outstanding among these are:

**Objective 3.1. Knowledge about biodiversity and its scientific, economic, social and cultural importance is improved and made more accessible.** This is a

very well developed and important section. Recognition of knowledge gaps, funding of appropriate research and developing more effective means of communicating results of research are essential activities for biodiversity conservation.

Action 3.1.3 is strongly supported and should also include 'sufficient scientific expertise in the fields of taxonomy and systematics, ecology and applied ecology'.

Action 3.1.4 is strongly supported.

**Priority for change 4: Getting results.** The ESA supports the statement 'To maximise biodiversity outcomes with limited resources, investment strategies must be long-term, cost-effective and prioritised'. Landscape- or seascape-scale approaches to biodiversity conservation initiatives, rather than the individual species approach, are also strongly supported.

**Objective 6.1. A robust, long-term national monitoring, evaluation and reporting framework is established and linked to state of the environment reporting.**

A potential model for this approach was described in the Wentworth group's *Accounting for Nature* document (Wentworth Group of Concerned Scientists 2008), and a good regional model is currently demonstrated by South East Queensland Healthy Waterways Partnership (<http://www.ehmp.org/>). A unified national approach to biodiversity accounting is an essential tool. It should make explicit the link between human activities and biodiversity condition and status, and enable policy makers and the general public to understand what improvements have been made and the amount of further effort required.

**2.1.3. National biodiversity indexes with frequent reporting and wide public dissemination.** Publicising the results of Objective 6.1 (above) in ways accessible and interesting to the general public would contribute greatly to 'mainstreaming biodiversity'.

**Objective 6.4 Biodiversity conservation programs and actions are effective and measured over time.** This objective and its actions are strongly supported, especially action 6.4.2.

**1.1.3 Establish conservation linkages.** This is particularly important for its recognition of the need for species to move across the landscape, either as part of regular migrations, for gene flow, and for range changes associated with climate change. It also highlights the crucial role that habitat restoration now has in Australian conservation strategies. However, much of our biodiversity in highly modified or degraded landscapes is likely to decline and vanish because there simply is not enough habitat for long-term sustainability. It is likely that many ongoing declines will not be averted by conserving and rebuilding strategic habitat linkages alone. Maintaining or increasing the total habitat area needs to be a priority for many species, and it will remain important to adequately-fund the development of a better scientific understanding of specific causes of decline so that they can be matched with appropriately-targeted conservation or restoration actions.

**1.1.4 Continue to support, expand and manage the National Reserve System as a foundation for biodiversity conservation.** This action is strongly supported.

**Appendices 7 and 9** provide a good appraisal of the major threats facing Australia's biodiversity, and could form the most important guide as to how to resolve the biodiversity crisis in Australia. Broader recognition of these threatening processes in the main body of the document is warranted (see Critical Concern 3 below).

## **CRITICAL CONCERNS**

There are three critical weaknesses in this document that, if not addressed, will leave Australian biodiversity in a poorer state by 2020.

### **1. The Strategy does not identify human population growth, combined with consumption of resources, to be the main cause of biodiversity decline**

Although Appendix 9.4 correctly identifies 'unsustainable use of natural resources' as a threat to biodiversity, the strategy reaches no firm conclusion about whether there is a causal link between human population growth and biodiversity decline (even though Hardin's 1968 paper about the 'population problem' is cited in the introduction). We urge the Australian Government to recognise in the Biodiversity Strategy that the main cause of biodiversity decline is the combined effect of human population growth and human consumption of resources. Actions to address the combined effect of human population growth and human consumption of resources need to be added to the Strategy.

### **2. The Strategy does not make it clear enough that a substantial increase in resources is immediately required to halt Australia's current biodiversity decline.**

The previous level of resources devoted to biodiversity conservation in Australia did not prevent ongoing declines (demonstrated by successive *State of the Environment* reports, and stated on p. 16 of the Strategy), and current resources will not be adequate to achieve the aspirations set out in the Strategy. More people and resources are needed to manage threats to biodiversity on existing reserves; undertake compliance activities to enforce existing legislation; coordinate landscape-level projects that link conservation on private and public lands; increase public awareness of, and involvement in biodiversity conservation; conduct surveys and taxonomic work; undertake ecological and applied ecological research; monitor biodiversity status and trends, and the results of management actions; and provide technical advice for conservation programs, as well as undertake many other roles.

