Developing a new threatened species strategy for Tasmania
In recognition of the deep history and culture of these islands, we acknowledge all Tasmanian Aboriginal people as the continuing Custodians of this Land and Sea Country and pay our respect to elders past and present.
# Contents

Minister’s Foreword ............................................................................................................................................ 4  
Introduction ............................................................................................................................................................... 5  
Background ................................................................................................................................................................ 7  
Reflections on progress ..................................................................................................................................... 8  
Threats ..................................................................................................................................................................... 13  
Case Studies ........................................................................................................................................................... 15  
Towards a New Threatened Species Strategy ....................................................................................... 17  
Have Your Say .......................................................................................................................................................... 24  
  How to Provide Feedback ................................................................................................................................. 24  
  Questions ............................................................................................................................................................... 24  
  Confidentiality ..................................................................................................................................................... 25  
References ............................................................................................................................................................... 26

Please cite this document as:
Department of Natural Resources and Environment Tasmania, Hobart, Australia.

Department of Natural Resources and Environment Tasmania  
Published November 2023  
© State of Tasmania 2023

Additional photography credits


Minister’s Foreword

Tasmania is world renowned for its rich natural environment. Our natural ecosystems, native plants and animals are important to the health of our environment and our community, and we all have a role to play in protecting these species into the future.

The Tasmanian Government is developing a new Threatened Species Strategy to guide our collective actions to help our flora and fauna survive in the wild. We are committed to a thorough review and have provided $300,000 over two years to ensure our approach is comprehensive and informed by contemporary science. The new Strategy will reflect current biodiversity management principles and consider future impacts of climate change, providing an opportunity to cast a forward-thinking approach to threatened species management in Tasmania.

As in other parts of Australia, Tasmania’s threatened species face significant challenges including impacts of invasive species, new diseases and climate change. Extreme weather events, altered bushfire regimes and warming oceans are all having a destabilising effect on biological systems. Under these emerging scenarios, many species face an uncertain future. Tasmania is a safe haven for many species, yet many plant and animal species in Tasmania are critically endangered and are vulnerable to small changes in their habitat and environmental conditions. Building knowledge of habitat and ecosystem requirements and threats along with finding ways to protect these values remains one of our greatest challenges.

In saying that, we have had great success in bringing some species back from the brink of extinction. The Save the Tasmanian Devil Program has supported these iconic marsupials to slowly rebuild from the devastating threats of devil facial tumour disease and the Orange-Bellied Parrot Captive Breeding Program in 2022 delivered the highest recorded number of wild returns in over 15 years. These success stories provide us with hope and inform our approach to emerging challenges.

Increasingly, the ability to collaborate across research bodies, community organisations, Tasmanian Aboriginal People, industry, and government is critical to how we achieve maximum impact. The Strategy will be developed through several rounds of consultation. Partnership opportunities and innovative thinking, coupled with pragmatic action, are being sought to navigate the path forward. Your response to this Discussion Paper will help inform the final Strategy and actions.

I encourage you to have your say on how Tasmania can continue to protect, recover and value our threatened species now and into the future.

Hon Roger Jaensch MP
Minister for Environment and Climate Change
Introduction

Nearly 700 species of flora and fauna found in Tasmania are listed as threatened under the Threatened Species Protection Act 1995 (the Act). A new evidence-based Threatened Species Strategy (Strategy) informed by the latest science will focus efforts and provide a contemporary framework for Tasmania to maximise the conservation and recovery of our threatened species.

The Threatened Species Protection Act 1995 states that the Secretary will prepare a threatened species strategy for the conservation of threatened native flora and fauna. This Discussion Paper is the first step in a comprehensive process to develop a new strategy which is evidence-based and informed by contemporary science. It specifies that the Strategy needs to incorporate proposals for:

• ensuring the survival, and conditions for evolutionary development in the wild, of threatened native flora and fauna; and
• ensuring the identification, and proper management of, threatening processes; and
• education of the community in conservation and management of threatened native flora and fauna; and
• ensuring the availability of resources to accomplish the objectives of conservation and management of threatened native flora and fauna.

The current Strategy for Tasmania (the 2000 Strategy) has been in place for more than 20 years. Emerging threats, and improved knowledge and tools to support threatened species management, will be considered in developing the new Strategy. The new Strategy will:

• ensure decisions are evidence-based and informed by contemporary science;
• allow for adaptive responses to the risks and potential opportunities associated with climate change and other threatening processes;
• foster collective ownership, collaboration, and participation from all sectors of the community;
• complement national and international approaches to threatened species conservation;
• encourage partnerships with other organisations and governments to produce tangible long-term outcomes; and
• explore options for resourcing conservation initiatives.

