

CONSERVATION OF THREATENED SPECIES



CONTEXT

There is ongoing biodiversity decline occurring across Australia, including in forests. The list of threatened species at risk of extinction continues to grow, as a result of multiple threatening processes including invasive species, land clearing, climate change, and changes in both fire regimes and land management practices. Protected and conserved areas are under-funded and most threatened species have complex habitat needs, which are not yet fully understood. Australia's spending on conservation programs is disproportionately low and often biased towards high profile species or politically sensitive environments, to the detriment of other species or places where recovery actions could have a higher chance of success. Australia's tenure-based land management system creates siloes which can limit the effective management of threatened species at the landscape level. Active and adaptive management, informed by research, traditional knowledge and monitoring, is needed to secure threatened species recovery and will have the best chance of success where there is multi-stakeholder involvement and a holistic view of threats and actions over the long-term.

FORESTRY AUSTRALIA ADVOCATES THE FOLLOWING:

- Australian governments need to significantly increase long-term expenditure on strategic threatened species monitoring, conservation, management and recovery programs.
- Increased investment in strategic fire management and controls for invasive species and disease will be critical to supporting threatened species conservation, especially in light of climate change.
- Cross-tenure, collaborative and long-term monitoring and research programs are required to increase our understanding of the dynamic nature of threats, and the complex needs of threatened species to support more effective active and adaptive management.
- Threatened species management and recovery actions need to be planned at the landscape scale, based on systematic survey data and unbiased spatial habitat models, and take a holistic view of the nature and impact of all threats and existing management measures.
- The experience, perspectives and knowledge of Traditional Custodians and Aboriginal and Torres Strait Islander peoples for supporting biodiversity and restoring healthy Country should inform threatened species management plans.
- Meeting agreed targets for protection of high quality or rare habitat types is an important strategy for conserving threatened species, but even in protected and conserved areas, active and adaptive management interventions are needed to protect and restore habitat.
- Scientifically-based management prescriptions and protection zones should continue to be used to assist with threatened species conservation in forests where sustainable use is permitted.
- Monitoring and proactive planning for threatened species and communities is required in national parks, on private land, in regrowth forests and plantations, to ensure holistic management that takes account of the landscape context and does not unnecessarily limit access to other priority natural resources including water, timber and firewood.

SUPPORTING NOTES

Following a long history of landscape management by Aboriginal and Torres Strait Islander peoples, Australia's biota has evolved to be unique and megadiverse. Many species are endemic, occupying very small geographic areas or with unique adaptations and specific habitat requirements that limit their range of occupancy. As a signatory to the 1992 Convention on Biological Diversity, Australia has committed to both the conservation and sustainable use of its biodiversity. Under the agreed Global Biodiversity Framework, Australia has committed to effectively conserving at least 30% of its terrestrial land. Australia also has a target of conserving a minimum of 15% of each ecosystem within the National Reserve System.

Since European settlement, our biodiversity has been on a trajectory of decline, with the number of species listed as threatened in Australia continuing to grow. This decline is occurring due to direct and indirect human activities that have resulted in loss or substantial modification of natural habitats, over-exploitation and disruption of natural processes, introduction of invasive species and diseases, altered fire regimes and climate-change related impacts. The most prevalent and highest impact threats to Australia's biodiversity are:

- Invasive species, including weeds and feral animals such as cats, foxes, feral horses, deer and rabbits
- Altered and inappropriate fire regimes
- Habitat loss and degradation from agriculture, urban development, utility corridors and transportation associated with expanded human settlement
- Climate change and its compounding effects on other threats

Australia has been identified in the top 40 underfunded countries for nature conservation, with some conservationists suggesting that current budgets for threatened species recovery in Australia are just 15% of what is needed. Despite some important successes, many threatened species management programs are less effective than planned, especially those where implementation has been ad hoc in nature, not resourced well enough over longer timeframes, and with poor evaluation and monitoring of their effectiveness. The result is that species declines are occurring across all land tenures, including prominent and high-profile local extinctions within National Parks and conservation reserves.

