

Science for Saving Species

Research findings factsheet

Project 6.4



National Environmental Science Programme

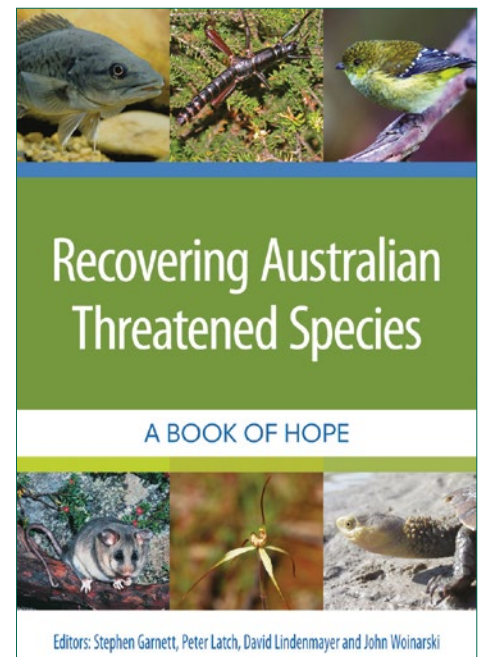
Reason to hope in recovering Australia's threatened species

Why do we need a Book of Hope

Threatened species conservation is undertaken with the goal of saving species from extinction or, better still, helping populations recover to their former abundance and range. A lot of the news about threatened species conservation can be about what is not working, species on the brink. This is inevitable as these are our most imperilled species; however, it is important not to let these stories make us feel that threatened species conservation is hopeless. The recovery of Australian threatened species can be accomplished and where we achieve success we should celebrate and learn from these examples.

These stories reinforce the optimism and hope that drive successful conservation interventions, and can persuade those supporting threatened species conservation that their investment of time and money is worthwhile.

Wanting to share existing successes in threatened species recovery work, the Threatened Species Recovery Hub convened a workshop in 2016 which brought together 40 conservation managers and researchers to look at this topic. The results have now been compiled in the book, *Recovering Australian Threatened Species: A Book of Hope* (CSIRO Publishing).



Tumut grevillea. Photo:
Eyeweed CC BY NC ND 2.0 Flickr



Humpback whale.
Photo: Whit Welles CC BY 3.0 wikimedia commons



Yellow-footed rock wallaby.
Photo: Talexbikes CC BY-SA 4.0 wilimedia commons





Glossy black cockatoo - adult male.
Photo: Daniella Teixeira

Measures of success

The *Book of Hope* presents 28 case studies. Each highlights success in different aspects of threatened species recovery. In some of the cases described, this success has involved recovering populations and markedly reducing the risk of extinction. But the recovery of threatened species is usually a long-term concern and improvements in conservation outlook may take many years and many small steps. Hence, other case studies highlight those components of the recovery process where their success has so far been greatest.

How far we have come

For millennia, Australian biodiversity has been managed by Indigenous landowners. European settlement of Australia brought major changes to Australian environments, including the introduction of many pest and weed species, changes in fire regime and extensive land clearing. Initially many of these changes were unregulated, and there was little concern for the many species that were disadvantaged by such marked upheavals.

Much has occurred in the past 40 years. By the 1980s, national attitudes to the environment were changing. While some ad hoc conservation work had occurred previously, it was only in the late 1980s that the Australian Government began to play a more significant role in the protection of threatened species. It was recognised that planning and investment in conservation activities had to be more strategic if catastrophic future losses were to be averted. Action plans were written, and by 1996 recovery

planning had been substantially adopted as an organising principle for recovering threatened species. While only some threatened species now have recovery plans, those that do are far more likely to receive the co-ordinated attention and action they require.

In 1992, Australia ratified the Convention on Biological Diversity. By the end of the century, the *Environment Protection and Biodiversity Conservation Act 1999* was enacted. It was the first time that threatened species were recognised as Matters of National Environmental Significance and applications for development now had to prove that the proposed actions would have no significant impact on species formally listed as threatened.

While Australia still faces a potential extinction crisis, the progress achieved in the last 40 years should give us some reason to hope. Where political will and commitment exists, there is no need for any more Australian species to become extinct.

Any species can be saved

Our case studies show that recovery should be possible for any threatened species, no matter its taxonomic group or environment, whether they are large or small species, long-lived or ephemeral, charismatic or obscure, and no matter what environment they inhabit or represent.

This tells us that commitment and investment can and should be prioritised based on the relative risk of extinction, rather than any other factors such as public charisma or longevity.



Acanthocladium dockeri.
Photo: Melburnian CC BY-SA 3.0 Wikimedia Commons

*Lord Howe Island Phasmid.
Photo: Dean Hiscox*



Steps to recovery success

Many of the stories in the book document recovery, with successes happening now, and give us hope that we can recover threatened species. But what else can we learn from these case studies to benefit other threatened species? The case studies were analysed to identify common themes that lead to success and these have been developed into seven steps to recovery. The steps are briefly outlined here, while detailed information can be found in the Book of Hope.