Forty-spotted pardalote (Pardalotus quadragintus) | Photo - Mark Sanders
The Strategy will also consider the objectives of the Act which, in support of the Objectives of the Resource Management and Planning System of Tasmania, are to:

a) ensure that all native flora and fauna in Tasmania can survive, flourish and retain their potential for evolutionary development in the wild; and
b) ensure that the genetic diversity of native flora and fauna is maintained; and
c) educate the community in the conservation of native flora and fauna; and
d) encourage co-operative management of native flora and fauna including the making of co-operative agreements for land management under this Act; and
e) assist landholders to enable native flora and fauna to be conserved; and
f) encourage the conserving of native flora and fauna through co-operative community endeavours.

The new Strategy will provide the overarching framework for action. It will be supported by an Implementation Plan which will identify the actions required to deliver on the Strategy.

This Discussion Paper is the first step in developing the new Strategy. It provides an overview of threatened species in Tasmania, identifies key threats and challenges, and proposes a vision, objectives, prioritisation principles and priority areas for action.
Background

Tasmania’s rich biodiversity is widely recognised on a global scale. Our distinctive flora and fauna are precious in their own rights and support activities that underpin Tasmania’s liveability and economy. Tasmania has several species that are no longer present on the Australian mainland.

Ongoing threats place our ecological communities at risk of decline or extinction. Out of the approximately 33,000 native species residing in Tasmania, as of November 2023, 686 are listed as threatened under State legislation, of which 195 are animal species and 491 are plant species. A significant number (227) are listed as endangered, the highest threat level under State legislation. A further group (310) are rare in the wild, existing in small populations that are not currently in danger of extinction but could be at risk in the future.

Twenty-seven percent of Tasmania’s threatened species are also listed as threatened on a national level.

Listing a threatened species

Species considered to be in need of protection can be referred to the Government under the Threatened Species Protection Act 1995. The listing and delisting processes for flora and fauna are detailed in the Act and associated Guidelines. Listed species are included in Schedules 3, 4 and 5 of the Act.

Tasmanian threatened species categories are:

- **Extinct**: Species presumed extinct.
- **Endangered**: Species in danger of extinction because their long-term survival is unlikely while the factors causing them to be endangered continue operating.
- **Vulnerable**: Species likely to become endangered while the factors causing them to become vulnerable continue operating.
- **Rare**: Species with a small population in Tasmania that are at risk.

What has changed?

The current Threatened Species Strategy for Tasmania was published in 2000. A copy of the Strategy is available on the Department of Natural Resources and Environment Tasmania (NRE Tas)’s website at https://nre.tas.gov.au/Documents/threatspstrat.pdf. The 2000 Strategy has close to 80 performance indicators and for many, no base line data existed at the time of development. On review, the monitoring and evaluation framework has been found to be complex with many performance indicators not supported by tools and data that allow progress to be measured.

Focusing on six key areas, we can draw some conclusions about what has been achieved since 2000. These areas are policies, regulation and compliance; protecting habitat in our Reserve Estate and on private land, identifying and listing threatened species, conservation planning, managing disease, pathogens and invasive species, and species level monitoring and interventions.

A brief summary of progress towards delivery of the Strategy is detailed in the Reflection on Progress section.
Reflections on progress

In November 2000, the current Threatened Species Strategy for Tasmania was published. Since then, the Tasmanian Government, in partnership with key stakeholders, has made significant investments that directly or indirectly support the recovery of threatened species.

Policies, Regulation and Compliance


At a national level the Environment Protection and Biodiversity Conservation Act 1999 and regulations protect and manage nationally and internationally important plants, animals, habitats and places. Conservation of some species is supported by a National Recovery Plan or Conservation Advice.

At a State level, threatened species management is guided by legislation such as the Threatened Species Protection Act 1995, the Nature Conservation Act 2002, the Environmental Management and Pollution Control Act 1994, the State Policies and Projects Act 1993, the Land Use Planning and Approvals Act 1993, and associated subordinate regulatory instruments – all of which assist in protecting the State’s flora and fauna. Other land use legislation, policies and plans also reference sustainability principles and provide protections for Tasmania’s native biodiversity (e.g., forest practices, fisheries management, and resource management).

NRE Tas, including a dedicated Threatened Species and Conservation Programs (TSCP) branch, provides specialist scientific advice, tools and information to support the State Government, community and regulators with meeting these obligations and promotes the consideration of conservation values and species protection and recovery as part of land management and sustainable development.

Overall, it can be concluded that there are legislative frameworks in place to provide for consideration of threatened species in approval processes and to support compliance with policies, regulations, and conventions. Nevertheless, risks associated with resourcing assessments, compliance and ensuring continuous improvement in supporting contemporary data, maps and tools and knowledge of species and habitat use, remains challenging.
Habitat

Sufficient habitat and ideally habitat subject only to natural rates of change for our flora and fauna, is a foundation block for its protection. This includes but is not limited to, habitats that require a level of disturbance for flora and fauna to regenerate.

Tasmania’s national parks and reserves provide a significant habitat resource and protection for our threatened species, as well as providing the opportunity to view threatened species in their natural habitat and learn about them through interpretive programs and displays.

