



NSW NATIONAL PARKS & WILDLIFE SERVICE

# Zero extinctions – national parks as a stronghold for threatened species recovery

National Parks and Wildlife Service Threatened Species Framework September 2021



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# Summary – a zero extinction framework for NSW national parks

Across the planet, more than a million species are threatened with extinction.

Our protected areas provide a vital refuge for many of these threatened species.

In New South Wales (NSW), around 85% of all species threatened with extinction are represented on the national park estate. Most are endemic to Australia or NSW – found nowhere else in the world.

However, even on the NSW national park estate, the future for these approximately 800 species is threatened by feral animals, weeds, altered fire regimes, the impact of climate change and other threats.

Urgent and focused action is required to ensure NSW national parks are a permanent stronghold for the conservation and recovery of our threatened species.

To this end, the NSW National Parks and Wildlife Service (NPWS) commits to:

- zero extinctions on the NSW national park estate (*baseline: July 2020*)
- stabilise or improve the on-park trajectory of all threatened species by 30 June 2030:
  - and, as an interim target, stabilise or improve the trajectory of 300 species by 30 June 2026.

NPWS is the first national parks agency in Australia to adopt a zero-extinction target.

A global target to prevent the extinction of known threatened species by 2020 was not met. In implementing the NPWS Threatened Species Framework (the Framework), NPWS will contribute to a renewed global commitment to preventing extinctions and promoting the restoration of biodiversity.

The Framework provides for a range of actions operating at multiple scales including:

- the declaration of important habitat as *Assets of Intergenerational Significance*, attracting special legislative protection
- the reintroduction of locally extinct species into a network of feral predator-free areas
- the strengthening of the integration of threatened species objectives in NPWS landscape scale programs such as feral animal control and fire management
- the delivery of a world class ecological health monitoring framework.

The design and delivery of these actions will occur in partnership with Aboriginal communities, including through joint management arrangements, and will be informed by effective engagement and collaboration with neighbours and other partners and stakeholders.

NPWS will report annually against its globally significant threatened species targets.



## Scope

The Framework and associated targets will initially cover vertebrates and higher plants, noting invertebrates and threatened ecological communities will be incorporated at a later date.

The Framework applies to species listed as threatened under the *Biodiversity Conservation Act 2016* (BC Act). In addition, the Framework will also apply to any species that NPWS identifies as threatened for the purposes of this Framework – for example, if there is a delay in listing under the BC Act.

The Framework is a living document. It will be updated on a regular basis by NPWS to reflect new knowledge, best practice, input from stakeholders and learnings from implementation.

## Context – the need for a Framework

In NSW, over 70 taxa (mammals, birds, reptiles and plants) are listed as extinct. Australia has the worst mammal extinction rate in the world – 25 mammal species have disappeared from NSW.

Approximately 85% of all threatened species in NSW are represented on the national park estate, which occupies 9.3% of the State.

Around 800 of the approximately 900 threatened species in NSW occur on the national park estate. Over 200 threatened species (nearly 25% of all threatened species) have 60% or more of their remaining NSW habitat (based on available records) on national park.

The concentration of threatened species and their habitats highlights the critical role of national parks in the effective conservation of threatened species. Our parks should be a stronghold for threatened species and the centrepiece of efforts to protect and restore threatened species populations.

There is evidence that the overall decline in biodiversity in NSW is occurring even in the national park estate. Key threats affecting threatened species populations in national parks include feral predators and other feral animals; invasive weeds; changed fire regimes; and a range of impacts associated with climate change. On park declines are occurring, or have occurred, in a range of threatened species including small- to medium-sized mammals, woodland birds, koalas and gliders, frogs and a range of plant species.

This Framework outlines a series of actions designed to secure and restore threatened species populations on the national park estate. In doing so, it recognises that the opportunities and risks influencing threatened species outcomes on national park are different to those on private land:

- National park is public land held by the Minister for the Environment specifically for conservation purposes.
- National park tenure provides the highest possible legislative protection, including from the actions of third parties; key actions impacting on threatened species are prohibited or regulated on national park land.
- National parks often occupy large, contiguous areas which provide opportunities to protect many threatened species without needing to operate across multiple tenures.

