



Australian Government

Department of the Environment and Energy

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Secretary

Ref: EC18-000918

Ms Christine McDonald
Committee Secretary
The Senate Standing Committees on Environment and Communications
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Parliament House
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Dear Ms McDonald

I am pleased to make this submission to the Senate Standing Committees on Environment and Communications regarding: *Australia's faunal extinction crisis*.

On behalf of the Australian Government, the Department of the Environment and Energy, protect and conserve fauna through a range of activities including measures under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*, working with all levels of government, development of policies that guide national action, on-ground investment, supporting science and monitoring, and through the work of the Threatened Species Commissioner.

More detail on the above matters is included in Attachment A.

The Director of National Parks will also make a submission outlining the activities of Parks Australia.

Thank you for the opportunity to provide a written submission.

Yours sincerely

Finn Pratt

7 September 2018

Senate Environment and Communications References Committee

Inquiry into Australia's faunal extinction crisis

Department of the Environment and Energy submission

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SECTION 1: INTRODUCTION

Australia is a country rich in unique animals that are central to our environment, identity, Indigenous culture, and economy.

The Department of the Environment and Energy (the Department), delivers on the Australian Government's international obligations to protect and conserve fauna through a range of statutory measures related to the operation of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act), including listing species and identifying actions to conserve them; non-statutory measures such as contributing to the implementation of priority actions and supporting science and monitoring; and through the development of policies and strategies that guide national management and action.

Australia is rich in biodiversity

Australia is one of 17 megadiverse countries with globally distinct levels of biodiversity and significantly more unique species than most other countries. We possess more than 80 globally unique families of plants and animals and these species have very high degrees of endemism (i.e. are found only in Australia). Our continent is home to half of the world's marsupial species, it is a centre for globally important Myrtaceae species (this includes our Eucalypts), and includes two global hotspots, south-western heathlands and woodlands and the forests of east Australia (Conservation International 2011). Our ocean territory contains a megadiverse biota including our southern coastal waters that show distinctive levels of species richness in which as many as 90% of some groups of organisms are endemic (CSIRO 2015; Cresswell and Murphy 2017).

Australia's biodiversity is highly regarded for its adaptations having evolved in continental isolation for over 45 million years and under many tens of thousands of years of interaction with Indigenous people. The period since European settlement has seen a rapid change in land management and the introduction of a diverse array of threats to Australia's native species.

Australian fauna are under pressure

The State of the Environment 2016 (Cresswell and Murphy 2017) reported that: "Based on the information available about vegetation extent and condition, and the small number of species for which there is some understanding of trends in distribution and abundance, the status of biodiversity in Australia is generally considered poor and worsening." The main threats to biodiversity are: clearing, fragmentation and degradation of habitat; the impact of invasive species; climate change; changed fire regimes; grazing pressure and changed hydrology.

The 2016 report identified that the pressures affecting biodiversity remain largely consistent with previous State of the Environment reports. However, the nature of biodiversity decline across Australia is complicated, as many species and communities suffer from the cumulative impacts of multiple pressures. For example, during the past 5 years, evidence has emerged that the greatest impact on mammals in northern Australia comes from a combination of predation by feral cats in recently burned environments (Woinarski et al 2014). In the absence of cats, native mammals are able to survive fire and continue to find food, while cats forage less effectively in unburned environments.

Invasive species are the most frequently cited pressure affecting species listed under the EPBC Act. The State of the Environment 2016 report notes that approximately 80 per cent of species are at potential risk from invasive species impacts. Invasive species pose a threat not

only through predation but also habitat modification and reducing availability of necessary resources.

The 2016 State of the Environment report found climate change is one of the main pressures on the Australian environment and exacerbates other pressures including land-use change, habitat fragmentation and degradation and invasive species.

Scientists expect climate change to cause changes to the abundance and geographic range of many species, restrict or alter species movement and interfere with their lifecycles.

The State of the Environment 2016 report found it difficult to assess the status and trends for many species or groups of species as they are not regularly monitored or monitored at all. Our understanding of the causes of declines is generally skewed towards the better known taxonomic groups such as mammals and birds. This is reflected through comprehensive reviews such as the Action Plan for Australian Birds (Garnett et al 2011) and the Mammal Action Plan (Woinarski et al 2014).

Threatened fauna include mammals, birds, reptiles, frogs, fish and invertebrates species in terrestrial, freshwater and marine environments

At July 2018, 138 mammals were listed as threatened under the EPBC Act, including 27 that have become extinct. According to the State of the Environment 2016 report, the pressure that has contributed the most to mammal extinction in Australia, and is contributing to the decline of the highest number of threatened mammals, is predation by feral cats and red foxes. Feral cats are implicated in the extinction of more than 20 listed mammals and are an identified threat to a further 124 listed threatened species. Changed fire regimes is considered a major threat that has contributed to the extinction of six mammal species, and is a significant pressure on 35 threatened mammal species.

There are 155 birds listed as threatened under the EPBC Act, including 22 which are extinct. The Action Plan for Australian Birds, updated in 2011, found that terrestrial threats to birds included introduced predators (such as foxes and feral cats), land clearing, habitat fragmentation, grazing pressure and changes in fire regimes. At sea, threats include high mortality associated with fishing, although the report noted that there has been substantial progress in developing and implementing mitigation techniques. Overall the State of the Environment 2016 report found that populations of bird species across much of Australia are in decline.

There are 63 reptiles and 33 frogs listed as threatened under the EPBC Act, including four extinct frogs. Threats to reptiles and amphibians include invasive species, such as feral cats, and diseases. In 2014, seven frog species were identified as being at high risk of extinction from the disease chytridiomycosis, resulting from infection by the chytrid fungus, with a further 22 species assessed as being at moderate to lower risk of extinction. There has been little improvement in the status of listed reptile and amphibian taxa at the national level, however increased survey effort has revealed greater ranges or additional, previously unknown populations (State of the Environment Report 2016).

There are 58 species of fish listed as threatened under the EPBC Act (as at July 2018), including one that is extinct in the wild and eight that are conservation dependent. According to the State of the Environment 2016 report, approximately 70 per cent of Australian inland fish species are endemic; further, they show unusual adaptations to highly varying environmental conditions. Although no Australian freshwater fish is known to have become extinct since

European settlement, there is evidence of regional extinctions, particularly in south-eastern Australia.

A range of coastal and marine habitats and communities - from the nearshore to the abyss, and from the seabed to the water column - were assessed for their current state and recent trends in the State of the Environment 2016 - *Marine environment* report (Evans et al 2017). Most species groups assessed are regarded as being in good condition overall, although information is lacking to assess the condition or trend of some invertebrate groups. The State of the Environment 2016 reported that "Trends are stable or improving for most fish species, except inner shelf reef species, which are in poor condition and worsening, similar to temperate rocky reef and coral reef habitats". Trends were unclear for sharks and rays, most seabirds, sea snakes, some marine turtles and most marine mammals.

The five yearly Great Barrier Reef outlook report process includes assessment of the condition and trend of biodiversity, including threatened fauna. The 2014 outlook report found climate change is the greatest threat to the Great Barrier Reef. It is already impacting species and habitats in the Great Barrier Reef World Heritage Area, and impacts are projected to worsen under ongoing climate change trends.

Governments at all levels share responsibility for conserving and protecting native fauna

Within the Federation of Australia, biodiversity conservation and protection is delivered by the combined efforts of local, state, territory and Commonwealth governments, along with the actions of landholders, communities, traditional owners, the private sector and non-government organisations.

The Australian Government has international obligations to protect and conserve biodiversity under various conventions and treaties, and this guides our national action.

The Australian Government provides for the protection of these environmental matters, which includes threatened fauna, through the operation of the EPBC Act. The Australian Government also delivers non-statutory measures such as programs that invest in recovery and restoration, national policies and strategies that guide national action, and funding activities that support science and monitoring for the conservation and protection of threatened fauna.

States and territories are responsible for regulating environmental matters in their respective jurisdictions, and are the primary regulators for Australia's native plants and animals. All state and territory governments have legislation to conserve biodiversity and to retain and manage habitats, including through a conservation reserve system involving national parks, nature reserves, conservation parks and marine parks. State and territory governments operate native vegetation conservation programs, while also providing for sustainable development of lands and waters within their jurisdictions.

All responsible landholders, managers and lessees contribute to biodiversity conservation through their management of lands and waters across Australia. This contribution ranges from retaining the productive potential of the lands and waters, to conserving particular species or habitats and even providing habitats for native species such as frogs, birds, reptiles and small mammals in towns and city areas.

Other groups and sectors that invest considerable time and effort to protect biodiversity include Indigenous and community groups, environmental non-government organisations, businesses, and the research and education sector. These groups have considerable

Indigenous ecological or local knowledge, technical expertise and play a critical role in on-ground implementation and raising community awareness. Many biodiversity conservation successes are the product of effective partnerships between governments and non-government groups.