The Tasmanian Reserve Estate covers over 3.5 million hectares, including formal and informal reserves on public land, reserves on private land, and Marine Protected Areas. The terrestrial reserve area covers more than 50% of the area of Tasmania and Marine Protected Areas over 144,000 hectares.

Reserves are declared under the Nature Conservation Act 2002 which sets out the values and purposes of each reserve class. Reserves are managed under the National Parks and Reserves Management Act 2002 according to objectives for each class of reserve. Objectives of the reserves include recreation, education, cultural, co-operative management with Aboriginal people, research and protection.

In addition to the public Reserve Estate, the Tasmanian Government’s Private Land Conservation Program has supported the establishment of reserves on private land, which now cover more than 114,000 hectares.

Many of these private land reserves have been established specifically for the protection of habitat for threatened species, such as the endangered giant freshwater crayfish, swift parrot and Davies waxflower.

The new Threatened Species Strategy will consider other objectives of a reserve including conservation and preservation.

Regional Natural Resource Management (NRM) organisations and Landcare with the support of governments are bringing together industry, land managers and conservation interests to improve the health, productivity and biodiversity of local areas.

The Tasmania-wide Vegetation Mapping Program (TASVEG) is a comprehensive digital map depicting the extent of more than 150 vegetation communities. This map is being continually updated and refined as new information comes to light, providing an important resource to support monitoring programs and management decisions at both State and Commonwealth levels.

Tasmania’s strong habitat-focused approach to conservation is providing critical habitat for threatened species and helping protect Tasmania’s biodiversity.
Identifying and listing threatened species

The Threatened Species Protection Act 1995 (the Act) details the procedure for listing a species. All nominations are considered by the Threatened Species Scientific Advisory Committee, an independent body set up to advise the Minister and the Secretary on the listing and delisting of flora and fauna species. Decisions by the Minister are then gazetted.

A total of 686 species are currently listed as threatened under the Act in Tasmania. The number of threatened species is a snapshot in time and may increase as knowledge of our flora and fauna improves, and consequently it is likely that some species already at risk may not be currently listed. Alternatively, the number of species listed as threatened may decline as new knowledge about species range and population numbers are obtained, resulting in delisting of species.

Table 1 details the change in number of species listed under the Act between 1999 and 2023. The changes in numbers in the different categories below reflects a range of factors, including the movement of species between listing categories as they are reassessed due to new information and improved spatial mapping. It is also a function to some degree on the number of nominations received and assessed throughout the years.

Table 1: Number of species listed under the Threatened Species Protection Act 1995

<table>
<thead>
<tr>
<th></th>
<th>Extinct</th>
<th>Endangered</th>
<th>Vulnerable</th>
<th>Rare</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>20</td>
<td>36</td>
<td>154</td>
<td>60</td>
</tr>
<tr>
<td>Mammals</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Birds</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Reptiles</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Amphibians</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fish</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Invertebrates</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3</td>
<td>10</td>
<td>36</td>
<td>19</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
<td>2023</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>29</td>
<td>58</td>
<td>227</td>
<td>102</td>
</tr>
</tbody>
</table>

The number of extinct species in 2000 and in 2023 has declined. This reduction is due to several factors including as an example, four invertebrate species listed as extinct in 1999 which have been rediscovered:

- Lake Fenton trapdoor spider now listed as **Endangered** (the species has been rediscovered, and further research will seek to determine the range of this species).
- Tunbridge looper now listed as **Endangered** (rediscovered at the Type locality and now found at two other locations).
- Miena jewel beetle now listed as **Endangered** (rediscovered in 2013, after extensive field work, range extended).
- Caddisflies - one species previously assessed as extinct is **no longer a valid species** and has been subsumed into another more widespread species.
Conservation Planning

Recovery Plans and Listing Statements are documents which outline information on a species biology, habitat and distribution, and provide guidance on the key threats, research and management actions necessary to address the decline, support the species recovery and enhance its chance of long-term survival in the wild. In Tasmania, 47 per cent of threatened species are covered by Listing Statements or Recovery Plans. The drafting and development of these tools requires intensive input from leading species experts, academics, managers, government, and industry representatives.

During the process for developing these documents the Scientific Advisory Committee has the opportunity to evaluate the data and knowledge for a species, including information related to total population, geographical range, threats and decline in numbers. The Threatened Species Community Review Committee also has the opportunity to consider draft Recovery Plans and Listing Statements. This process ensures that these conservation planning resources have a well-rounded consideration for the ecological and socio-economic aspects of threatened species management, to support practical approaches to species recovery and management.