POSITION STATEMENT

CONSERVATION OF THREATENED SPECIES



Species can be listed as threatened or endangered under State and Federal laws, according to an agreed Common Assessment Method, based upon criteria developed by the International Union for Conservation of Nature (IUCN). Anyone can nominate a species for listing, which tends to bias the approach towards higher profile and flagship species that are more likely to attract public interest, and thus funding. Once listed there is an obligation to prepare Conservation Advice, a Recovery Plan or an Action Statement, but currently these have been prepared for less than half of the listed threatened species in Australia.

For many species, proper evaluation of their threatened status and management requirements is hampered by a lack of data and knowledge about the species' distribution, habitat requirements, life history, population trajectories, and the impact of threats. Surveys, citizen science, monitoring and management interventions have sometimes been biased towards areas of political interest or expediency. Ad hoc reactive management responses based on individual species records or surveys that focus on single threats, or which are biased to particular tenures or habitats, are unlikely to achieve improved conservation outcomes. This bias creates skewed perspectives and can cause inadvertent misdirection and ineffective or inefficient use of funds. More proactive and collaborative approaches to conservation across forest land tenures would generate greater confidence that outcomes are being achieved.

Spatial modelling has proved a useful tool for estimating species occurrence across broad landscapes. These models require frequent updating as the environment changes and as new information becomes available. Species records generated from citizen science and dedicated programs are important sources of information, but they are prone to bias. Further investment in long-term, cross-tenure and multi-agency collaborative programs for monitoring and research is needed to strengthen habitat models as key decision-making tools for prioritising further investment and follow-up management actions. Species do not recognise tenure boundaries; therefore, monitoring and management actions that are siloed are at risk of being inefficient or ineffective. Approaches must be targeted towards addressing key knowledge gaps and considering the landscape and threats holistically.

By focussing attention on a single threat, interactions and other impacts that are major sources of population pressure can be missed. Adaptive approaches and contingency plans are also required, recognising that unforeseen outcomes from management interventions can occur. For example, attempts to control feral animals can have unintended negative consequences for native fauna, especially when poisons are

used. Control of dingoes and feral dogs can allow foxes to increase in abundance, while control of foxes can allow feral cats to increase in abundance, with severe effects on native wildlife. There are many other complex interactions that need to be better understood and managed for threatened species recovery programs to be effective.

In many bioregions, forest dependent species have been negatively impacted by large-scale land clearing for agriculture that has accompanied European settlement, reducing the extent of forest. Additionally, forest dependent species have been impacted by changes to forest structure, age and fire regimes, as a result of the combined effects of removal of management by Traditional Custodians, some timber harvesting and multiple severe landscape-scale bushfires. Active forest management is needed to redress these impacts. Preventing and limiting the extent of severe wildfires is key to reducing direct consequences for threatened species and their habitats. In some cases, silviculture such as thinning and cutting artificial hollows in the trunks or branches of existing trees should be used to restore structural diversity and accelerate the development of old forest characteristics, such as tree hollows, in areas where these important habitat features have been depleted. Strategies to retain, protect and regrow hollow-bearing trees must be prioritised during timber harvesting, fire prevention and recovery works, and in urban development or agricultural expansion projects. Likewise, threatened species need to be given greater consideration in the preparedness, response and recovery phases of bushfire management.

The conservation value of regrowth native forest should not be underestimated as many species make substantial use of regrowth forests and rely on disturbance for renewal and food sources. Actions that remove this disturbance, whether from fire, timber harvesting or other management, can cause declines in some plant species and subsequent negative flow-on effects on a range of bird and mammal species.

Plantations are critical to Australia meeting its increasing demand for wood products, however can also provide habitat for some threatened species. In these contexts, planning and management mechanisms must appropriately balance commercial timber production and conservation goals. A significant negative and perverse consequence of reactive species management prescriptions is to further reduce Australia's capacity to conduct sustainable timber harvesting in plantations and native forest, which can positively contribute to active management for a broad range of forest values, including threatened species conservation outcomes.

Further reading

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