Working in partnership with governments and land managers

As biodiversity conservation and protection is a shared responsibility, the Australian Government works in collaboration with the states and territories, as well as the range of other government and non-government land and sea managers, to provide protection and conservation for threatened species and ecological communities, and importantly the ecosystems on which they depend.

The Australian Government has partnered with states and territories to consolidate and strengthen environmental regulatory decision making. Assessment bilateral agreements with all jurisdictions are helping to improve environment outcomes and streamline processes. All governments are now working together on streamlined and more consistent threatened species listing assessments, to reduce confusion and duplication of effort. This is building on the longstanding cooperation in recovery plan development and implementation (see the case study on conserving the Malleefowl below).

The Australian Government also continues to foster partnerships with the states, territories and land managers to effectively deliver non-statutory protection measures for species, including the implementation of national biodiversity policies and frameworks, and the delivery of key programs such as the National Landcare Program and the National Reserve System.

Case Study: Working together to conserve the Malleefowl

Malleefowls occur across the drier environments of southern Australia. A major factor in their population decline has been the loss and fragmentation of their habitat, but other threats include inappropriate fire regimes, grazing pressure and predation by foxes and cats.

Fundamental to conservation of the malleefowl has been the National Malleefowl Recovery Team formed in 1989. Membership of the team comprises representatives from relevant state agencies, the Australian Government, industry stakeholders and community groups. The team promotes the objectives and actions outlined in the Recovery Plan by providing advice and general guidance on actions, based on the most reliable information available. This is underpinned by the work of committed individuals and community groups collecting data and promoting awareness and state agencies undertaking on-ground management.

More information about this and other examples of working together for threatened species recovery are in 'Recovering Australian threatened species – a book of hope' edited by Stephen Garnett and others.

Australia's approaches and outcomes are internationally recognised

A combination of approaches to support biodiversity conservation at the national and jurisdictional level has seen the implementation of internationally significant systems and outcomes. Australia has made notable progress in expanding the terrestrial and marine protected area estate and, in doing so, has exceeded international commitments and supported the comprehensive participation of Indigenous communities through world leading co-management models (UNCCD 2017).

Australia has spearheaded internationally remarkable mechanisms for integrated land, water and biodiversity management including the now well established system of regional Natural Resource Management (NRM) organisations and the Landcare initiative (ACIUCN 2017). The creation of the state-Commonwealth management arrangement for the Great Barrier Reef was a world first and continues to be a best practice example of comprehensive marine management (ACIUCN 2017).

Committed to continuous improvement

The approach to threatened species management in Australia incorporates continuous improvement and building from a scientific base.

In 2014, the Australian Government appointed a Threatened Species Commissioner to bring national focus to threatened species. This model is assisting to prioritise investments and efforts to enhance their impact, coordinate action and build public awareness (see the case study on Threatened Species Commissioner model below). More information about the role and Terms of Reference for the Threatened Species Commissioner are at: www.environment.gov.au/biodiversity/threatened/commissioner/role.

The Threatened Species Commissioner leads the implementation of the Threatened Species Strategy, which outlines the Australian Government's approach for Australia's threatened plants and animals. The Threatened Species Strategy includes a five year Action Plan with key action areas for tackling feral cats, providing safe havens for species most at risk, improving habitat, and emergency interventions to avert extinctions. It includes explicit and measurable targets to tackle feral cats and their impacts, improve the trajectory of 20 mammals, 20 birds and 30 plant species and improve recovery practices by 2020. More information about the Strategy is in Section 3: National Policies and Programs.

From 2015, the Department has worked with the states and territories to implement the Common Assessment Method to align the assessment and listing of nationally threatened species across Australian jurisdictions. The Common Assessment Method provides a consistent approach to assessments, reducing duplication of effort and improving clarity for stakeholders.

The Australian Government is increasingly focussed on delivering threatened species outcomes in partnership with others through its investment programs. In delivering the next phase of the National Landcare Program, which will roll out from 2018-19, the Department aims to improve the effectiveness and efficiency of regional scale natural resource management, including delivering more targeted outcomes and improved reporting. As a result, one outcome of the new \$450 million Regional Land Partnerships program is focused on priority threatened species.

More information on these developments is provided in sections 2 and 3 of this submission.

The Threatened Species Commissioner model

The Threatened Species Commissioner model was established in 2014 to bring a new national focus to conservation efforts and help address the growing number of native flora and fauna in Australia facing extinction. The Commissioner champions the development and implementation of practical actions, participates in and influences policy and program development, and brings partners and resources together to deliver on-ground change. The Commissioner also plays an important role in promoting awareness of threatened species at a national level and supporting local communities and their efforts to avoid extinctions.

Examples of key achievements since the Commissioner's role was established is the launch of a Threatened Species Strategy, which provides a focus for actions through setting targets; the launch of the first Threatened Species Prospectus, an innovative method of attracting private sector investment; and raising awareness of Australia's threatened species through the use of contemporary engagement techniques such as social media.

Social and traditional media channels are important tools for engaging directly with the community on a range of issues and to communicate the Government's approach to threatened species recovery. The Commissioner model overall has been very successful in raising awareness and support for the protection of threatened plants and animals, with over 36,000 social media followers and regular engagement with leading media outlets.

The Commissioner's role has also been very effective at raising community awareness of feral cats as a key threat to Australian fauna. The Commissioner chairs the Feral Cat Taskforce, which has supported jurisdictions to coordinate action on feral cat management and remove legislative barriers to feral cat control, a commitment made by all states and territories at the 2015 Meeting of Environment Ministers. More information on the role of the Feral Cat Taskforce is in the case study in Section 2: Legal Frameworks.

The work of the Commissioner complements but does not duplicate or override the important statutory responsibilities of the Threatened Species Scientific Committee. Decision-making powers on referrals remain with the Minister.

Recovery is complex and requires careful planning, the best available science and working together to focus effort. The Threatened Species Commissioner is working with communities, business, non-government organisations, scientists and state and territory government to change behaviours, focus effort and save species. More information about the Threatened Species Commissioner's role is at:

www.environment.gov.au/biodiversity/threatened/commissioner.

SECTION 2: LEGAL FRAMEWORKS

The Commonwealth's role is focussed on identifying and protecting Matters of National Environmental Significance

The 1997 Heads of Agreement, signed by the Commonwealth, states and territories, and local government, defines the roles of respective governments in environmental protection through a cooperative approach. The agreement aimed to reduce disputes between governments, increase environmental protection, and increase certainty for Government and business decision making. These arrangements focuses the Commonwealth's role on environmental matters in the national interest. Environmental management of other matters remain the responsibility of other levels of government.

The EPBC Act is the Australian Government's primary environmental legislation. The EPBC Act provides a legal framework to identify, protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. These are defined in the EPBC Act as matters of national environmental significance (MNES). Additionally, the EPBC Act allows the Commonwealth to regulate actions on Commonwealth land or carried out by a Commonwealth agency.

Under the EPBC Act, threatened species are afforded protection directly through listed species and communities (as an MNES), and indirectly through associated MNES, including Ramsar wetlands, the Great Barrier Reef, water assets associated with coal seam gas or large coal

mines, and natural and world heritage properties. Threatened species and ecological communities also receive protection under the EPBC Act through other landscape-level mechanisms, such as Commonwealth marine areas, and the National Reserve System.

This reflects the role of the EPBC Act in promoting biodiversity protection and supporting ecologically sustainable development (ESD). ESD is about using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

The EPBC Act supports regulatory decision making but is also part of a broader framework that aligns legal protection with programmatic spending and biodiversity policy to direct focus on priority national-level matters.

More information on the EPBC Act is available at: www.environment.gov.au/epbc.

At July 2018, 449 fauna species were listed as threatened under the EPBC Act - either as critically endangered, endangered, vulnerable or extinct in the wild. This includes 50 fish, 29 frogs, 63 reptiles, 133 birds, 111 mammals and 63 invertebrate species. A further 4 frogs, 22 birds, 27 mammals and 1 invertebrate are listed as extinct. A further 52 fauna species are under assessment for their eligibility for listing as threatened.

The EPBC Act is a foundation that directs planning and action to help Australia meet its international responsibilities in protecting biodiversity

The EPBC Act provides a framework to plan for the long-term recovery of listed threatened species through the development of recovery plans and conservation advices. This provides a planned and logical framework to guide collaborative investment and participation by all levels of government and the broader community.

Key threatening processes are listed under the EPBC Act and where required, threat abatement plans (and advices) are prepared in response. The EPBC Act provides a significant foundation upon which longer term conservation planning and action is directed and is a significant step in reporting on Australia's international responsibilities in protecting biodiversity.

The EPBC Act provides the legal framework to meet a number of Australia's international obligations, including for threatened fauna under the Convention on Biological Diversity, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

The Department implements CITES through the EPBC Act to ensure that international trade does not threaten the survival of species.