P. 21. states correctly that '... a well-managed terrestrial and marine reserve system is the most effective and immediate strategy to build resilience in a changing climate' but most of Australia's reserves are poorly managed for biodiversity conservation because of lack of resources and staff. Providing adequate resources to manage existing reserves should be a priority, and this could stimulate the economy of many regional areas. Therefore action 1.1.4 is strongly supported, and it should be a priority action in Table 1.1.

Adequate resources for *ex situ* conservation measures (action 1.1.6) should not come at the expense of resources for *in situ* conservation. *Ex situ* conservation should only be considered under special circumstances, and when *in situ* conservation is not an option. This is in keeping

with principle 3 of the Strategy: 'Biodiversity is best conserved in its natural state', which ESA supports.

The magnitude of the response needed should be linked to each of the threatening processes and the actions required to address them. Until we explicitly list the amount of work actually needed, policy makers and politicians will not have the information needed to grasp the size of the response required. Successfully tackling the biodiversity crisis requires responses on a very substantial scale, larger than has been achieved to date. This needs to be made explicit in the strategy.

### **3. Crucial information about threatening processes from Appendices 7 and 9 are not translated into the main body of the strategy.**

Threats are barely discussed in the main body of the draft strategy, but addressing threats is the most important thing to do to prevent the ongoing decline of Australia's biodiversity. At 1.2.1 the draft urges partnerships of government, community and the private sector to 'Set priorities for the management of threats', with an emphasis on new innovative ways of doing so. But the document doesn't say "do something about the threats". This is a major omission. Threats are clearly listed in the executive summary, but the strategy as currently written has very little focus on these main problems.

Section 1.2 should be given priority and shifted to be objective 1.1. It must be expanded to bring a substantial focus to what can be done now to address the well known threats which were highlighted repeatedly in Appendix 7, and discussed in detail in Appendix 9. New innovative approaches will be helpful, even essential for some threats, but there are methods available right now that can be applied to reduce threats.

Each of the major threats from Appendix 7 should have its own dot-point under a new section 1.1 (with a modified version of the original section 1.1 becoming 1.2). These main threats were listed in the executive summary. A short list of objectives to tackle each threat could then be devised to maintain the current format.

Section 1 should not be called 'building ecosystem resilience', as this term is not specific enough. 'Ecosystem resilience' is a relevant and important ecological concept, but it is also a broad concept that is difficult to measure or manipulate. If it is used by itself, and as a 'catch-all' for biodiversity conservation, 'Ecosystem resilience' runs the risk of becoming a weasel word that can be used to hide / allow poor decisions and a lack of strategic action. We suggest that the term be augmented or replaced by reference to managing threatening processes. Perhaps 'Manage threatening processes and build ecosystem resilience' would be a more appropriate title.

Abatement of threatening processes should also be referred to in Table 1.1.

### **ADDITIONAL COMMENTS**

**P. 8. Principle 7.** Replace 'All Australians *have a stake* in biodiversity' with 'All Australians *depend* on biodiversity' – as is stated on p. 9.

**P.9.** Second paragraph, first line. Replace 'and' with 'including', i.e.: 'All Australians depend on our biodiversity **including** the many ecological services provided by our natural environment.'

**Table 1.1 Priority for change 3** should also include actions to actually *improve* knowledge, not just *plan* to improve it. For example 'Improve knowledge on the distribution, status and ecology of x threatened species and communities, and x data deficient species likely to be threatened' or something similar. Many knowledge gaps have already been identified in existing recovery plans, action plans and threat abatement plans, and these should be targeted as priorities.

**p. 14. Dot point 8.** To 'Protect our most endangered species and ecological communities' add 'and ensure that others do not become threatened'.

**p. 21. *Ex situ* conservation.** *Ex situ* conservation does have a role in conserving biodiversity, but has the potential to reduce overall conservation gains by taking resources away from the conservation of species in the wild (*in situ*). **A decision to undertake *ex situ* conservation should follow a cost-effectiveness process, with the goal of minimising the number of extinctions in the wild.** This process should consider:

1. Risk of extinction of the target species if *in situ* conservation is undertaken;
2. Risk of extinction of the target species if *ex situ* conservation and reintroduction is undertaken (including the ability of the target species to thrive in captivity, and the likely success of future reintroduction to the wild);
3. Risk that non-target species might decline in status (i.e. become more threatened with extinction) due to altered resource allocation, or other factors, when undertaking *ex situ* conservation of the target species;
4. Initial and ongoing costs of both *in situ* and *ex situ* actions;
5. The benefits (including cultural and economic) of maintaining *in situ* and *ex situ* populations.