Figure 1: Listed species with or without Listing Statements

Recovery Plans can be long, complex documents which take several years to be developed and approved. Listing Statements are usually shorter and less detailed and are often developed when a species is listed as threatened. While progress is being made in preparation of Listing Statements and Recovery Plans for key threatened species their development is resource intensive. In addition, many Recovery Plans are led nationally by Recovery Teams with the majority of members based in other parts of Australia and consequently may not fully reflect Tasmanian priorities.
Managing Pests, Diseases and Invasive Species

Tasmania’s island status and its strict biosecurity protocols provide the State with a greater natural advantage for preventing incursion of invasive species and pathogens than individual Australian mainland states. Tasmania has strong biosecurity measures that are underpinned by legislation and policies. This includes tight border restrictions on species of higher risk, and control of species that can enter and be kept in the State. Despite this, external biosecurity risks and threats combined with a changing climate are increasing Tasmania’s exposure to incursions of pests, diseases, and invasive species not currently present in the State, and which increases the need to be prepared for response activities.

Biosecurity controls and management programs help to limit the invasion and establishment of exotic pest plants and animals, restricting their impact on the State’s ecology, agricultural enterprises and economy, however they don’t reduce the risk to zero. Increased movements of people and goods into the State, climate change, and natural means of dispersion (e.g., wind borne) of some pests mean managing the State's biosecurity status to minimise their impacts requires ever increasing demands on an adaptable biosecurity system.

There is a broad spread of activities undertaken as part of this system. One example is the management of vertebrate pests and weeds on Tasmania’s high priority off-shore islands, targeting the eradication of vertebrate pests that predate on native fauna (e.g., seabirds) and destroy vital habitat.

A comprehensive Biosecurity Strategy has been developed for the Tasmanian Wilderness World Heritage Area (Tasmanian Wilderness World Heritage Area - Biosecurity Strategy 2021-2031 (nre.tas.gov.au)), identifying goals to address biosecurity risks in this area of important natural and cultural value.

Overall, evidence suggests that managing pests, diseases and invasive species has been, and continues to be, a priority to protect and recover threatened species.

Species level monitoring and interventions

At times, urgent interventions have been necessary to protect endangered and vulnerable species from threats and allow wild populations to stabilise and recover. Tasmania has collaboratively invested in targeted recovery actions to support a range of threatened species including, for example, the Orange-bellied parrot, Tasmanian devil, swift parrot, shy albatross and Maugean skate.

The Tasmanian Government, through specialised units such as the TSCP, deliver priority threatened species programs in partnership with stakeholders including NRM's and environmental not-for-profits, the Australian Government, local government, research institutes, industry organisations and landowners. The teams also provide scientific advice, tools, and information regarding conservation and recovery actions.

Monitoring of threatened species enables detection of changes to a species’ status and trends and is crucial to determine the effectiveness of recovery actions. Data collection through a range of short and long-term monitoring and research projects and through citizen science activities contributes to our knowledge of species distributions and habitat use. In addition to larger scale projects and programs, a prioritised approach has been developed within the TSCP for monitoring across other listed species.

The Tasmanian Natural Values Atlas (NVA) is a key tool for capturing, storing, spatialising and making data accessible that supports efforts to manage, monitor and protect threatened species. The data supports important scientific research and provides valuable metrics to underpin listing processes. The NVA can be used in conjunction with TASVEG to provide species information for selected habitats.

QUESTION 1: What key elements in the 2000 Threatened Species Strategy should be considered when developing the new Strategy?
Threats

Understanding and mitigating against threats to native flora, fauna and ecological communities that are at risk or are threatened is fundamental to protecting and recovering threatened species. The new Strategy will need to take into account current and emerging threats if it is to be successful.

Key threats to Tasmania’s native flora and fauna named in the 2000 Strategy included the clearance of native vegetation; pests, weeds and diseases; degradation of water systems; inappropriate use of fire; illegal harvesting; and impacts of stock.

More recently climate change and associated risks have emerged. Some species may adapt to the new environmental conditions, or follow shifts in their preferred habitats, others will not have the capacity for change. The cumulative impact of multiple threats adds to the complexity of risk mitigation.

After considering scientific literature, and accounting for Tasmania’s unique natural environment, a high-level summary of the key threats to threatened species in Tasmania, including some examples for context, is provided for feedback (Figure 2).

**QUESTION 2: Are there any key threats to Tasmania’s native species that may be missing, and why are they important?**
Habitat Loss, Declining Quality and Fragmentation

Habitat fragmentation and loss has been implicated in, for example, the declines of threatened species including the swift parrot (pictured) and giant freshwater crayfish. Loss of connectivity may limit threatened species recovery potential, and amplify other threatening processes.

Climate Change

Climatic modelling has identified that the preferred environmental conditions for numerous species (e.g. Giant kelp pictured) and their habitat (e.g. Tasmania’s unique alpine communities) will either shift or no longer exist in the future as a result of climate change.

Decisions Guided by Incomplete Knowledge

With approximately 33,000 native species in Tasmania, it is unsurprising that our knowledge about their biology, conservation status, habitat requirements, and drivers of population declines is incomplete. For example, we know that cascading effects can occur following the decline of species, but the effect of declining populations of Tasmanian devils (pictured) are only partially understood. We also don’t understand the current causes of mortality of Orange-bellied parrots during migration (a research project has been initiated to address the latter).