The international movement of native species, and species listed on the appendices to CITES, are regulated by the EPBC Act. Export for these species can only occur if the export will not be detrimental to, or will not contribute to trade that is detrimental to, the survival or recovery of the species or relevant ecosystem. This ensures that utilisation of native wildlife for export is managed in an ecologically sustainable way, regardless of the purpose of trade. Australian native species are used for commercial trade in many industries and include crocodiles, kangaroos, fish, corals and many plant species, such as grass trees and orchids.

For example, the management arrangements of Australia's commercial fisheries are assessed for ecological sustainability for the purpose of granting export approval under the EPBC Act. The Department has worked with state and territory fisheries management agencies to identify

and address ecological risks. This has resulted in more than 60 fisheries being demonstrably low risk and granted longer-term 10 year approvals under the EPBC Act. In addition, under Part 13 of the EPBC Act, fisheries management arrangements are assessed for their potential impacts to protected species in Commonwealth waters. Accreditation of the management arrangements is granted where fishers can demonstrate they are taking all reasonable steps to avoid the killing or injuring of species protected under Part 13 of the EPBC Act and the impacts of fishing is not having an adverse impact on the species.

The EPBC Act requires a careful assessment of the impacts on MNES and their significance

The EPBC Act is triggered when an action has, will have, or is likely to have, a significant impact on one or more MNES. Such an action would require referral to the Department for assessment and approval under the EPBC Act to be carried out lawfully.

Relevant and adequate information must be provided to the Department for an assessment of its impacts to be completed and public comments are also considered. Once assessed, the Department makes a recommendation to the Minister whether to approve the action or not. The Minister or delegated decision maker consider the potential impacts on MNES as well as social and economic impacts of the action. The Minister or delegated decision maker may consider the cumulative impacts of an action through the assessment and approval processes under the EPBC Act, where those cumulative impacts form part of the context of the action.

Significant impact depends on the circumstances under which an action is to be carried out. Significant Impact Guidelines published by the Department lay out criteria by which significant impact is to be determined. These include:

- The MNES that may be affected
- Proposed measures to avoid or reduce impacts on MNES
- The nature and magnitude of potential impacts.

Approvals can be granted on a conditional basis to ensure the impact of the action is acceptable

An approval can be conditional on requirements to avoid impact where possible, to mitigate or reduce impacts, and to offset residual impacts when unavoidable. The EPBC Act Environmental Offsets Policy was released in 2012 to outline an approach to using environmental offsets in EPBC Act decisions. This increased flexibility for business and other stakeholders, whilst maintaining desired environmental outcomes.

The EPBC Act also provides a strategic approach to considering actions that may impact MNES by considering them at a landscape scale and over a longer timeframe

Strategic assessments are one of a range of landscape-scale tools under the EPBC Act that the Department uses to regulate and manage environmental activity. Strategic assessments can deliver improved environmental benefits, as well as regulatory efficiency and certainty for proponents and the community, at a broader scale than individual project assessments.

Because they consider up front a wide range of activity over a long timeframe, strategic assessments can deliver greater certainty and improved ecological outcomes compared to project-by-project approvals. Strategic assessments provide an opportunity to consider cumulative impacts at the landscape-scale.

The EPBC Act sets out the process by which threatened species are listed as an MNES

The EPBC Act provides an annual cycle for nominating and assessing species for listing as threatened. The independent Threatened Species Scientific Committee (TSSC) identifies priority species for listing assessment, taking into account candidate species identified by the community. Once the Minister has finalised the list of species for assessment, the TSSC seeks comments on those species, and assesses against the criteria specified in the EPBC Act. The Minister then decides whether to list the species as threatened and a conservation advice is published.

The Department's publicly accessible Species Profiles and Threats database reports on the listing status of all species under Commonwealth and state legislation as well as information on and links to statutory conservation plans in place. This includes EPBC Act lists of threatened fauna, threatened flora and ecological communities:

<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>.

States and territories maintain lists for threatened species including MNES and non-MNES species. The Commonwealth and the states and territories have a common method to remove inconsistencies between jurisdictions

To align listing processes nationally and reduce confusion and duplication of effort across all jurisdictions, the Australian Government and all states and territories have agreed to establish a Common Assessment Method (CAM) for the assessment and listing of threatened species. The method is based on the best practice standard developed by the International Union for Conservation of Nature (IUCN), as used to create the Red List of Threatened Species. Using the common assessment method, species are assessed by all jurisdictions applying the IUCN criteria, categories and thresholds.

The CAM maintains the current high level of scientific rigour in the assessment and listing of threatened species across Australia, while promoting a more consistent, efficient and harmonised process between Australian jurisdictions. Coordinated threatened species listing aligns protection across levels of government and will lead to better outcomes for Australia's threatened fauna. The primary aim of the CAM is to reduce confusion and duplication of effort by establishing a consistent method for the assessment and listing of nationally threatened species across Australia.

At July 2018, the CAM memorandum of understanding for threatened species had been signed by Western Australia, Tasmania, the Northern Territory, the Australian Capital Territory, New South Wales, Queensland and the Australian Government.

Sixty-eight listing decisions have been made under the EPBC Act based on assessments prepared by other jurisdictions. The states and territories are also adopting changes to their threatened species lists to achieve alignment. An interjurisdictional Working Group continues to guide implementation of the memorandum, providing an effective forum for information sharing and mutual support in relation to administrative, policy and legislative matters. Going forward, jurisdictions are progressing relevant administrative arrangements and legislative amendments to support the CAM, and the work to review and align threatened species listings across jurisdictions is ongoing.

Ensure threatened species lists are up-to-date

Knowledge of species and their status improves continuously, yet many of the species listed under the EPBC Act do not regularly have their status reviewed. Regular and comprehensive reviews of all listed species is challenging due to the large number that are threatened.

The Species Expert Assessment Plan approach has been developed by the TSSC in association with the Department to encourage and support expert groups to review particular taxon or group of species. The TSSC may then use the assessments prepared by these expert groups to pursue amendments to the EPBC Act list of threatened species.

Example include the independently published Action Plan for Australian Birds (Garnett et al 2011) and Mammal Action Plan (Woinarski et al 2014), which have been used by the TSSC to strategically review and inform new listings, where required, for these two species groups. Similar work is underway for frogs and squamate reptiles (lizards and snakes).

Identifying key threatening processes

The EPBC Act also provides for the identification and listing of key threatening processes. A threatening process is defined as a key threatening process if it threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community. Key threatening processes do not trigger the EPBC Act in their own right. However, listing a key threatening process under the EPBC Act provides official recognition that a process is a key threat to biodiversity at the national level, raises awareness of how that threat is operating across Australia and assists with understanding and prioritising management of the threat. At July 2018, 21 key threatening processes are listed under the EPBC Act. All of the listed key threatening processes either relate directly (through competition, predation, etc) or indirectly (through loss or decline in habitat or ecosystem function) to fauna and many have potential impacts on threatened fauna.

Imported pests, weeds and diseases could also pose threats to Australia's native fauna and flora and are listed to mitigate new threats

Preventing the establishment of new pests, weeds and diseases is the most cost-effective way to manage the threats they pose. The EPBC Act establishes a List of Specimens Taken to be Suitable for Live Import (the Live Import List) to regulate what live animal specimens can come into Australia. Species are assessed for their potential risk to the Australian environment if they were to establish in the wild. This helps mitigate the establishment of new species of feral animals.

The Live Import List consists of two parts: Part 1 contains specimens that can be brought into Australia without a permit; and Part 2 contains specimens that require a permit to be imported. It is an offence to import a specimen that is not on the Live Import List. It is also an offence to possess an unlisted specimen that was unlawfully imported or its progeny.

Invasive plants may pose a threat to native fauna by modifying habitat and reducing availability of resources. The Department of Agriculture and Water Resources is responsible for the import of plants where these are not listed under CITES.

Conservation advices and recovery plans to guide the recovery of listed species

When a native species is listed as threatened under the EPBC Act, a conservation advice must be developed to assist its recovery. Conservation advice provides guidance on

immediate recovery and threat abatement activities that can be undertaken to ensure the conservation of a newly listed species.

Where needed, the Minister may prepare a more comprehensive recovery plan to guide recovery of the species. Recovery plans are generally prepared where the listed species has complex management needs due to its ecology, the nature of threats affecting it, or the number of stakeholders affected by or involved in implementing the necessary recovery actions.

Recovery plans set out the research and management actions necessary to stop the decline of, and support the recovery of, listed threatened species or ecological communities. Recovery plans can be developed by the Commonwealth or prepared by an external party, commonly a state or territory government, and then 'adopted' as a national recovery plan by the Minister.

