The effectiveness of threatened species and ecological communities' protection in Australia

The Wilderness Society Inc.
GPO Box 716, Hobart TAS 7001

Our collective efforts to date in attempting to recover and protect threatened species and ecological communities in Australia have proven to be ineffective. In fact, the number of species and ecosystems listed as threatened continues to grow each year. Furthermore, under Australia's current framework of environmental management, any attempts to prevent the decline of more common species and communities into threatened status will also likely fail.

No threatened ecological community has been delisted from the EPBC Act threatened list due to recovery. Four communities have been delisted only to be associated with broader communities, which are themselves still threatened. Of the 69 species that have been delisted, only one of the nine fauna species, and possibly two of the 60 flora species, have recovered through active management. All of the others have been delisted for a range of reasons that include the discovery of previously unknown subpopulations, the species is no longer recognised as valid, lack of sufficient data for listing, or populations that have seen historical decline but have now stabilised at their reduced size or distribution. In other words, although there may have been some instances of threats being mitigated, investment in species and community recovery does not actually result in recovery.

If Australia's species and ecosystems, and the ecological processes underpinning them, were part of Australia's national accounts, our balance sheet would look very grim indeed. We would see an ever-increasing number of species and communities recognised as threatened in Australia, and an ever-expanding array of threatening processes and developments continuing to undercut any attempts at protection and recovery.

A piecemeal approach to environmental management, limited funding and capacity and the resulting failure to implement whole rather than select parts of recovery plans, lack of coordination between governments, critical holes in scientific information, poor political will, the failure to properly account for the value of our natural heritage, and the prioritisation of destructive development over environmental restoration have all conspired to create this result.

Now, the context for environmental management in Australia is shifting as a result of the predicted impacts of catastrophic climate change. Recent climate and biodiversity modelling by CSIRO[1] predicts that "within decades, environments across

[1] Dunlop M., Hilbert D.W., Stafford Smith M., Davies R., James, C.D., Ferrier S., House A., Liedloff A., Prober S.M., Smyth A.,. Martin T.G., Harwood T., Williams K.J., Fletcher C. & Murphy H. 2012 Implications for policymakers: climate change, biodiversity conservation and the National Reserve System. CSIRO Climate Adaptation Flagship, Canberra.

Australia will be substantially different from those currently experienced by biodiversity at most locations. As a result, biodiversity management will require a new paradigm to minimise future losses." In this context, our current approach appears woefully inadequate.

Species and their habitats may not be able to survive in their current locations under the conditions predicted in this scenario. In the face of rapid climatic and ecological change, there will be significant uncertainty about which species or populations are best able to adapt to those changes, and which species will be forced to migrate or perish. This is a clear case for a radical shift in our approach to environmental management as a whole, and threatened species and ecological communities in particular.

To continue to rely on Australia's current approach to protecting and recovering threatened species and ecological communities in this scenario is to invite failure in upholding our international biodiversity conservation obligations, and failure to safeguard our invaluable natural heritage.

If the Australian Government is committed to upholding these obligations, and to ensuring a secure future in which a healthy and resilient environment is the foundation of our society's wellbeing, the current approach will not suffice. In fact, we will continue to facilitate the destruction and degradation of ecosystems, and the accelerating extinction of species.

In a changing climate, where we cannot rely on environments remaining unchanged for centuries to come, our focus will have to shift from the protection of places and species to the protection of function. This will involve the identification, mapping and protection of ecological and evolutionary processes across the landscape. The hydrological functions of rivers and wetlands, ecosystem productivity, the movement and transfer of biological material across the continent, the interaction of key species, the natural disturbance patterns of fire and flood and drought, the potential for species to evolve: these are all critical to ensuring the long-term viability of our natural environment. However, these processes are rarely measured or managed explicitly.

There is also a need to build on our understanding of climate adaptation. How do we best facilitate the survival of species and their habitats, and the ongoing function of ecosystems, in a world that is changing more rapidly than at any time in the last 10,000 years? Once again, environmental management in Australia must be overhauled.

Improving the integration of scientific, economic, information and policy initiatives will be key to the establishment of a new environmental management discipline. With the rise of more detailed environmental information and modelling; improved understanding of on-ground management responses; collaboration between government, non-government, community and Indigenous organisations; and adaptive management frameworks; there are opportunities to generate new

approaches to environmental management for the 21st century that do not commit to making the mistakes of the last two centuries.