Disease, Pathogens and Pollutants

*Phytophthora cinnamomi* and myrtle rust fungus are two of the most well known pathogens leading to disease in susceptible plants. Phytophthora is recognised as a national threat to biodiversity, and its impact is not limited to the plants and plant communities it infects and kills, but also the animals that rely on these plant communities for habitat.

Invasive Species and Predation

The detrimental impact of feral cats and uncontrolled domestic cats on wildlife is widely recognised and projects are underway to address this threat. Less known impacts occur too, for example, predation of swift parrots by sugar gliders, and European wasp predation on Ptunarra brown butterflies (pictured) which has resulted in local population declines.

Unsuitable Fire Regimes

Burning too often, too little, or with too much intensity has been demonstrated to be a key driver of habitat modification leading to decline in a broad range of species including the King Billy pine and New Holland mouse.
Case Studies

Evidence-based Decision Making

Save the Tasmanian Devil Program

The emergence of Devil Facial Tumour Disease (DFTD) resulted in a significant decline in Tasmanian devil numbers. By 2002, there were legitimate concerns that DFTD could cause devils to become extinct in the wild, with some model projections suggesting extinctions in local areas could occur within 25-35 years.

Fortunately, collaborative investment in research and monitoring has shown that despite initial fears, the devils have persisted in the wild with the disease.

The Save the Tasmanian Devil Program now focuses on four key areas with the aim of achieving a resilient wild devil population that needs limited management intervention. These are:

- robust long-term monitoring and evaluation regimes that enable timely assessment of wild devil population status and inform appropriate management response;
- managing and maintaining a captive insurance population;
- providing specialist advice across a range of sectors; and
- facilitating targeted research collaborations to address key knowledge or technical gaps.

DFTD remains the single largest cause of devil decline and the resulting small, isolated populations across the landscape are at greater risk of other factors including severe bushfires, roadkill, and loss of genetic diversity.

Collaboration with industry and research institutions continues to play a key role in devil recovery efforts. Captive breeding institutions from around Australia hold devils which are managed collectively as a disease-free genetically diverse insurance population to guard against extinction. Research institutions from around the world continue to address key knowledge gaps in understanding DFTD and other threats to devils.

These include the Menzies School of Medical Research which for over a decade has been working towards an effective vaccine and targeted vaccine delivery system, the University of Tasmania’s School of Natural Sciences which has been investigating the dynamics of DFTD and devil genetics, the University of Sydney which has research across a range of devil-related fields including best practice genetic management, and the University of Cambridge which has been tracking the movement of different disease strains across the State and through time at monitored sites.
Collaborative Action

Orange-Bellied Parrot Tasmanian Program

The migratory orange-bellied parrot (OBP) is one of Australia’s most threatened bird species. The last known breeding site is at Melaleuca in the Tasmanian Wilderness World Heritage Area.

A foundation of the recovery effort is a well-managed captive OBP insurance population, which provides birds for release to supplement the wild population. The captive OBP population consists of approximately 570 individuals across five breeding institutions. NRE Tas partners with volunteers, researchers and breeding institutions to deliver a range of management and monitoring recovery actions for the wild OBP population, including:

- annual monitoring of the size and survival of the wild population and breeding success;
- providing nest boxes and supplementary food;
- managing direct threats to survival and breeding;
- monitoring population migration;
- undertaking annual planned ecological burns to improve foraging habitat quality; and
- releasing captive-bred adults and juveniles at Melaleuca each spring, and end of summer.

These actions have produced promising results. In 2022-23 the wild population reached its highest level in over 15 years, with 77 wild returns. This season also saw investment into the first proof of concept tracking trial of migrating OBPs in partnership with Zoos Victoria. This foundational trial will build on our knowledge of OBP migration ecology and provide the first steps towards improving the understanding of migration and over-winter survival.
Towards a New Threatened Species Strategy

The new Strategy will be informed by contemporary science and modern understanding of threatened species management and developed in consultation with the Scientific Advisory Committee, the Community Review Committee, Tasmanian Aboriginal People and the broader Tasmanian community. Consultation will be undertaken at each step as detailed in the diagram below.

Feedback on this Discussion Paper will be summarised in a Consultation Summary Report. The summary report will identify themes for workshopping during the targeted engagement stage of the strategy development.

Following the release of the Strategy, an Implementation Plan will be developed, and this will identify actions that will be undertaken to deliver the Strategy. The Strategy will be supported by an evaluation framework and performance indicators to enable progress towards delivery of the Strategy to be measured over time, and for adaptive management.