The EPBC Act specifies the content requirements of a recovery plan, such as objectives, performance criteria, threats to recovery, and actions, and requires the Minister to consider the advice of the TSSC on a draft plan. Advice from the TSSC is also required before approving a conservation advice.

Ninety nine point seven percent of all nationally listed species and communities have a recovery plan or conservation advice. Of the 449 fauna species listed;

- 337 have a conservation advice
- 206 have a recovery plan in place, noting some species have both.
- Plans are being finalised as a priority for three listed species currently not covered by either.

Recovery actions require collaborative investment and participation

The majority of recovery plans under the EPBC Act are adopted state and territory recovery plans, and their implementation is largely facilitated by the relevant jurisdiction. Implementation of some recovery plans and conservation advices is overseen by a recovery team comprising representative stakeholders.

Both recovery plans and conservation advices are taken into account in EPBC Act project approval decisions. Measuring recovery plan progress occurs through recovery plan reviews, through the updating and revision of existing plans or when a species listing status is reassessed under the EPBC Act.

Plans and advice to reduce threats to threatened species

The Minister, with advice from the TSSC, may develop a Threat Abatement Plan (TAP). A TAP establishes a framework to guide and coordinate Australia's response to the impact of a key threatening process. For example, the 'Predation by feral cats TAP' guides national action on feral cats and the implementation of the TAP is monitored by a national taskforce established by the Threatened Species Commissioner – the Feral Cat Taskforce (see the case study on the Feral Cat Taskforce on the following pages).

All TAPs include the listed threatened species and ecological communities affected by the key threatening process. A TAP identifies the research, management and other actions necessary to reduce the key threatening processes to an acceptable level in order to maximise the

chances of the long-term survival of native species and ecological communities affected. The Commonwealth and the states and territories work cooperatively to ensure implementation.

There are 21 key threatening processes and 12 TAPs. If a TAP is not a feasible or effective approach to abate a threat, the Department may prepare threat abatement advices. Threat abatement advices provide a source of guidance, bringing together information about management and research activities at national, state and local levels. These are non-statutory so are not binding on any organisation or individual.

The Department also prepares threat abatement advices for key threatening processes where there is a decision that a TAP is not a feasible, effective and efficient means to abate the process. Threat abatement advices provide a source of guidance, bringing together information about management and research activities at national, state and local levels. These are non-statutory so are not binding on any organisation or individual.

The Feral Cat Taskforce

The Feral Cat Taskforce was established to support the implementation of the [Threatened Species Strategy](#) and the [Threat abatement plan for predation by feral cats](#). The Taskforce supports the delivery of the 'tackling feral cats and their impacts' target by

- Informing government policy, planning and investment on strategic feral cat management;
- Sharing ideas, initiatives, and progress on managing feral cat threats;
- Building partnership and national cooperation on feral cat management; and
- Providing clear and accessible data, monitoring and public reports on feral cat management activity.

The Taskforce is an operational group that provides information and support to the Threatened Species Commissioner, the Department and state and territory jurisdictions. There is a strong focus in the Taskforce of supporting the coordination of feral cat management activities across the country and addressing the identified actions in the Threat Abatement Plan to reduce the impacts of feral cats on threatened species and other native fauna.

The 2015 Meeting of Environment Ministers committed to review arrangements within respective jurisdictions and, where necessary, to remove unnecessary barriers to effective and humane control of feral cats. The Taskforce has taken on a role enabling state and territory governments to report on progress against this commitment.

An example of the Taskforce supporting the implementation of the Threat Abatement Plan is the ongoing transparent updating, reviewing and revising of focus around feral cat on-ground actions. This process supports on-ground practitioners and feral cat policy to ensure gaps in national action are addressed and a coordinated approach is maintained.

The Taskforce has provided advice to organisations preparing to eradicate feral cats from islands across Australia including the identified five islands of Kangaroo (SA), Bruny (Tas.), French (Vic.), Christmas (External Territory) and Dirk Hartog (WA); to the RSPCA on the development of guidelines for cat management; and in the development of the Curiosity® bait for feral cats, the Hisstory® bait for feral cats and the Felixer feral cat grooming trap.

Monitoring compliance

The Department continues to establish and maintain its position as a contemporary, mature and trusted regulator. This includes the establishment of the Office of Compliance on 1 July 2017 and implementing an intelligence-led, risk-based and outcomes-focused approach to compliance and enforcement across the legislation that the Department administers.

When we detect non-compliance, we take action. Our response is consistent and proportionate to risk, and dependent on the issue and the context. We consider factors such as the severity of the breach and the compliance history and attitude of the offender when deciding the enforcement action we will take.

The Office of Compliance utilises the full suite of compliance tools to deliver compliance outcomes. This includes the disruption and deterrence mechanisms of criminal and civil prosecutions, as well as delivery of an audit program and working with the regulated community on education initiatives (see the case study on Regulating impacts from changing land use below).

Case Study: Regulating impacts from changing land use

In NSW we have partnered with co-regulators and industry representatives including National Farmers' Federation to put in place measures to ensure NSW landholders are aware of their obligations under the EPBC Act. This includes training Local Land Services staff, who deliver customer focused services to farmers and land holders in rural and regional NSW, so that they can help farmers make informed decisions about whether the national environmental laws apply to their agricultural development.

Compliance approach is underpinned by best practice guidelines and Australian Government policy

The Department's compliance approach is guided by the *Australian Government Investigation Standards* (AGIS) and the Department's *EPBC Act Compliance and Enforcement Policy* (amongst others). The AGIS is a cornerstone of the Australian Government's fraud control policy and is the minimum standard for investigations relating to the programs and legislation the Department administers. The *EPBC Act Compliance and Enforcement Policy* outlines how the Department promotes a consistent, transparent and fair approach to EPBC Act compliance and enforcement activities. It provides guidance for stakeholders and the wider community about how the Department addresses potential contraventions of the EPBC Act. Further information can be found at:

<https://www.ag.gov.au/RightsAndProtections/FOI/Pages/Freedomofinformationdisclosurelog/AustralianGovernmentInvestigationStandards2011andAustralianGovernmentInvestigationsStandards2003.aspx>

<http://www.environment.gov.au/epbc/publications/epbc-compliance-and-enforcement-policy>

Improving environmental regulation

The Department has recently developed a Regulatory Framework that has been co-designed with industry, staff and academia to ensure it is fit-for-purpose and meets the needs of our diverse stakeholders. The framework will help us to give our regulated community and the public that we regulate on behalf of, greater clarity on our priorities and approach.

The next independent statutory review of the EPBC Act must commence no later than October 2019. The Review will consider the operation of the EPBC Act and extent to which the objects of the Act have been achieved. The review will involve extensive consultation and will provide an opportunity to consider improvements into the longer term.

Regional Forest Agreement Act 2002 supports biodiversity conservation in forests

The productive use and conservation of Australia's public native forests are provided for through Regional Forest Agreements (RFAs) established between the Commonwealth and Tasmania, Victoria, NSW and Western Australia under the *Regional Forests Agreement Act 2002*. Ten RFAs were progressively signed between 1997 and 2001, with five in Victoria, three in New South Wales and one each in Tasmania and Western Australia. The Department advises the Department of Agriculture and Water Resources on environmental aspects of the Agreements and directly engages with states on forest related environmental matters.

The 10 RFA regions cover 39.2 million hectares, including 22.3 million hectares (18 per cent) of Australia's forests. The forests in RFA regions comprise 21.0 million hectares of native forests and 1.3 million hectares of plantation forest.

In total 11.1 million hectares of high conservation value land (2.2 million hectares) and forest (8.9 million hectares) is protected through RFAs.

- At the time of signing, the area of forest protected within the RFA regions increased by around 44 per cent (2.3 million hectares), significantly increasing protection for native species and ecosystems.
- Over the last 20 years since the RFAs were signed an additional 1.7 million hectares of native forest has been protected in response to new information on species requirements.

The RFAs set the framework to deliver ecologically sustainable forest management (ESFM) consistent with the objectives of the EPBC Act, recognising that:

- comprehensive regional assessments, conducted before each RFA was signed, addressed the economic, social and environmental impacts of forestry operations
- the Comprehensive Adequate and Representative (CAR) reserve system and ecological sustainable forest management protect biodiversity, old-growth forests, heritage, wilderness and threatened species values
- the integrated forest management system for the region supports continuous improvement and adaptive management, including ensuring that any changes in matters of national environmental significance are taken into account.

The performance of each RFA is subject to independent review every 5 years. Successive independent reviews have found that the RFAs are meeting their objectives.

The Australian Government has committed to a rolling 20-year extension of the RFAs. The Tasmanian RFA was extended last year. Through the extension process the RFAs are being improved. Improvements include:

- updating the RFAs to reflect current Commonwealth and state laws, in particular to take account of matters of national environmental significance

- improving 5 yearly assessment and reporting on how the RFAs have provided for protection of matters of national environmental significance, including identifying trends and status of matters of national environmental significance
- recognising the implications of climate change for forests
- improving access to forest data
- clarifying dispute resolution and audit processes.

