

## **Submission to the Senate Standing Committee on Environment and Communications**

### **Inquiry into the effectiveness of threatened species and ecological communities' protection in Australia**

By Professor David Lindenmayer (BSc, DipEd, PhD, DSc, FAA, ARC Laureate Fellow)

6 December 2012

I make my submission to the inquiry based on 30 years of experience working on conservation science, empirical ecological science, and on threatened and endangered species. I have very briefly outlined some of my many major concerns below.

By any measure, Australia has an appallingly poor record of biodiversity decline, biodiversity loss, and poor environmental management [1,2]. The nation is characterised by:

- (1) A lack of effective management interventions.
- (2) Little or no biodiversity monitoring.
- (3) Low levels of investment in tackling major environmental problems, or a lack of continuity in those investments (that is, programs start and then stop with prolonged periods of inactivity in between).
- (4) A record of crisis management in which poorly conceived, very expensive and often ineffective “last gasp” actions are taken (like captive breeding programs) when it is clear that early interventions were warranted [3].
- (5) A record of reduced capacity in Australian conservation science through the loss of key organizations like Land and Water Australia, and disinvestment in CSIRO.
- (6) State of Environment Reporting that is sub-standard and does not provide any substantive information on **trend** patterns in biodiversity conservation, including the effectiveness (or otherwise) of management interventions.

There are substantial implications arising from these problems and, in many cases, the vast majority of programs to conserve threatened species are unsuccessful or ineffective. There are several well documented reasons for this.

- a.* There is massive under-investment in biodiversity monitoring in Australia. This means that it is not possible to determine when management interventions have been effective and when they have not [4-7].
- b.* The recovery plans for many species have not been written or, if they have been written, the actions recommended in them are not implemented or given sufficient funding to effectively implement them [8]. Again, the monitoring to determine

management effectiveness is rarely done (or it is done poorly) and it is not resourced in a way to make that monitoring effective.

- c.* There is currently no mechanism set in place to tie monitoring to resource use. For example, despite an extensive native forest logging industry, there are few effective monitoring programs to determine the impacts of logging or efforts to mitigate those impacts [7].
- d.* In many cases, land use activities that have major negative impacts on biodiversity take precedence, leaving no ecological margin for effective conservation. As an example, the Regional Forest Agreements have locked in major over-commitments of timber and pulpwood resources in Victorian forests. The negative impacts of this on the endangered Leadbeater's Possum are clear [9] – especially following the 2009 wildfires. Yet, there is no provision to adequately protect the species because rates and impacts of logging are locked in under the RFA process. Hence, Leadbeater's Possum will be doomed to extinction because of a legislative inability to conserve the species (coupled with poor resource management policies on the part of the Victorian Government). In the particular case of the conservation of that species, we already know well what has to be done to conserve it (that is well documented and has been so for two decades). It is poor policy and inaction that is leading to the species' demise.
- e.* There is currently a very strong push in all state and federal jurisdictions to reduce the number of people involved in park management and biodiversity conservation. This is a major issue because it requires many well qualified and field competent people to implement good environmental management (and associated biodiversity monitoring). Notably, there are several good examples of effective conservation management when good staff are retained and funding levels are appropriate. For instance, biodiversity management and monitoring in Booderee National Park in the Jervis Bay Territory [10] and woodland conservation on private land under the Australian Government's Environmental Stewardship Program [11].
- f.* There is currently a push to reduce so called "green tape". This is misguided and inappropriate as the need for environmental regulation to reduce the risks associated with over-development are well known [8]. As an example, there are currently plans to hand management for the environment and biodiversity conservation under the EPBC Act 1999 to the States. This is inappropriate because poor policies from one level of government will often need to be tempered by more appropriate considerations from another level of government. For instance at present (2012), oversight by the Federal Government is essential to limit the current raft of anti-environment actions of the largely environmentally-bankrupt eastern seaboard states of Australia [12]. The issue here is that there is a need for legislation and regulation at several levels of government to properly manage biodiversity and properly manage natural resources.