---

**Discussion Paper**
- Discussion Paper provided for public feedback
- Consultation summary report

**Strategy**
- Summary report and targeted engagement workshops
- Draft Strategy released for public and stakeholder consultation
- Final Strategy released

**Implementation Plan**
- Actions to support delivery of Strategy developed
- Final Implementation Plan released

---

Figure 2 – Summary of the Strategy development process and its implementation
Vision

Threats to the survival of Tasmania’s rich biodiversity and ecosystems are managed in an integrated and adaptive way to reduce future species decline and create pathways to recovery for those that are already threatened.

We will deliver our vision through collaboration, evidence-based decisions, adaptive management, and focused recovery efforts, targeted at where we can make the most significant impact.

Objectives

The aims of the 2000 Strategy were to:

• ensure that threatened species can survive and flourish in the wild;
• ensure that threatened species and their habitats retain their genetic diversity and potential for evolutionary development; and
• prevent further species becoming threatened.

In considering the objectives for the new Strategy it is proposed that an additional objective be considered:

• foster and facilitate a shared responsibility for improving the status of Tasmania’s threatened species and conservation efforts.

This recognises the importance of collaborative action to address key threats and implement effective management strategies.

Guiding Principles

In developing and delivering the new Strategy, the following guiding principles are proposed:

1. Evidence-based: enable evidence-based decision making by applying scientific expertise and robust data.
2. Collaborative: work together to conserve or improve the status of Tasmania’s threatened species.
3. Innovative: apply novel approaches to meet the new challenges presented by a changing climate and other emerging and unresolved threats.
4. Effective: strategically and transparently present the case for investment, and target threatened species activities for maximum impact.
5. Accountable: measure our progress through reporting and evaluation frameworks.

QUESTION 3: Do the proposed Vision, Objectives and Guiding Principles provide a sound foundation for the Strategy and Implementation Plan? If not, why not? Are there any important principles missing and, if so, what are they?
Resource Prioritisation Framework

Existing prioritisation frameworks will be enhanced to help identify where investment in threatened species management and recovery can be strategically targeted. The framework will provide an objective, transparent, and adaptable prioritisation process. This will be based on standard risk management principles for ensuring that resources and efforts for threatened species management and recovery are targeted where we can achieve the maximum impact.

Possible prioritisation principles are identified below to guide where activity and investment is focused:

<table>
<thead>
<tr>
<th>Prioritisation principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urgency</td>
<td>Prioritising species based on their likely threat of extinction.</td>
</tr>
<tr>
<td>Potential to recover</td>
<td>Prioritising species with the best survival prospects, where affordable efficient interventions can be delivered that have the potential to deliver lasting recovery.</td>
</tr>
<tr>
<td>Impact</td>
<td>Prioritising recovery work for species and habitat where activities will deliver broader impact across multiple species.</td>
</tr>
<tr>
<td>Building on past successes</td>
<td>Prioritising based on alignment with successful programs and where existing investment can be leveraged.</td>
</tr>
<tr>
<td>Pre-emptive action</td>
<td>Prioritising based on potential to prevent the need for future urgent/costly species level interventions.</td>
</tr>
<tr>
<td>Iconic species</td>
<td>Prioritising species that are endemic to Tasmania or Australia or are at the limits of their range.</td>
</tr>
<tr>
<td>Importance to community</td>
<td>Prioritising species that are culturally significant to Tasmanian Aboriginal people and that are valued by our community.</td>
</tr>
<tr>
<td>A broad cross section</td>
<td>Ensuring prioritising is balanced across different species selected from different parts of Tasmania and broadly representative of all species in the state.</td>
</tr>
</tbody>
</table>

**QUESTION 4:** How important are each of the prioritisation principles proposed above? Should they be weighted with some being more important than others? Are there any important principles missing and, if so, what are they?

Strategic Priorities

Strategic priorities will be included in the new Strategy. These strategic priorities will be populated with actions through the consultation process and targeted scientific and stakeholder workshops to help deliver the Implementation Plan.