Regulation is only one tool the Commonwealth employs in delivering national leadership on environment protection and management. Other Commonwealth actions relevant to threatened species protection are outlined in Section 3.

SECTION 3: NATIONAL POLICY AND PROGRAMS

The Department supports the Australian Government to meet its international biodiversity obligations and deliver national policies and programs that provide for the conservation and protection of threatened fauna.

International obligations to protect biodiversity

Australia's international obligations provide the overarching framework and constitutional basis by which the Australian Government and the Department seek to deliver national policies and programs that provide for the conservation and protection of biodiversity, including threatened fauna.

Australia is a signatory to international agreements focused on addressing key global biodiversity challenges in order to deliver sustainable development. These include, but are not limited to, the United Nations Sustainable Development Goals, Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on the Conservation of Migratory Species, the Ramsar Convention on Wetlands of International Importance and the World Heritage Convention. As a signatory to these conventions and agreements Australia has committed to care for, and report on progress towards, global biodiversity goals and targets.

The Department leads Australia's engagement in the United Nations Convention on Biological Diversity, and represents national interests at intersessional meetings and biannual Conferences of the Parties. The Convention on Biological Diversity is dedicated to promoting sustainable development. As a Party to the Convention, Australia's obligations include having a national biodiversity strategy and action plan that demonstrates how Australia will contribute to global targets and reporting internationally every four years on how we have contributed to the Aichi Biodiversity Targets. <https://www.cbd.int/sp/targets/>.

Guiding fauna management and action through national leadership and policies

Australia's Biodiversity Conservation Strategy 2010-2030 is the guiding national framework for Australian governments to conserve national biodiversity to 2030. It provides an overview of the state of Australia's biodiversity and outlines collective priorities for conservation. The strategy also provides relevant guidance to non-government organisations and individuals on how and where they should be focussing their conservation efforts. <http://www.environment.gov.au/biodiversity/conservation/strategy>.

A range of national, Commonwealth and state and territory strategies and programs fall under the Australian Biodiversity Conservation Strategy, including national strategies for the reserve system, weeds, pest animals and water quality, the Commonwealth Threatened Species Strategy and the National Landcare Program.

The Australian Biodiversity Conservation Strategy is currently being revised to improve its ability to drive change in biodiversity management priorities and provide better alignment with Australia's international biodiversity commitments.

Setting priorities for threatened species

In response to the decline of Australia's native species, the Australian Government launched the Threatened Species Strategy in July 2015. The Threatened Species Strategy is the Australian Government's guiding policy document that outlines the approach to protecting and recovering Australia's threatened plants and animals. The Strategy highlights how science, action and partnerships can be used to achieve the long-term goal of reversing species declines and supporting species recovery.

To focus effort and investment to give threatened species a better opportunity to survive and thrive, the Threatened Species Strategy includes a five year Action Plan and principles for prioritisation to guide investment. The Action Plan includes key action areas for tackling feral cats, providing safe havens for species most at risk, improving habitat, and emergency interventions to avert extinctions. More information on the Strategy is at:

www.environment.gov.au/biodiversity/threatened/publications/threatened-species-strategy.

The Threatened Species Strategy contains 87 explicit and measurable targets to tackle the threat of feral cats, improve the trajectories of priority species (20 mammals, 20 birds, and 30 plants) and improve recovery practices. It includes a commitment to report on progress towards the targets at the one, three and five year mark. The Threatened Species Commissioner is responsible for preparing the reports to the Minister for the Environment and Energy on progress against these targets as well as actions identified in the Action Plan. The report on year three targets in the Threatened Species Strategy is due in late 2018.

Focussed effort and investment under the Threatened Species Strategy has contributed to positive outcomes for many species (see the case study on the Mallee Emu-wren). It has also fostered effective collaboration and coordination of effort, for example through establishing the Feral Cat Taskforce to build collaborative approaches and drive national momentum for feral cat control (see also the case study on enhancing collaboration in threatened species management).

More success stories are presented in the Threatened Species Strategy year one and year two progress reports at www.environment.gov.au/biodiversity/threatened/publications/strategy-home.

Case study: Threatened Species Strategy success story – the Mallee Emu-wren

There are many positive stories of species improving due to mobilising additional funding and effort since 2014. The Mallee-Emu-wren is one of these stories.

The Mallee Emu-wren was already critically endangered in 2014 when a large bush fire led to the extinction of populations in South Australia, leaving only three populations in Victoria. On Threatened Species Day in 2017, the South Australia Murray-Darling Basin Management Board received \$225,000 through the Australian Government's Threatened Species Recovery Fund to transfer 60-80 Mallee Emu-wrens back into South Australia in order to re-establish a population.

Early monitoring suggests that the 40 birds released in April 2018 have successfully settled into their new location. More will be known about the success of the translocation in the coming months.

Not only has this returned this species to South Australia, this work is also providing valuable insight for future translocations for a number of species.

Case Study: Enhancing collaboration in threatened species management

Recovery plans and conservation advices are key mechanisms to guide and facilitate national action on threatened species, to engage communities, to monitor progress and to report on outcomes and conservation success. Securing the long-term recovery of threatened species is a challenging task, involving many individuals, organisations and agencies. The development and implementation of these conservation plans are therefore necessarily collaborative processes that involve multiple stakeholders. A key mechanism to assist this process is to ensure effective governance.

The Threatened Species Strategy recognises the importance of the recovery team – a collaboration of partners brought together to plan and/or coordinate the implementation of a recovery program – as a governance model to coordinate implementation of recovery programs and to report on progress. National recovery team governance guidelines are established and provide a framework for establishing and operating effective recovery teams.

<http://www.environment.gov.au/biodiversity/threatened/recovery-teams>

The Australian Government is represented on a number of recovery teams with the level of engagement varying depending on the nature of the recovery program. For some widely distributed species occurring across state and territory borders, the Commonwealth can play a key role in bringing a diversity partners together and facilitating operation of the recovery team. For example, the Plains-wanderer Recovery Team is currently chaired by an Australian Government representative. In that role the Chair organises the biannual meetings, maintains a list of recovery activities, shares information between jurisdictions, manages membership and coordinates any intersessional activities to resolve emerging issues.

National investment to conserve and protect species

The Department has delivered significant programs and investments to conserve and protect species. At a broad level, these investments have been guided by Australia's international obligations and national policies and strategies.

The Natural Heritage Trust has comprised much of the Australian Government's investment in biodiversity over the last 20 years. Most recently, investments under the Natural Heritage Trust have been delivered through major programs including:

- the National Landcare Program
- 20 Million Trees
- Threatened Species Recovery Fund
- Indigenous Protected Areas.

In addition to the Natural Heritage Trust, significant investments that benefit species protection and conservation have been made through the Green Army program (2014-18) and the significant ongoing investment in the Great Barrier Reef.

These programs target a number of biodiversity objectives and outcomes. Priorities for investment are informed by national policies, data on species and ecosystem status, actions identified in recovery plans and conservation advices, as well as local and Indigenous traditional knowledge. For each program, selection criteria and assessment processes are developed to ensure investments efficiently and effectively address environmental priorities.

Through mainstreaming threatened species outcomes into its programs, the Australian Government has mobilised more than \$255 million since 2014 for over 1,200 projects that are supporting threatened species outcomes (including plants and marine species).

20 Million Trees

The 20 Million Trees program is an Australian Government program delivered by the Department with an objective of planting 20 million trees by 2020. The Program is re-establishing green corridors and urban forests to improve connectivity and condition of native vegetation that supports native species. The Program involves competitive grants, delivered by individuals and organisations, and larger-scale plantings, delivered by service providers.

Under the 20 Million Trees program, projects that contributed to threatened species outcomes, including Threatened Species Strategy priorities, were prioritised for approval. Applicants were required to demonstrate that the activities proposed for funding were consistent with activities identified in threatened species recovery plans, conservation advices and management plans.

During the assessment process the Database of Species of National Environmental Significance and the Database of Ecological Communities of National Environmental Significance was used to validate the presence of threatened species or threatened ecological communities at or within the vicinity of each project site prior to approval. In instances where these spatial distribution databases could not establish their presence the applicant was required to clearly demonstrate how expert knowledge was used to support their proposal.

Trained assessors referred to this spatial information to support their assessment and to check whether the threatened species or threatened ecological community is located within the project site and ensuring the project was consistent with the program objectives.

Assessors were also trained to remain aware of, and understand, the supporting material available to them to undertake the assessments, including links to conservation advices and recovery plans, links to EPBC Listed Migratory Species, the Species Profile and Threats Database (SPRAT) database.