(1) Create a recovery plan

Developing a strategic recovery plan with the involvement of all relevant stakeholders is a vital step in working to recover a species, and has been behind recovery successes since the 1980s.

Recovery plans typically set out actions aimed at achieving protection and appropriate management of the target species at known sites. They feature clear, specific objectives, detailed actions to achieve those objectives, and identify performance criteria for each. Implementation of the plan should involve engaging communities, monitoring progress and reporting on outcomes and successes.

Although we know that recovery plans and active recovery teams are vital for conservation success, most threatened species currently have neither, and national legislative change now means that establishing a recovery plans is not mandatory for all threatened species. Despite these national policy changes, a well-developed strategic plan continues to be a vital step in the road to recovery.

(2) Pull together the right team

The challenge of securing the long-term recovery of threatened species and ecological communities is best met by intensive teamwork involving effective and representative groups of stakeholders. In the case studies examined, teamwork between Indigenous people and scientists, policy- and law-makers, organisations, land managers and keen members of the public has been crucial to successes.

Successful teams share a vision of the future for the species and a realistic plan for how to achieve it. They feature skill diversity, redundancy, longevity, expertise, well-established linkages to bodies responsible for management, and a capacity to draw on skills and resources beyond the team membership. Such teams embrace external evaluation and are receptive to suggestions for improvements in their governance and programs.

Effective governance is essential to ensuring that the team can implement the recovery plan and report on its progress and successes. National recovery team governance guidelines have recently been drafted and provide a framework for the effective establishment and operation of recovery teams of diverse members.

Forty percent of Australian land is under some form of Indigenous management or responsibility. In many cases, the protection and recovery of threatened species is undertaken entirely or mostly by Indigenous groups. It is important to include Indigenous people in the planning and action for threatened species recoveries.

Combining two knowledge streams – Western scientific and Indigenous cultural – also presents exciting, fertile and effective new options for managing Australian environments.

(3) Foster recovery champions

Champions can play an extraordinary role in the recovery of threatened species and can bring continuity and long-term commitment to the cause. Champions can galvanise actions, catalyse and sustain community involvement, fight hard for the welfare of the species they care for, and create the pathway for an enduring recovery effort.

Successful champions tend to be personally invested in the conservation of a species, while at the same time empowering others to contribute. Some champions are found inside government agencies with responsibility for the conservation of the species. Other champions have been outside government agencies. Champions within government can bring the authority and resources of their agencies, and champions outside agencies may be able to advocate without political restraint.

(4) Create and enhance the legislative and policy settings needed

Government support has been critical to the most successful of Australia's threatened species recovery efforts. Governments have supported recovery in nearly every case by embedding legislative and/or policy requirements to protect threatened species, and then funding programs to ensure compliance and management.

Steps to recovery success (continued)

However, the challenges affecting threatened species are diverse, dynamic and often of increasing intensity and extent, so relevant policy may need ongoing enhancement.

(5) Commit adequate resources

For most threatened species, the likelihood of recovery is largely contingent on adequate and continuous funding. While some species have cost little to recover, others have proven more complex, expensive and time-consuming and many will need continuing investment for the foreseeable future. Failure to provide continuing investment will increase the risk of extinction and the squandering of past investments. For example, the eradication of pests from Macquarie Island has proven a remarkable conservation success, but that success may be lost if adequate biosecurity is not maintained.

A survey of the ongoing funding needs for each of the case studies over the next five years found that about half the programs will require funding of between \$100,000 and \$1 million over the period to maintain and improve on their gains made to date.

(6) Make evidence-based decisions and adapt as new evidence emerges

Successful recovery of threatened species rests on evidence about their ecology, distribution and abundance.

This can particularly include the 'weak spots' in their life history, the impacts of different threats, and the options for controlling those threats.

Research and monitoring are critical components of recovery. Recovery practitioners need to understand priority needs and actions as informed by results from monitoring programs; and be able to measure the success or otherwise of their management efforts through carefully planned monitoring.

(7) Communicate

The recovery of threatened species depends upon community support. That can be achieved only when people are engaged and knowledgeable, and when they care enough. So, public communication is fundamental to conservation: it must help engender a sense of why we should strive to conserve a species, of the problems that the species face, and how those problems can be resolved. The message should also communicate how the community can contribute to the recovery effort.

Without doubt, even more Australian species would be extinct today were it not for the voluntary efforts of thousands of people. In 25 of the 28 case studies presented, community involvement was identified as a primary factor in success.

Across the country, individuals and groups have contributed in many ways, such as propagating plants, controlling weeds, supplementary feeding, nest monitoring and pest eradication. In the case of humpback whales, community support was through advocacy that sought and achieved change in international commitments and national law and policy.

The story of the species, its conservation need, and its recovery progress should be well told. A well-told story can connect those involved in recovery with each other and with a wider audience of policy-makers and the public. As well as galvanising public sentiment, such stories can also serve to disseminate the lessons learned from individual cases to the many others who stand to benefit, and attract much-needed future investment.

More Information

Garnett, S., Latch, P., Lindenmayer, D., & Woinarski, J. (2018). *Recovering Australian Threatened Species: A Book of Hope*. Melbourne: CSIRO Publishing.