- There is significant investment by the NSW Government in threatened species conservation across national parks through existing NPWS land management programs, including:
  - land acquisition
  - fire management
  - feral animal control
  - weed control
  - translocations of threatened species.

The concentration of threatened species on national parks, and the unique role of public protected areas, means a dedicated NPWS threatened species framework is required.

While building on the unique opportunities within national parks, this framework also provides for effective collaboration and integration with threatened species conservation measures 'off park'. This is especially important when discrete populations straddle national park boundaries, or when factors outside of national parks influence species on park (such as environmental water allocations or the movement of feral animals and weeds).

## Objectives

Urgent and focused action is required to stabilise and improve the on-park trajectory of threatened species, and this action needs to be driven by clear objectives.

The objectives for threatened species conservation on NSW national parks are:

By 30 June 2026:

- Stabilise or improve the on-park trajectory of at least 300 threatened species (measured by reference to metrics appropriate to the relevant species).
- No extinctions on the national park estate (ie, no loss of threatened species from the national park estate as a whole).

By 30 June 2030:

- Stabilise or improve the on-park trajectory of all threatened species.
- No extinctions on the national park estate.
- Remove # species (target to be determined by 30 June 2026) from the threatened species list as a result of on-park conservation measures.

NPWS will report annually against these objectives.

**The NSW National Parks and Wildlife Service is the first national parks agency in Australia, and one of the first in the world, to commit to zero extinctions.**

A global target to prevent the extinction of known threatened species by 2020 was not met (Aichi Target 12). An estimated 1 million species globally are now threatened with extinction (IPBES Global Assessment 2020). In implementing this Framework, NPWS will contribute to a renewed global commitment to preventing extinctions and promoting the restoration of biodiversity.

To this end, the NPWS Framework is more ambitious than the proposed 2030 targets, and the 2050 vision (Living in Harmony with Nature) being negotiated as part of a new Global Biodiversity Framework to be agreed by the Convention on Biological Diversity in 2022.

It is consistent with a 2030 Nature Compact agreed at the 2021 G7 Leader’s meeting, which included a commitment to “halt and reverse biodiversity loss by 2030”. The Compact also stated that G7 nations will “agree and meet targets to increase the abundance of species populations worldwide, significantly reduce overall species extinction risk and eventually stop human-induced extinctions.”

## Summary of actions

The Framework includes eight actions designed to support the delivery of our objectives:

1. Establish and maintain an inventory of threatened species on the national park estate.
2. Map the on-park distribution of each threatened species.
3. Declare and manage important habitat as Assets of Intergenerational Significance (including the reintroduction of locally extinct species in feral-free areas).
4. Improve the integration of threatened species objectives in the design and delivery of landscape scale park management actions (feral animal control, weed control, fire management etc) and in land acquisition decisions.
5. Report against targets.
6. Integrate activities with Saving our Species, Koala Strategy and other programs.
7. Deliver an NPWS threatened species research strategy.
8. Implement a data management plan.

Importantly, the design and delivery of these actions will occur in partnership with Aboriginal communities including through existing and future joint management arrangements (e.g. Boards of Management and advisory committees). This reflects a commitment to Aboriginal involvement in decisions about park management, a recognition that traditional knowledge is vitally important to successfully achieving the objectives of this framework and an acknowledgment of the cultural values associated with many threatened species.

Implementation will also be informed by effective engagement and collaboration with neighbours and other partners and stakeholders. A range of mechanisms are in place to support such engagement including Regional Advisory Committees.

### 1. Establish and maintain an inventory of threatened species on the national park estate

- Establish and maintain an inventory of the threatened species found on the national park estate (i.e. at the estate level).
- Publish clear advice on the number (%) of threatened species found on national park estate. (This metric will initially not include listed populations.)
- The quality and integrity of this metric will improve over time as additional data is collected.

## 2. Map the on-park distribution of each threatened species

- Map the on-park distribution of threatened species, and regularly review these maps (combination of actual records, modelling and expert advice, refined over time).
- Distinguish between:
  - species with discrete population on the national park estate – detailed maps are generated (see Action 3. *Assets of Intergenerational Significance*)
  - species that are widely dispersed and inhabit specific locations on a temporary or transitory basis – broad maps noting temporal variation and identifying the most important locations for breeding, feeding, other critical resources etc will be generated (see 4. NPWS landscape species).