Approximately 95 per cent of all 20 Million Trees projects are supporting outcomes for EPBC Act listed threatened species and/or threatened ecological communities (TECs) (see the case study on connecting and expanding habitat below). Service Provider Tranche Three and Competitive Grants Round Three were designed with a focus on 42 tree-dominant TECs as well as EPBC listed threatened species, and all Service Providers and applicants were required to target an EPBC listed threatened species and/or TEC when applying for funding.

Further information about approved 20 Million Trees projects are available at:
<http://www.nrm.gov.au/national/20-million-trees>.

Case study: Connecting and expanding habitat for threatened species

Parks Victoria acquired a large amount of ex-farming land in key habitat areas of Gippsland's national parks and reserves. This provided an opportunity to restore degraded land under the 20 Million Trees Program and work on a variety of important habitat types at scale, with the aim of increasing vegetation extent and local connectivity.

A discovery was made during monitoring of the fringing wetlands at the Clydebank Morass State Game Reserve site. Calls were recorded for two nationally listed threatened frogs, the Growling Grass Frog, which has never been recorded at the site before, and the Golden-Bell frog. An amphibian expert from Melbourne University indicated that this could be one of the only sites where these two species co-exist.

Project Manager Martin Potts said, 'Seedling success on the site is exceeding expectations and the new finding highlights the importance of revegetating this old farmland, now under Parks [Victoria] management. Native trees and understorey provide an important buffering function to the adjacent high-value wetlands, helping to reduce erosion, preserve water and recycle nutrients. Importantly, they contribute to the health and extent of habitat available to these frogs and other nationally threatened species.'

Green Army

The Green Army Program (2014-18) was a hands-on, practical environmental action program that supported local environment and heritage conservation projects across Australia. The Program delivered over 1,000 projects across Australia and engaged with over 11,000 young Australian's as participants.

The Green Army Program was designed to contribute to a range of priority areas with environmental and heritage outcomes. Each round under the Program was designed to achieve specific priorities in support of environmental, heritage and conservation outcomes. Rounds 2, 3 and 4 investment priorities included protecting and conserving threatened species or ecological communities, migratory species, and regionally significant species, as well as their habitat.

During the assessment process trained assessors reviewed all applications against selection criteria to determine if a project clearly outlined activities which deliver threatened species outcomes (particularly those that align with the Australian Government's Threatened Species Strategy).

As per the 20 Million Trees Program, the trained assessors referred to spatial information and supporting materials about threatened species (such as recovery plans and conservation advices) to inform their assessment.

More than 700 (over half) Green Army projects included activities that were designed to support threatened species outcomes. Activities included improving the condition of important habitat areas, including via revegetation, threat reduction through weed removal and pest animal management, fencing and species-specific interventions such as installing nest boxes (see the case study on nature reserves for threatened species below).

The Green Army Evaluation Report, which evaluates the environmental outcomes of the Green Army Program, is available at <http://www.environment.gov.au/land/green-army/publications/green-army-evaluation-report>.

Case study: Nature reserves for threatened species through the Green Army Program

The Restoring Rare Species Habitat at Mulligans Flat Woodlands Sanctuary and Jerrabomberra Wetlands 2 Green Army project in Canberra focused on developing two nationally significant nature reserves to create positive outcomes for key species living there. The project was closely aligned with the Threatened Species Strategy, with activities focused on two of the Strategy's priority 20 mammals: the Eastern Quoll and the Eastern Bettong.

The project was designed with a science-based approach, fitting in with the Strategy's three-pronged approach to species conservation: science, action and partnership. Activities were planned with an ecologist from the Woodlands and Wetlands Trust, the Project Host. Activities were targeted and based on the best available knowledge and that, by monitoring the results, the Green Army team could adapt activities to get the best outcomes.

At Jerrabomberra Wetlands, activities were targeted at protecting the floodplain for migratory birds. The team planted trees, weeded, and helped convert a building into an education centre for visiting school groups. The team also built a viewing platform and dipping stations for children to participate in wetlands activities. These facilities will help future generations to understand ideas of sustainability, conservation and environmental monitoring.

At Mulligans Flat, the team built fences and undertook pest eradication work to reduce the number of rabbits and serrated tussock. These activities preserved important habitat for the Eastern Bettong, supporting the key Threatened Species Strategy action of mainland reintroduction of this species. Habitat maintenance efforts completed by participants helped fulfil higher ecosystem functions, with the Eastern Bettongs' ability to scratch and forage improving water retention in the soil, increasing composting and supporting the threatened box gum woodlands that bettongs live in.

Threatened Species Recovery Fund

The \$5 million Threatened Species Recovery Fund was announced in June 2016 to provide seed money and community grants for local projects that strongly align with targets in Australia's Threatened Species Strategy and leverage additional funding for threatened species. As at July 2018 a total of 39 projects have been announced as receiving funding. Many of these projects are already generating benefits for threatened species (see case study on the Mallee Emu-wren)

The National Landcare Program Phase 2

The Australian Government invested \$1 billion through the National Landcare Program over four years from 2014-15 to 2017-18, including support for the Landcare Networks, 20 Million Trees and Australia's 56 regional natural resource management (NRM) organisations. This funding helped support local environmental and sustainable agriculture projects.

Last year the Australian Government announced funding of more than \$1 billion over six years to continue the National Landcare Program to ensure it remains a key part of the Australian Government's commitment to protect and conserve Australia's water, soil, plants, animals and ecosystems, as well as support the productive and sustainable use of these valuable resources.

The majority of the \$1 billion investment will be delivered over a period of five years—from July 2018 to June 2023—while some elements of the program began during the 2017-18 financial year.

With the Government's investment in the next phase of the National Landcare Program, the Department aims to work in partnership with states and territories, industry, communities and individuals to protect and conserve Australia's water, soil, plants, animals and ecosystems, as well as support the productive and sustainable use of these valuable resources.

A major component of the National Landcare Program Phase 2 is the Regional Land Partnerships program

Regional Land Partnerships - The most significant investment under the second phase of the Program commenced from July 2018, providing \$450 million over five years Australia-wide to deliver national priorities at a regional and local level. Shifting to a procurement investment model secures ongoing capability to deliver projects on key priorities for the life of the program. It also enables more funding to flow directly to on-ground activities, particularly threatened species recovery efforts.

- There are six program outcomes, which can be found on the [nrm.gov.au](http://www.nrm.gov.au/system/files/resources/9a92edba-aa2f-48ee-81fe-48c4ed47708f/files/rlp-program-logic.pdf) website <http://www.nrm.gov.au/system/files/resources/9a92edba-aa2f-48ee-81fe-48c4ed47708f/files/rlp-program-logic.pdf>.
 - Outcome 1: The ecological character of Ramsar sites (internationally recognised wetlands) is maintained or improved.
 - Outcome 2: The trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is improved.
 - Outcome 3: The natural heritage Outstanding Universal Value of World Heritage properties is maintained or improved.
 - Outcome 4: The condition of EPBC Act listed Threatened Ecological Communities is improved.
 - Outcome 5: The conditions of soil, biodiversity and vegetation are improved.
 - Outcome 6: Agriculture systems have adapted to significant changes in climate and market demands.

Service Categories	Indicative national investment split of the total funding (%)
Core services	20
Regional Landcare Agriculture Facilitator	8
Outcome 1 Ramsar (Wetlands)	10
Outcome 2 Threatened Species	30
Outcome 3 World heritage	5
Outcome 4 Threatened Ecological Communities	10
Outcome 5 Soils	12
Outcome 6 Agricultural systems	5
Total	100%

Investments in projects against these six outcomes contribute to the nation-wide effort to help protect and recover threatened ecological communities and species targeted under the Threatened Species Strategy, and support priority actions identified in conservation plans, strategies, reports and advices.

A mapping tool was available to all tenderers, which identified investment priorities for the management unit. The tool included links to relevant recovery plans, threat abatement plans and conservation advices to help tenderers develop their project designs and proposals.

Projects selected for funding were those which best met the assessment criteria, including: targeting the investment priorities; utilising best-practice methodologies; and aligning with relevant plans.

- An evaluation plan, and supporting program logics, for each of the six outcomes of the Regional Land Partnerships has been developed. The Evaluation Plan aims to create an approach that will support clear and effective reporting on achievements across the RLP. The plan sets out the short, medium and long-term goals for each outcome, identifies indicators and measures to assess progress towards those outcomes, and defines the type of data Service Providers should collect in order to report on progress. Other components of the National Landcare Program Phase 2 are: Indigenous Protected Areas - The Government is providing \$15 million for Indigenous Protected Areas, in addition to an investment of \$93 million for the ongoing support of existing Indigenous Protected Areas. Further information about the Evaluation Plan is available at <http://www.nrm.gov.au/publications/regional-land-partnerships-evaluation-plan>.
- Environment Small Grants - The Government is providing \$5 million in small grants to community, landcare, environment and other natural resource management groups to deliver natural resource management activities that improve the quality of the local environment. The small grants will be allocated through a one-off grant round in the 2018-19 financial year.