It is proposed that the following six strategic priorities form the pillars of the new Strategy and Implementation Plan.
<table>
<thead>
<tr>
<th>Strategic priority</th>
<th>Action areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science and knowledge</td>
<td>• Science and knowledge are applied and used to develop practical policy, management, and recovery solutions.</td>
</tr>
<tr>
<td></td>
<td>• Sustainable industry development and recovery of threatened species are managed through appropriate tools and technologies.</td>
</tr>
<tr>
<td></td>
<td>• Emergency response (e.g. bushfire) tools for public reserve land support prioritisation to reduce the impact on threatened species.</td>
</tr>
<tr>
<td>Planning and management</td>
<td>• Practical and effective conservation planning, including landscape level planning, supports management, recovery, and preparedness for new threats.</td>
</tr>
<tr>
<td></td>
<td>• Climate change adaptation and resilience is built into planning and management.</td>
</tr>
<tr>
<td>Legislation, policy,</td>
<td>• Strong and effective contemporary regulatory and legislative frameworks underpin the protection and management of threatened species.</td>
</tr>
<tr>
<td>compliance</td>
<td>• The Common Assessment Method for listing of threatened species is implemented which supports a consistent national framework.</td>
</tr>
<tr>
<td>Risk-based conservation</td>
<td>• Strategic species interventions based on risk management are supported to help avert extinctions and further declines.</td>
</tr>
<tr>
<td>and protection</td>
<td>• The extent, connectivity and condition of habitat is maintained and, where appropriate, improved.</td>
</tr>
<tr>
<td></td>
<td>• Consider situations where appropriate disturbance regimes may be in the best interest of a species.</td>
</tr>
<tr>
<td>Partner and engage</td>
<td>• Partnerships and codesign processes help align effort, ensure effective coordination, and deliver on shared objectives, particularly for migratory species moving between jurisdictions.</td>
</tr>
<tr>
<td></td>
<td>• Innovative public and private funding models deliver investment in threatened species protection, recovery, and threat mitigation.</td>
</tr>
<tr>
<td></td>
<td>• Community members and other stakeholders champion our threatened species and are aware of their obligations to protect nature.</td>
</tr>
<tr>
<td>Monitor and evaluate</td>
<td>• Monitoring, evaluation, and reporting inform adaptive management approaches.</td>
</tr>
<tr>
<td></td>
<td>• Appropriate review periods are incorporated in Strategic Planning.</td>
</tr>
</tbody>
</table>
**QUESTION 5:** Do you think the proposed Prioritisation Framework and Strategic Priorities are appropriate? What would you add or change?

**QUESTION 6:** What work are you or your organisation undertaking, or planning to undertake, that aligns with the proposed objectives and strategic priorities, and what opportunities are there for your organisation to partner to deliver priorities over the next 5-10 years?

**QUESTION 7:** What research and innovation priorities could support Tasmanian threatened species management over the next 5-10 years?

**QUESTION 8:** What would encourage you to support and invest in threatened species management?

### Tools For Managing Threatened Species

A range of planning and management tools are used to achieve biodiversity outcomes and protect and manage our threatened species. Below are some examples of existing approaches which are currently employed in Tasmania, as well as emerging approaches that are being explored in Australia and internationally.

<table>
<thead>
<tr>
<th>Existing approaches</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biosecurity</strong></td>
<td>• Management of pest plant and animal populations focused on the timely eradication or control of new populations and collaborative management at a landscape-scale.</td>
</tr>
<tr>
<td><strong>Increase population/species resilience</strong></td>
<td>• Revegetation around patches of remnant bushland, to increase the size of remnant patches and create a buffer from external influences.</td>
</tr>
<tr>
<td></td>
<td>• Replanting understorey plant species to create habitat.</td>
</tr>
<tr>
<td></td>
<td>• Increasing connectivity between populations (e.g. wildlife corridors(^a)).</td>
</tr>
<tr>
<td></td>
<td>• Improving landscape permeability by managing the matrix between remnant populations(^b) (e.g. feral predator control).</td>
</tr>
<tr>
<td></td>
<td>• Insurance populations.</td>
</tr>
<tr>
<td><strong>Intensive site management</strong></td>
<td>• Placing small cages over native orchids to prevent their grazing by pest and native animals.</td>
</tr>
<tr>
<td></td>
<td>• Small-scale ecological burns to stimulate germination.</td>
</tr>
<tr>
<td></td>
<td>• Supplemental feeding.</td>
</tr>
<tr>
<td><strong>Population enhancement</strong></td>
<td>• Translocations between wild populations.</td>
</tr>
<tr>
<td></td>
<td>• Captive breeding programs to provide individuals to enhance wild populations e.g. NRE Tas’s Orange-bellied Parrot Program.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Emerging approaches</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assisted evolution</td>
<td>• Selective breeding.</td>
</tr>
<tr>
<td></td>
<td>• Translocations to enhance gene flow.</td>
</tr>
<tr>
<td></td>
<td>• Genetic modification.</td>
</tr>
<tr>
<td>Assisted migration</td>
<td>• Assisted migration to facilitate the movement of plants and animals into areas of suitable habitat.</td>
</tr>
<tr>
<td>Biobanking</td>
<td>• Collection and cryogenic storage of biological material from threatened species.</td>
</tr>
<tr>
<td>Biodiversity certification schemes</td>
<td>• Industry supported voluntary biodiversity certification schemes provide landholders with the opportunity to capitalise on sympathetic land management practices through the application of specific branding that identifies their sustainability credentials – e.g. the Australian Farm Biodiversity Certification Scheme.</td>
</tr>
<tr>
<td>Carbon – biodiversity co-benefit schemes</td>
<td>• Maximising carbon capture through the growth of trees and large shrubs, as well as promoting the potential benefits of additional layers of vegetation structure – groundcover and sub-shrubs – which create habitat for both wildlife and other plant species.</td>
</tr>
<tr>
<td></td>
<td>• Although in their infancy, several co-benefit schemes are operating in Australia, e.g.; Clean Energy Regulator (Emissions Reduction Fund), Queensland Government (Land Restoration Fund), Government of Western Australia (Carbon Farming and Land Restoration Program).</td>
</tr>
<tr>
<td>Climate-adjusted provenancing</td>
<td>• Collection of plant seed from a species’ population in a dry locality and sowing them within a population of the same species at a wetter location, to assist and accelerate the second population’s adaptation to a drying climate.</td>
</tr>
<tr>
<td>Conservation of foundation species</td>
<td>• Appropriate management of foundation species to ensure sufficient quantity and quality of habitat is available to maintain threatened species populations.</td>
</tr>
<tr>
<td>De-extinction</td>
<td>• The application of genetic techniques such as cloning and genome editing using genetic material to create a species that resembles, or is, an extinct species.</td>
</tr>
<tr>
<td>Fenced refuges</td>
<td>• Development of systems of fenced refuges to provide short-term protection for native species.</td>
</tr>
<tr>
<td></td>
<td>• While the majority of these refuges are small, some are now encompassing whole landscapes; e.g. Australian Wildlife Conservancy (Karakamia Wildlife Sanctuary), Marna Bangarra.</td>
</tr>
<tr>
<td>Landholder stewardship programs</td>
<td>• Voluntary programs for landholders to set aside portions of their land for the purposes of biodiversity conservation.</td>
</tr>
<tr>
<td></td>
<td>• Such schemes operate widely across Australia, with some of the larger scale examples in Tasmania being the conservation covenant scheme (NRE Tas Private Land Conservation Program) and the Midlands Conservation Partnership (Tasmanian Land Conservancy and Bush Heritage Australia).</td>
</tr>
</tbody>
</table>