## 3. Declare and manage important habitat as Assets of Intergenerational Significance

### Declaration

- For species with discrete habitat on the national park estate – and for a subset of NPWS landscape species – the most important habitat will be declared as an Asset of Intergenerational Significance (AIS).
  - The most important habitat will typically include areas for breeding, nesting, feeding, shelter, etc. Not all mapped habitat will be declared an AIS although this may be the case for many species, especially those with limited distributions.
  - Feral predator-free areas and other reintroduction sites on national parks will be identified as an AIS.
- AISs will be declared on a staged basis taking into account a range of factors including available information; threat status; proportion of remaining distribution on national park; and the total area occupied.
- AIS declarations will be updated as available data improves – i.e. it is intended that AIS declarations evolve over time to reflect the most up to date information.
- A risk assessment will be carried out by the end of 2021 to identify those species – especially plant species – that are at the highest risk of extinction (from the national park estate) to help inform priority AIS listings.



On Threatened Species Day 2021, the NSW Minister for the Environment, the Hon Matt Kean MP, declared **the first tranche of Assets of Intergenerational Significance**.

- Important habitat for 93 threatened species now has additional statutory protection as AIS sites.
- The species to benefit include the koala, brush-tailed rock-wallaby, eastern bristlebird, grey grasswren, Wollemi pine and the Richmond mountain frog.
- The declarations cover a total area of 301,843 ha across 221 AIS sites in 110 national parks.



Brush-tailed rock wallaby (*Petrogale penicillate*). Photo: Michael Van Ewijk/DPIE

## Management

- Each AIS enjoys special legislative protection over and above the protection enjoyed by a national park.
- For each AIS, NPWS is required by regulations made under the *National Parks and Wildlife Act 1975* to prepare and implement a concise (two to three pages) Conservation Action Plan (CAP) which sets out:
  - key risks to the declared area of habitat for the threatened species
  - priority actions to reduce risks to this important habitat – these are specific measures for that species, which can be stand-alone measures for the declared location and/or measures that are embedded in broader planning for fire, feral animal control etc. It can also include translocations and/or establishment of insurance populations
  - actions to measure and report on health/condition (metrics).

- Amendments to the *National Parks and Wildlife Act 1975*, due to be introduced into the NSW Parliament in 2021, will create an offence for actions which interfere with, damage, harm or disturb an AIS.

## Measurement and reporting

- Every three to five years, NPWS will measure and report on the health/condition of the declared AIS, as per CAP requirements. This is a statutory requirement. **The CAP metrics will provide an assessment against trajectory including an approximate baseline.**
  - The CAP is a critical document in setting out concisely the list of management actions and the relevant metrics to be measured and reported.

NPWS, working with our partners, is establishing a **network of large feral predator-free areas** across the national park estate in places like the Pilliga, the north coast and the south-east of NSW. This reflects a broad scientific consensus on the importance of such areas for the conservation and recovery of threatened species, especially mammals. Nationally, feral-free areas, including offshore islands, have already prevented more than a dozen extinctions.

- Each feral predator-free area in a NSW national park will be declared an AIS.
- Over 25 locally extinct species are being reintroduced to these feral-free areas including species such as the bilby, the numbat and the eastern bettong which are currently listed as extinct in NSW.
- In total, more than 50 threatened species are expected to benefit from feral predator-free areas in NSW.



Release of the greater bilby in the Pilliga (*Macrotis lagotis*) by NPWS staff.  
Photo: Australian Wildlife Conservancy/Brad Leue

## **4. Improve the integration of threatened species objectives in the design and delivery of landscape scale park management actions (NPWS landscape species)**

### **Management**

- Improve the integration of threatened species conservation measures/input into regional and park-specific land management strategies and programs, and identify relevant investment levels, for:
  - fire management
  - feral animal control
  - weed control
  - land acquisition

### **Measurement and reporting**

- Selected NPWS Landscape species will be incorporated in our ecological health measurement framework and measured/reported as part of that framework.
- Selected NPWS Landscape species will have dedicated health/condition monitoring projects (to be determined on a case by case basis).
- Key threat metrics (e.g. fire measures) will provide additional and supporting information.