Further information regarding investments including the design of programs contribute to outcomes for threatened species is available at: <http://www.nrm.gov.au/national-landcare-program>.

Great Barrier Reef

Under the Reef 2050 Plan targets and actions have been identified to maintain and enhance ecosystem health (for example, coral reefs, seagrass meadows and coastal habitats). These ecosystems provide habitat for biodiversity including threatened species. Together, the Australian and Queensland Governments are investing more than \$2 billion to implement the Reef 2050 Plan. This includes an Australian Government commitment of \$5.3 million to implement the National Dugong and Turtle Protection Plan. The intent of the plan is to protect these iconic species from threats, with a focus on Queensland and the Torres Strait.

Partnerships and Innovation Financing

As with all threatened species recovery, partnerships are critical to success. The Department continues to work with the community, expert scientists and non-government organisations to protect threatened species.

Both the Threatened Species Strategy and the Threatened Species Prospectus are frameworks coordinated by the Threatened Species Commissioner for national effort to motivate and encourage additional investment from a wide array of sources, including state and territory governments, business and non-government sectors.

Australia's first Threatened Species Prospectus was launched in February 2017. The Prospectus is an invitation from the Minister and the Threatened Species Commissioner to the private and philanthropic sector to co-invest in conservation and partner in the fight against extinction, and showcases 51, action-oriented opportunities. This innovative financing tool has attracted support, to the value of more than \$6 million, for at least 19 projects featured in the Prospectus to date (see the case study on preventing the decline of the Shy Albatross below). More information is at www.environment.gov.au/biodiversity/threatened/species/threatened-species-prospectus.

Case study: Preventing the decline of the Shy Albatross - Prospectus project

The Shy Albatross is endemic to Tasmania, breeding on only three small offshore Tasmanian islands. The project was designed to trial high quality artificial nests of Shy Albatross on Albatross Island to improve their breeding success and increase the number of chicks surviving the first few critical years. With an Australian Government funding contribution of \$100,000, the project attracted additional investment of over \$160,000 and involved a partnership with the World Wide Fund for Nature and Tasmanian Albatross Fund.

Artificial nests were airlifted to Albatross Island in July 2017, and subsequent monitoring revealed the birds are accepting these nests and personalising them with mud and vegetation.

More information on this project is at: www.abc.net.au/news/2018-02-08/breeding-success-of-tasmanian-shy-albatross-with-artificial-nests/9408300?pfmredir=sm

Protecting and building resilient landscapes through the National Reserve System

The Department oversees the National Reserve System (NRS), Australia's network of protected areas, conserving our natural landscapes and native plants and animals. These protected areas are managed to reduce threats such as wildfire, weeds and feral animals. The

NRS is building more resilient landscapes that provide refuge and wildlife corridors for plants and animals to adapt as climate change alters their existing habitat.

The NRS currently includes more than 10,500 protected areas and covers more than 19% of Australia's landmass, over 150 million hectares. The NRS comprises Commonwealth, State and Territory parks and reserves, Indigenous Protected Areas and areas protected by private and non-government landholders.

The Commonwealth's National Reserve System Programme (1996-2013) invested approximately \$200 million to assist the purchase of 371 properties (around 10 million hectares). Subsequently, Australia's protected areas estate increased by approximately 13 million hectares between 2014 and 2016, increasing the protected terrestrial area from 17% of Australia to over 19%. Protected area data for the period 2016 to 2018 is being compiled and expected for release in early 2019.

Indigenous engagement and knowledge supporting threatened species management

The Australian Government provides funding to support the declaration and management of 75 Indigenous Protected Areas (IPAs) covering more than 67 million hectares. IPAs comprise more than 45% of the area of the National Reserve System.

IPAs are areas of land owned or managed by Indigenous groups, which are voluntarily managed as a protected area for biodiversity conservation through an agreement with the Australian Government. IPAs protect biodiversity and cultural heritage, and provide employment and social benefits.

Funding of over \$87 million will be provided over the next five years to support existing IPAs, with an additional \$15 million to support new IPAs over the next four years. Funding agreements have been finalised for five Indigenous groups under the New IPA Program for approximately \$2.5 million to support community consultation and planning leading to the dedication of their land and/or sea country as an IPA.

These new IPAs will deliver important biodiversity benefits, including protecting habitat, managing feral pests and providing connectivity and linkages at the local and landscape scale. For example, the five recently announced IPA projects will provide protection for a number of threatened species, including the EPBC Act listed Bilby, Numbat, Malleefowl, Golden Shouldered Parrot, and the critically endangered Eastern Curlew. A second funding round for New IPAs is planned for late in 2018. Further information about IPAs is available at <http://www.environment.gov.au/land/indigenous-protected-areas>.

The New IPA Program is managed cooperatively by the Department of the Environment and Energy and the Department of the Prime Minister and Cabinet, which manages the existing IPA Program and Indigenous Ranger Program through a network of regionally based offices. The Regional Network work closely with local Indigenous organisations and communities.

Indigenous ranger projects support Indigenous people to protect and manage their land, sea and culture. There are 121 Commonwealth funded Indigenous ranger groups located throughout Australia.

IPAs and Indigenous ranger programs contribute to conservation of threatened species by protecting habitat, managing feral pests, and carrying out specific actions aimed at protecting threatened species.

IPAs provide opportunities to integrate traditional knowledge and western science, and IPA plans of management incorporate Indigenous ecological knowledge together with scientific information. Indigenous ranger projects also support Indigenous people to combine traditional knowledge with conservation training.

The Threatened Species Strategy is also supporting and promoting Indigenous Australians to deliver practical on-ground actions for threatened species recovery. Actions include on-country management of feral pests, restoring traditional fire regimes, knowledge sharing and monitoring.

Case study – Indigenous people leading threatened species projects

The Australian Government has provided direct support through the Australian Government's Threatened Species Recovery Fund for Indigenous led threatened species conservation projects such as:

- Feral predator control delivered by Indigenous rangers and the Department of Biodiversity, Conservation and Attractions to protect the Golden Bandicoot, Bilby and Boodie (burrowing bettong) at Matuwa Kurrara-Kurrara Indigenous Protected Area, Western Australia (\$250,000 funding from the Australian Government).
- Feral cat eradication on West Island in the Northern Territory, delivered by the li- Anthawirriyarra Sea Rangers to conduct targeted baiting and cat monitoring for the final stages of the 13,000 ha island wide eradication project (\$210,000 funding from the Australian Government).
- Safeguarding Golden Bandicoots and Brush-tailed Rabbit-Rats in the Dambimangari and Unguu Indigenous Protected Areas, North Kimberley through activities such as fire management, controlling feral cats and identifying new populations. These activities are delivered by Indigenous Rangers and Traditional Owners with support from the World Wildlife Fund and Bush Heritage Australia (\$205,120 funding from the Australian Government).

Details about the National Reserve System program are at <http://www.environment.gov.au/land/nrs/about-nrs>

Details about Indigenous Protected Areas are at <http://www.environment.gov.au/land/indigenous-protected-areas> and <https://www.pmc.gov.au/indigenous-affairs/environment/indigenous-protected-areas-ipas>.

Details about the Indigenous ranger program is at <https://www.pmc.gov.au/indigenous-affairs/environment/indigenous-rangers-working-country>

SECTION 4: MONITORING AND RESEARCH

The Australian Government is committed to demonstrating and accounting for intermediate and long term outcomes and improvements for species from its policies, regulatory and non-regulatory actions. Monitoring and reporting on progress and improvement is an essential element of effective policy development and program management. Up-to-date monitoring and research is important for protecting and recovering threatened species and to capture and articulate the importance of good threatened species policy and effective conservation management.

The Australian Government has an important role in supporting monitoring and research at a national level. This includes:

- setting national research and monitoring priorities for individual species through recovery plans and conservation advices,
- supporting national level reporting through compiling the State of the Environment report,
- monitoring the outcomes of its investments in species conservation and protection programs
- investing directly to support national research priorities.

The Department makes research and monitoring publically available through access to species and faunal databases. This information directly informs policy development, conservation advices and recovery plans, regulatory decision-making and program investments.

Effective species monitoring and research across a continent as large and diverse as Australia, and as sparsely populated, is an inherently challenging exercise. Additionally, species decline occurs over long periods of time and can take many generations to get measurable results following government intervention. The task of bringing together and applying data collected from research and monitoring across multiple jurisdictions and from regulatory and non-regulatory activities is particularly challenging and resource intensive. It requires a highly collaborative approach across the Commonwealth, state and territory governments and non-government organisations and individuals.