### **Objective 1.1. As it applies to Marine and freshwater systems.**

In the freshwater realm, Australia has no national inventory of freshwater ecosystems, nor do we have a national framework for the development of a CAR<sup>1</sup> freshwater protected area network. This needs to be addressed in the Strategy as a matter of urgency.

Although Australia has a national framework for the development of a CAR MPA network, in some States (Tasmania for example, and the Commonwealth MPAs in the Southeast Region) the fundamental principles of providing effective protection to adequate and representative examples of all major ecosystem types have not been implemented. Therefore action 1.1.4 is strongly supported.

The existing scientific consensus is that, in order to adequately protect marine biodiversity, between 20 -40% of every coastal marine ecosystem needs to be protected within no-take reserves, and substantial areas of the high seas, both benthic and pelagic, need no-take protection. So far the development of Australia's MPA network falls far short of this goal, with

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<sup>1</sup> Comprehensive, adequate and representative.

the exception of those habitats protected by the GBRMP<sup>2</sup>. It is recommended that effective no-take areas are incorporated into marine parks as part of action 1.1.4.

River flows in the Murray-Darling Basin have been grossly over-allocated for human use, and groundwater development has followed the same path. Promised environmental flows for groundwater dependent ecosystems have not been delivered. This situation must be addressed as a matter of urgency.

**Action 1.2.1.** Priority setting for threat abatement should include consideration of cost and benefit, as well as risk.

**Table 3.2 Mainstreaming biodiversity.** Label food / other products as 'biodiversity friendly' to enable consumers to support the producers who actively conserve biodiversity, and to increase awareness. Encourage schemes whereby urban/city dwellers 'partner' with primary producers to share the costs and benefits of biodiversity conservation. This would also raise the awareness of biodiversity with the general public, be they city, urban or rural.

**A 7.2** Note that temperate grassy woodlands also occur west of Adelaide (Eyre Peninsula).

**Appendix 5 Approaches to decision making.** This section emphasises making decisions with available information, but in some situations it may be too risky to make decisions when there is no information or extremely inadequate information. This problem could be highlighted by adding a dot point to those listed under A5.2: 'What decisions are most likely to have undesirable outcomes due to a lack of knowledge with which to support decision making?'

The decision making process could also be linked explicitly with the research prioritisation process by adding another dot point: 'What are the priority knowledge gaps to fill using new research?'

**A5.3. Decision making approaches.** The prioritisation that occurs with respect to threatening processes needs to be recognised.

**Objective 6.1** One concern here is the concept of fixed sites for monitoring (6.1.3). Fixed sites could be 'fixed' to look much better than a randomly selected set of sites, preventing a clear and unbiased measure of changes to regional, state and national biodiversity.

**Appendix 8.** Traditional owners play an essential and unique role in biodiversity conservation, and supporting and empowering indigenous people to manage biodiversity is vitally important. However, it also needs to be acknowledged that in some cases traditional management and harvesting practices may pose risks to biodiversity. These risks may arise now because environmental conditions have altered (other threats e.g. weeds, feral animals, habitat fragmentation, and marine debris are simultaneously impacting on species), new technologies may be used, and the distribution and activity of indigenous people may have changed. Potential conflicts between biodiversity conservation and traditional management and use of biodiversity should be explicitly recognised in the biodiversity strategy. Liaison

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<sup>2</sup> Great Barrier Reef Marine Park

and monitoring to detect such conflicts and a recommendation of negotiated solutions should be included.

**2.3.3 Carbon markets.** To achieve goals such as action 1.1.3, an enormous injection of funding is needed. One solution is to link biodiverse plantings/habitat restoration with the carbon market (or carbon taxes). We recommend that carbon markets or taxes be set up to favour habitat restoration as the preferred method of carbon storage. This would provide the needed financing for large-scale restoration, allowing conservation linkages to be built. This solution to the massive funding gap for restoration links with action 4.1.3: innovative ways to encourage private investment in biodiversity.

## **CONCLUSIONS**

Overall, the draft strategy has some valuable approaches, but without an emphasis on the threatening processes (including human population growth and consumption) and recognition of the magnitude of the response needed to make a difference, the strategy will preside over the continuing decline of Australia's biodiversity. We need to do better.

## **REFERENCES**

Wentworth Group of Concerned Scientists (2008) *Accounting for Nature. A Model for Building the National Environmental Accounts of Australia.*

## **DISCLAIMER**

The Ecological Society of Australia has prepared this submission from comments received from ESA members in response to 'Australia's Biodiversity Conservation Strategy 2010-2020 Consultation draft'. However, this submission may not necessarily reflect the views of all ESA members.



# ESA