Enhancing threatened species conservation through **land acquisition**:

- Since 2019, NPWS is on track to expand the national park estate by more than 5%, meeting the target set by Environment Minister Matt Kean of adding 400,000 ha before the end of 2022.
- The decisions about land acquisition for the national park estate consider a range of criteria including protection of important habitat for threatened species.
- The acquisition of Narriearra pastoral station secured almost the entire NSW distribution of the endangered grey grasswren. The habitat of the grey grasswren on Narriearra-Caryapundy National Park is now an AIS.
- The acquisition of Mount Numeralla in mid-2021 will protect almost 1000 ha of koala habitat and create a new national park, with initial estimates suggesting it will support a population of more than 100 koalas. It also protects 80% of the total population of the endangered lemon zieria, the entire population of which is now found on the park estate.



Caryapundy Swamp, Narriearra Caryapundy Swamp National Park. Photo: Joshua Smith/DPIE

Enhancing threatened species conservation through **feral animal control**:

- NPWS is now delivering the largest feral animal control program in its history.
- The level of aerial shooting, for example, has tripled compared to the 10-year average.
- In addition to broadscale control of feral predators and herbivores, shooting and baiting programs target the control of foxes, goats and other feral animals in and around habitat of threatened species.

Enhancing threatened species conservation through **fire management**:

- A dedicated Bushfire Risk and Evaluation Team has been established within NPWS. The responsibilities of this team include ensuring that risk to threatened species populations is factored into new Bushfire Risk Plans (prepared under the auspices of the RFS) and park-specific fire management plans. AIS boundaries will be a key input into this fire planning.



Wollemi pine. Photo: DPIE

## 5. Reporting against objectives and targets

NPWS will publish an annual report, with the first report to cover 2021–22, identifying:

- the number of threatened species on the national park estate:
  - the number (%) of threatened species that are protected as AIS
  - the number (%) of threatened species that are NPWS landscape species
- the number (%) of threatened species for which trajectories are stable and/or improving:
  - AIS species
  - NPWS landscape species.



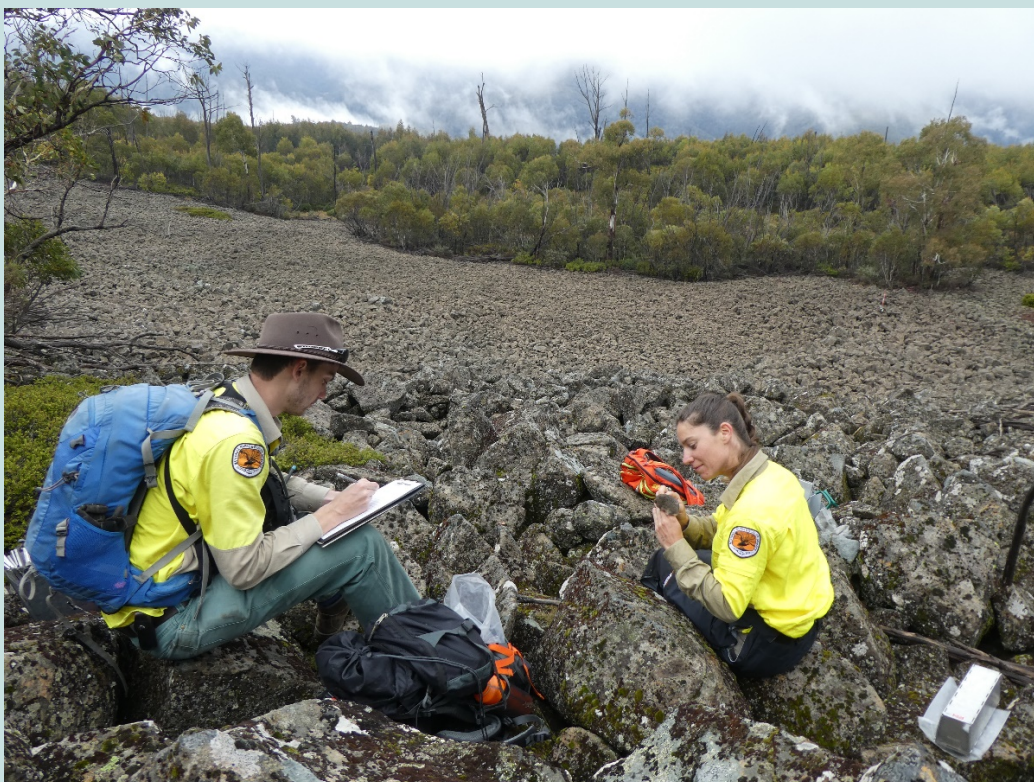
It is recognised that measurement of a species trajectory will be challenging. For most species, it is likely to take several years to collect the data required and to build the knowledge required to understand/interpret changes in the data (for example, accounting for the influence of natural variability). This highlights the urgency associated with collecting data in a consistent manner.