---

### Emerging approaches | Examples

**Rewilding**
- Enhancement of species populations and/or the reintroduction of highly interactive species that have a broad and significant influence over the health of a system. Rewilding programs can also encompass the reinstatement of abiotic processes, such as fire regimes (e.g. pyrodiversity\(^d\); Firesticks cultural burning\(^e\)), soil processes (e.g. soil biota\(^f,\(^g\)) and hydrological regimes (e.g. restoring flows and flood regimes\(^h\)).

**Species offset funds**
- Programs to offset biodiversity losses.

#### QUESTION 9: Do you have examples of cost-effective management and protection tools that you believe would be worth exploring in Tasmania? Are any of the proposed emerging approaches more or less suitable to Tasmania?


Have Your Say

How to Provide Feedback

Your feedback will help inform the development of a revised Threatened Species Strategy for Tasmania. All written submissions must be received by 5 PM (AEDST) Friday 22 Dec 2023.

Feedback may be submitted three ways:

• Online Form: http://haveyoursay.tas.gov.au/threatened-species-strategy-discussion
• Email Response to Questions below: ThreatenedSpeciesStrategy@nre.tas.gov.au
• Post Response to Questions below:
  ATTN: Threatened Species Strategy Discussion Paper
  Environment Strategic Business Unit
  NRE Tas
  GPO Box 44
  Hobart 7001

Questions

To guide your submission the questions that have appeared throughout the document are provided below.

QUESTION 1: What key elements in the 2000 Threatened Species Strategy should be considered when developing the new Strategy?

QUESTION 2: Are there any key threats to Tasmania’s native species that may be missing, and why are they important?

QUESTION 3: Do the proposed Vision, Objectives and Guiding Principles provide a sound foundation for the Strategy and Implementation Plan? If not, why not? Are there any important elements missing and, if so, what are they?

QUESTION 4: How important are each of the prioritisation principles proposed above? Should they be weighted with some being more important than others? Are there any important principles missing and, if so, what are they?

QUESTION 5: Do you think the proposed Prioritisation Framework and Strategic Priorities are appropriate? What would you add or change?

QUESTION 6: What work are you or your organisation undertaking, or planning to undertake, that aligns with the proposed objectives and strategic priorities, and what opportunities are there for your organisation to partner to deliver priorities over the next 5-10 years?

QUESTION 7: What research and innovation priorities could support Tasmanian threatened species management over the next 5-10 years?

QUESTION 8: What would encourage you to support and invest in threatened species management?

QUESTION 9: Do you have examples of cost-effective management and protection tools that you believe would be worth exploring in Tasmania? Are any of the proposed emerging approaches more or less suitable to Tasmania?
Confidentiality

Your feedback will be treated as a public document unless you indicate that all or any part of your feedback is confidential. Your feedback may be published in full or included in a published summary report of submissions.

Personal information will be managed in accordance with the Personal Information Protection Act 2004.

Information provided to the Government may be provided to an applicant under the provisions of the Right to Information Act 2009. Such requests, including determining whether information is exempt from release, will be handled in accordance with provisions of the Act.
References


A review of literature including the following articles informed the development of this Discussion Paper