### **What needs to happen?**

Based on my long expertise, I suggest that several key actions need to be taken.

- A.** The Federal Government should not cede its biodiversity conservation roles to state governments such as through watering down the EPBC Act. Indeed, it is quite clear in recent years that the States are pursuing agendas to weaken environmental legislation and conservation management. More than ample evidence comes from such examples as policies and actions to introduce livestock grazing to the Victorian high country, and so-called “reforms” of NSW vegetation management policies that will promote land clearing [12].
- B.** There needs to be significant long-term and large-scale investment in biodiversity conservation in Australia. Major problems have developed as a consequence of 200 years of widespread environmental mismanagement; they will not be rectified by limited 3-year granting programs. There needs to be thought given to large-scale, long-term environmental funding that promotes long-term ecologically sustainable environmental management (that facilitates biodiversity conservation). Options include an environmental future fund and/or an environmental levy [1], or a GST on food with the funds generated dedicated to environmental management [13]. There is also considerable merit in establishing a biodiversity conservation Research and Development Corporation for this nation – to reverse the loss of key infrastructure support and disinvestment over the past decade (such as the loss of Land and Water Australia and other institutions).
- C.** There is a critical need to mandate effective biodiversity conservation programs (including biodiversity monitoring programs) that are tied closely to approvals to use natural resources [7].
- D.** There is a need for proper recovery plans to be developed and then effectively funded so they can be properly implemented.

I am more than happy to give evidence in person should the Committee wish me to do so.

## **References**

1. Lindenmayer DB (2007) *On Borrowed Time: Australia's Environmental Crisis and What We Must Do About It*. Melbourne: CSIRO Publishing and Penguin Publishing.
2. Kingsford RT, Watson JEM, Lundquist CJ, Venter O, Hughes L, et al. (2009) Major conservation policy issues for biodiversity in Oceania. *Conservation Biology* 23: 834-840.
3. Lindenmayer DB, Piggot M, Wintle B (2013) Species extinction is not a spectator sport: Monitor with a plan for action. *Frontiers in Ecology and the Environment*: In review.
4. Hajkowicz S (2009) The evolution of Australia's natural resource management programs: Towards improved targeting and evaluation of investments. *Land Use Policy* 26: 471-478.
5. Pannell DJ, Roberts AM (2010) Australia's National Action Plan for Salinity and Water Quality: a retrospective assessment. *The Australian Journal of Agricultural and Resource Economics* 54: 437-456.
6. Commonwealth of Australia (2010) *Australia's biodiversity conservation strategy 2010-2030*. Canberra, Australia: Department of Sustainability, Environment, Water, Population and Communities.
7. Lindenmayer DB, Gibbons P, editors (2012) *Biodiversity Monitoring in Australia*. Melbourne: CSIRO Publishing.
8. Lindenmayer DB, Burgman MA (2005) *Practical Conservation Biology*. Melbourne: CSIRO Publishing.
9. Lindenmayer DB, Blanchard W, McBurney L, Blair D, Banks S, et al. (2012) Interacting factors driving a major loss of large trees with cavities in an iconic forest ecosystem. *PloS One*: e41864.
10. Lindenmayer DB, MacGregor C, Dexter N, Fortescue M, Cochrane P (2013) Connecting science and policy in reserve management: a case study of an iconic Australian National Park. *Ecological Management & Restoration*: In press.
11. Lindenmayer DB, Zammit C, Attwood SA, Burns E, Shepherd CL, et al. (2012) A novel and cost-effective monitoring approach for outcomes in an Australian biodiversity conservation incentive program. *PLoS One*: In press.
12. Lindenmayer DB (2013) From biodiversity to bioperversity: from good environmental science to poor policy. *Pacific Conservation Biology*: In press.
13. Cribb J (2010) *The Coming Famine. The Global Food Crisis and What We Can Do to Avoid It*. Melbourne and Oakland: CSIRO Publishing and University of California Press.