- the total level of expenditure on threatened species conservation on the national park estate including but not limited to:
  - direct expenditure (e.g Saving our Species, Koala Strategy)
  - fire management
  - feral animal control
  - weed control
  - ecological health monitoring
  - reintroduction of locally extinct species.

NPWS has launched a **world leading ecological health measurement and reporting** program across major national parks to systematically track:

- changes in the population of threatened and other indicator species
- changes in the level of threats (feral animal populations, weed occupancy, fire impacts, other threats)
- the cost of delivering effective national park management including threatened species conservation.

Priority national parks include Kosciuszko National Park, Royal National Park, the Blue Mountains and sections of the Gondwana Rainforests World Heritage Area. At Kosciuszko National Park, for example, the ecological health program is expected to track the population/trajectory of threatened species such as the spotted-tailed quoll and the mountain pygmy possum.



NPWS staff with mountain pygmy-possum (*Burramys parvus*). Photo: Mel Schroder/DPIE

## 6. Integration with Saving our Species and other programs

- NPWS priorities will be driven by the AIS legislative requirements and implementation of this broader NPWS threatened species framework. In meeting AIS legislative requirements (declaring habitat as AIS; drafting and implementing CAPs), and in developing/implementing the NPWS framework, NPWS will continue to work closely with other parts of the NSW Government (the Biodiversity, Conservation and Science Directorate, Biodiversity Conservation Trust, Taronga Zoo, Royal Botanic Gardens, Local Land Services, etc), Aboriginal joint management partners, scientific partners and other stakeholders.
- Saving our Species (SoS) funding will support those NPWS actions which align with SoS priorities. Other sources of NPWS funding will supplement/cover investment in other species.
- Strong collaboration with a range of partners and stakeholders will continue. While NPWS will generally lead or co-ordinate the delivery of threatened species actions on national park, alternative arrangements will be required in some cases – for example, NPWS may not lead delivery for cross-boundary species where only a small proportion of the NSW population is found on park.
- Threatened species metrics will be consistent across CAPs and the NPWS Ecological Health (Performance Scorecard) framework and will be developed, so far as reasonably possible, to align/integrate with SoS metrics, the NSW Biodiversity Indicator Program and other relevant programs.

## 7. NPWS threatened species research strategy

- NPWS will develop and implement a targeted research strategy designed to generate knowledge that will improve threatened species management. This will build on existing NPWS research priorities such as feral cat control, the impact of fire, weed control and identifying the ecological requirements of priority species.
- The NPWS threatened species research strategy will be developed to also maximise alignment with SoS research priorities, and to integrate with Department of Planning, Industry and Environment knowledge frameworks.
- The research strategy will ensure all research conducted on park is managed consistently – including through licence conditions, management and provision of data, etc. – and that research is focused on NPWS priorities.

## 8. Implement a data management plan

- The implementation of this Framework and associated programs, such as the NPWS program to measure ecological health, will generate a large volume of data critical to national park management and the conservation of threatened species.
- NPWS will develop and implement a revised data management plan, consistent with the data management requirements of the NPWS ecological health framework, to ensure the effective collection, storage and use of data.