Improved funding will also be required for:

- appropriate research into climate adaptation and climate refugia;
- mapping for ecological resilience and ecosystem processes;
- ongoing extension and intensive management of the National Reserve System; and
- targeted species recovery, where feasible, that sets out to recover a species, rather than prevent or even facilitate further decline.

The quantum of funds dedicated to these tasks does not currently reflect the urgency of the situation Australia now faces.

The current species-based approach to recovery planning and implementation will not provide long-term security for Australia's iconic species, nor its natural heritage more broadly. We must focus on developing a sophisticated management regime based on functions as well as features, based on processes as well as species.

Improving the Current Model of Threatened Species Recovery

Recognising that such a shift in management focus may take many years, there is an immediate imperative to ensure that any effort directed towards threatened species and ecosystem recovery is efficient and effective.

Investment in species recovery, without reference to long-term recovery objectives that are quantifiable and time-bound, and directly linked to down-listing in threat status, will likely fail.

For greatest efficiency in the allocation of resources to species conservation, those responsible for recovery need to make explicit decisions about their objectives. Recovery decisions are often made not with a strategy for achieving long-term objectives, but rather for satisfying short-term needs or solving immediate problems. It is imperative that conservation expenditure requirements be made explicit for all threatened species.

The allocation of ultimately limited resources should also be undertaken in a considered and objective way across all species, not piecemeal across various levels of management as is the case for most recovery processes.

Let us say that the long-term vision of species recovery in Australia is that all species extant in 2013 are thriving in the wild in 50 years' time.

And let us say that the recovery goal for the next 10 years is that each Australian species listed as threatened or near threatened on the IUCN Red List of Threatened

Species will be eligible for down-listing: moving from a category of higher threat to a category of lower threat according to IUCN criteria[2].

Specific and measureable objectives to achieve this goal within the specified time frame for each species would need to be developed, directly addressing these criteria.

These objectives should be specific, measurable, attainable, realistic and time-bound (SMART). Following this, a full set of recovery actions required to achieve those objectives with a high degree of confidence, including the location, frequency, duration, effort, and cost of each action, should be developed. This process assumes that all of these actions will be essential to achieving the goal of down-listing within 10 years, and that to undertake only a portion of those actions is to guarantee failure of recovery.

By articulating the explicit and detailed list of the minimum set of management actions required to meet the project goal for each threatened species in question, we obtain two valuable statements which can guide species recovery in Australia: The first statement is an estimate of the cost of recovering all of the threatened species in Australia to a specific conservation goal. This statement is a powerful tool for justifying the funding that is essential to meet this goal. The second statement is a list of the set of management actions that will deliver the recovery goal.

The Action Plan for Threatened Macropods 2011-2012[3], is an example of a clear and quantifiable outline of all those recovery actions required to achieve down-listing in threat status of 21 kangaroo and wallaby species on the IUCN Red List of Threatened species by 2021.

The cost of all these actions is approximately $290 million. However it must be emphasised that even undertaking all these actions will likely only lead to down-listing for each of the 21 species (for example, from critically endangered to endangered), rather than full recovery, or listing as Least Concern.

Thus where funds and capacity are limited, prioritisation may need to be undertaken in order to optimise resource allocation among projects, where costs, benefits, and the likelihood of management success are considered simultaneously.

Importantly, it will be critical to ensure that recovery efforts are not limited to down-listing, but continue long into the future to ensure ultimate delisting and maintenance of species status as Least Concern.

---

[2] IUCN (2001) Categories and Criteria (version 3.1). http://www.iucnredlist.org/static/categories_criteria_3_1, accessed 11 December 2012.

[3] WWF-Australia (2011) Action Plan for Threatened Macropods 2011-2021. WWF-Australia, Sydney. http://www.wwf.org.au/news_resources/?2940/The-action-plan-for-threatened-Australian-macropods-2011-2021, accessed 11 December 2012.

In this context, it is clear that there are many barriers to threatened species and community recovery in Australia, that will only become more numerous and more complex in coming years. Decisive action, adaptive management, innovative approaches and adequate funding will be required to overcome these barriers.