

**Submission to the Senate Standing Committees on Environment and Communications on
“The effectiveness of threatened species and ecological communities' protection in Australia”**

Dr. A. Jasmyn J. Lynch

Institute for Applied Ecology, Faculty of Applied Science, University of Canberra, ACT 2601

The conservation of threatened species and ecosystems in Australia is of national and international importance. Despite decades of effort, the issue of sustaining biodiversity is a growing problem – biodiversity is declining globally and in serious decline even in developed, relatively well-resourced countries such as Australia (Beeton et al. 2006, SOE 2011, Butchart et al. 2010). Australia is biotically megadiverse, with a high level of species richness, endemism and a large number of threatened species. I am therefore writing to argue against greater devolution of responsibility to the states for managing the national biodiversity assets. The task required is considerable and requires coordination and Commonwealth oversight to ensure that national and state commitments to biodiversity conservation are maintained. My arguments are presented below.

There is a range of major, widespread and ongoing threats to our biota, including habitat loss, fragmentation and degradation; unsustainable use and management of natural resources; altered fire regimes; invasive species; and climate change (Biodiversity Decline Working Group 2005, NRMCC 2010, Steffen et al. 2010). Moreover, addressing these conservation challenges is difficult as conservation approaches differ between jurisdictions even though many species and ecosystems cross state/territory borders. In addition to the lack of a coordinated, systematic approach, the level of resources allocated to conservation appears to be declining rather than increasing with recognition of the scale of the task. For example, the species recovery planning process no longer requires development, funding and implementation of recovery plans. Also, whereas approaches in the 1990s to the enumeration of threatened species included those considered rare as well as those considered threatened with extinction, there has been no national assessment incorporating rare species since 1996. The small, infrequent or scattered nature of populations of rare species means that they have a high inherent risk of loss and extinction due to stochastic impacts. Yet, the lack of monitoring of rare or threatened species, and paucity of information on the status and ecological requirements of many of them, means that trajectories to extinction may be sudden and rapid as in the case of the recently presumed extinct Christmas Island pipistrelle (*Pipistrellus murrayi*).

Since at least 1907, there have been calls for consistency between states in listing of threatened species (Jarman & Brock 2004). Consistency would facilitate information exchange between jurisdictions and for assessments such as under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and statutory reporting mechanisms such as State of the Environment. Such data would improve the effectiveness of biodiversity planning and also be useful for reporting trends in conservation effectiveness through time, i.e. identifying declines or improvements in the numbers of threatened species and ecosystems (see Butchart et al. 2006). Calls for transparency,

scientific rigour, and use and sharing of best available information were made in the *Assessment of Australia's Terrestrial Biodiversity 2008* (DEWHA 2009) and in *Australia's Biodiversity Conservation Strategy 2010-2030* (NRMCC 2010).

In contrast, some proposals to simplify or streamline the process for addressing the conservation of threatened biota in Australia are likely to be more detrimental than effective. Suggestions that a single national list would suffice, rather than the current system of listings at state and national level, disregards the large size and diverse environments of this country and the consequent potential variability across the ranges of taxa in their ecology, genetic diversity and abundance. It also raises the complication of how to deal with taxa that are threatened in only part of their range rather than at the national level. Similarly, retention of the role of the Australian Government in administering the EPBC Act is a necessary counter to state governments that may prioritise socio-economic concerns. Australia has committed to conserve our megadiverse biota internationally and through national policy and legislation; through ratification of the 1992 international Convention on Biological Diversity, through development of the national strategy for ecological sustainable development also in 1992, the national biodiversity conservation strategy for 2010-2030, and under the *Environment Protection and Biodiversity Conservation Act 1999*, our primary legal framework for protecting nationally and internationally important flora, fauna and ecological communities. In addition, all states and territories have similar policies, legislation and documented commitments.

Achieving consistency in the process and protocols for listing of threatened species and ecosystems, nevertheless, is not straightforward. Currently, although most Australian authorities claim to use the IUCN Red List categories and criteria for extinction risk to categorise taxa at risk of extinction, the various jurisdictions are inconsistent and variable in applying the categories and criteria, and have inconsistent approaches to data deficiency, transparency and accountability (Lynch in prep.).

There is thus a need for greater consistency and a coordinated approach to species conservation at national to regional levels, through:

- maintenance of national and state assessments of threatened biota
- a coordinated, systematic approach to conservation with nesting of integrated regional planning and reporting within national and state/territory frameworks
- a more comprehensive and transparent approach to categorisation and listing of threatened biota, including assessment of rare/ near threatened species and taxa for which the data are deficient
- stronger adherence to the IUCN categories, criteria and guidelines
- development of dynamic databases and geographic information systems of species information and threatening processes
- standardised reporting to facilitate systematic cross-evaluation and scaling-up of data.

References:

Beeton, R.J.S., Buckley, K.I., Jones, G.J., Morgan, D., Reichelt, R.E. & Trewin, D. (Australian State of the Environment Committee) 2006 *Australia State of the Environment 2006*. Department of the Environment and Heritage, Canberra.

Biodiversity Decline Working Group 2005 *A National Approach to Biodiversity Decline*, report to the Natural Resource Management Ministerial Council, Canberra.

Butchart, S.M., Akcakaya, H.R., Kennedy, E. & Hilton-Taylor, C. 2006 Biodiversity indicators based on trends in conservation status: strengths of the IUCN Red List Index. *Conservation Biology* 20(2): 579–581.

Butchart, S.H.M., Walpole, M., Collen, B., van Strien, A., Scharlemann, J.P.W., Almond, R.E.A., Baillie, J.E.M., Bomhard, B., Brown, C., Bruno, J., et al. 2010 Global biodiversity: indicators of recent declines. *Science* 328: 1164–1168.

DEWHA (Department of the Environment, Water, Heritage and the Arts) 2009 *Assessment of Australia's Terrestrial Biodiversity 2008*. Report prepared by the Biodiversity Assessment Working Group of the National Land and Water Resources Audit for the Australian Government, Canberra.

Jarman, P.J. & Brock, M.A. 2004 The evolving intent and coverage of legislation to protect biodiversity in New South Wales. Pages 1-19 in P. Hutchings, D. Lunney & C. Dickman (eds). *Threatened species legislation: is it just an Act?* Royal Zoological Society of New South Wales, Mosman.

NRMMC (Natural Resource Management Ministerial Council) 2010 *Australia's Biodiversity Conservation Strategy 2010-2030*. Australian Government, Department of Sustainability, Environment, Water, Population and Communities, Canberra.

Steffen, W., Burbidge, A.A., Hughes, L., Kitching, R., Lindenmayer, D., Musgrave, W., Stafford Smith, M. & Werner, P.A. 2010 *Australia's Biodiversity and Climate Change*, CSIRO Publishing, Collingwood, Australia.

SOE (State of the Environment 2011 Committee) 2011 *Australia State of the Environment 2011*. Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities (DSEWPac), Canberra.