In recognition of the need for better information on long-term trends, environmental services and benefits, on 27 April 2018 the Meeting of Commonwealth, state and territory environment ministers endorsed a strategy to deliver a common national approach to environmental-economic accounting in Australia. The strategy will ensure that coherent, comprehensive and integrated accounts are built and support public sector and business decision making at all levels and across all sectors. The Australian Government is considering how environmental-economic accounts could support the monitoring practices and adaptive management of threatened species.

Case study: The Biodiversity Knowledge Projects: Improving national biodiversity data resources and analytical capability

The *Biodiversity Knowledge Projects* are a \$5 million co-investment between the Department and the Commonwealth Scientific and Industrial Research Organisation aimed at improving Australia's biodiversity knowledge, data and analytical capability.

(<https://research.csiro.au/biodiversity-knowledge/>). Examples of projects that will improve capability to monitor, evaluate and report on the health status of biodiversity include:

A Habitat Condition Assessment System - Australia's first nationally consistent assessment of habitat condition for biodiversity. The project employs remote sensing, modelling of environments and site condition assessment data to provide a comprehensive, repeatable assessment of biodiversity habitat condition. The first assessment is due for release in 2018. This product will enable significant improvements to environmental decision making, including improved targeting of investment into monitoring of biodiversity and on ground actions.

The Recent Climate Driven Ecological Change project is collecting and modelling observations of ecological change, including on threatened species, that have occurred due to the 1-degree land surface temperature increase experienced across the Australian continent over the past century. This product will provide the first nationally comprehensive assessment of climate driven impacts on biodiversity, and will improve the capacity to predict future climate impacts.

A Knowledge Bank of Management Effectiveness provides a national systematic review and collation of scientific evidence about the effectiveness of Natural Resource Management (NRM) interventions. It provides analysis of current systematic barriers to effective monitoring and evaluation of actions designed to support the persistence and health of biodiversity, and provides recommendations for system reform.

Priorities for monitoring and research are set through recovery plans and conservation advices

Actions to monitor threatened species and threatened ecological communities are identified when recovery plans and conservation advices are developed and revised. The implementation of recovery programs is a collaborative endeavour with various partners including government, researchers and the wider community participating in and contributing to monitoring activities. Parks Australia and partners for example, undertake monitoring of threatened species on Commonwealth Parks to assess their population status as well as relevant aspects of their ecology and the threats posed. The Rufous-hare-wallaby *Lagorchestes hirsutus* (on Uluru-Kata Tjuta) and the Norfolk Island green parrot *Cyanoramphus cooki* (on Norfolk Island), two Threatened Species Strategy species, are monitored as part of their respective recovery programs.

The Australian Government is supporting improved recovery practices through the Threatened Species Strategy, by delivering best practice governance guidance for recovery teams with the view to having them report annually on progress of their implementation efforts. Not all species require a recovery team to coordinate recovery program implementation; many species are managed under different governance arrangements by states and territories with associated reporting. Where in place, it is envisaged that consistent reporting by national recovery teams will progressively build a national story of our collaborative efforts over time and will inform other national reporting such as State of the Environment.

The Australian Government also draws on monitoring of ecological community extent and condition through state and territory-led programs and community efforts. Systematic mapping of woody vegetation in some states contributes to comprehensive monitoring of vegetation extent, and ground-based condition monitoring can contribute to identifying trends indicative for entire ecological community distributions.

For instance, Queensland, Tasmania and Western Australia report regularly on remnant vegetation extent and reservation using their vegetation classification systems.

National reporting through the State of the Environment Report

Every five years the Australian Government conducts a comprehensive independent review of the state of the Australian environment. These national reports provide information about environmental and heritage conditions (including threatened species), trends and pressures for the Australian continent, surrounding seas and Australia's external territories.

The state of the environment reports are written by independent experts with support from the Department.

The Biodiversity chapter in both State of the Environment 2011 and 2016 addresses extinction rate, and reports on threatened and endangered species under the EPBC Act.

<http://environment.gov.au/science/soe>

Monitoring the outcomes of program investments

MERIT is the online monitoring, evaluation, reporting and improvement tool developed to capture the outputs of Australian Government investments in natural resources management. Developed in collaboration with the Atlas of Living Australia, MERIT enhances the reporting process by demonstrating the direct links between project activities and their contributions to Australia's biodiversity conservation work.

As part of their obligations under Australian Government biodiversity programs, funding recipients and service providers delivering projects are required to report regularly on their progress and achievements through MERIT. MERIT captures reported output and outcome data, spatial information, and displays dashboards showing information on the progress of projects and programs. The Department uses this data to track and report on program progress in delivering funding, activities, outcomes and expenditure. Members of the public can view a map and descriptions of projects in MERIT, as well as a dashboard that displays graphs and figures of aggregated output data across multiple projects and programs. These public features are available via the Project Explorer tool in MERIT at

<https://fieldcapture.ala.org.au/home/projectExplorer>. Guidance on using the Project Explorer and searching for projects in MERIT is available at <http://www.nrm.gov.au/my-project/monitoring-evaluation-reporting-and-improvement-tool-merit/user-guides>.

The Threatened Species Strategy is driving more systematic data collection and synthesis to report against the Strategy's measurable targets for priority species and action areas. For example, the RMIT University is undertaking a survey to assess the national feral cat management effort, to report against the Strategy's year three targets for eradicating feral cats on island and mainland areas. With the support of researchers from the National Environmental Science Program's Threatened Species Recovery Hub, the Department is synthesising information to inform reporting against the targets to improve the trajectories of priority birds and mammals. The report against Year 3 targets is due in late 2018. An interim of

progress towards targets was provide in year 1 and year 2 reports available on the Department's website.

Australian Government programs are increasingly incorporating monitoring in on-ground projects to better assess the outcomes of Australian Government investment and inform future actions (see the case study on monitoring for the Central Rock-rat below). This will lead to better targeting of investments and better outcomes for threatened species.

Threatened species funding is directly supporting new and innovative monitoring which assists in understanding species change. For example, Bilby Blitz, delivered in partnership with the Central Land Council and the Indigenous Desert Alliance, brings together Indigenous ranger groups across Australia to increase our understanding of the distribution of species like the Bilby. Rangers identify signs of different species across the landscape using traditional knowledge and expert tracking - including scats, tracks, and diggings - and record those signs using the bilingual Tracks App.

The Bilby Blitz resulted in 249 trackplots being recorded by eleven Ranger groups. Of these, 119 signs of Bilbies were found in 39 different trackplots. Forty-four other taxa were also detected, including cats, foxes, dingoes/wild dogs, camels and donkeys. Bilby Blitz activities covered a number of previously unsurveyed areas and data collected is helping to inform ongoing management actions by Indigenous Ranger groups to protect threatened species.

Case study – monitoring for the Central Rock-rat

Under the Threatened Species Recovery Fund, the Australian Government funded a \$220,000 feral cat baiting project in the MacDonnell Ranges to reduce feral cat densities in high priority areas and secure populations of the Central Rock-rat in the wild.

The project is also collecting information about the location and density of several threatened species and the threat posed to them by feral cats. This work has reduced feral cat numbers by more than 90% and has contributed to more Central Rock-rats being found in recent surveys.

National Landcare Program Phase 2 Regional Land Partnerships Monitoring initiatives

In recognition of the need for longer term monitoring and reporting on the impacts of Australian Government investment, a Long-term Monitoring Framework will be implemented for the Regional Land Partnerships component of the National Landcare Program Phase 2. A proposed framework has been developed and implementation is expected to commence by the end of the 2018-19 financial year. The proposed framework aims to enable cost-effective, scientifically defensible and relevant measurement, evaluation and reporting of ecological responses to interventions conducted under Regional Land Partnerships with respect to the four environmental outcomes of the program.

Once implemented, it is expected that the Long-term Monitoring Framework will improve the Department's ability to determine the success of Regional Land Partnerships and tell the story of the impact of interventions on sites across Australia. It will also support improved decision making and program design through enabling adaptive management. A key feature of this Framework is to set an enduring monitoring program that will operate beyond the typical five-year program cycle.

Long-term ecological monitoring and evaluation through the Environmental Stewardship Program

The Environmental Stewardship Program (ESP) is the Australian Government's largest investment (approx. \$150 million) into private land conservation. It aims to maintain and improve the condition of five nationally threatened ecological communities, and the threatened fauna and flora they contain. Long-term ecological monitoring and evaluation of the Environmental Stewardship Program is studying the program's impacts on matters of National Environmental Significance, including threatened reptiles and birds. This data set will form the most spatially comprehensive, consistent insight into the impacts of land management practice change on terrestrial threatened species in Australia gathered to date. The ecological monitoring program began in 2010 and will continue until 2023, representing a total investment of \$4.6 million from the Australian Government, and \$0.6 million from the Commonwealth Scientific and Industrial Research Organisation.

Investing in national research priorities through the National Environmental Science Program

The National Environmental Science Program (NESP) is a long-term commitment to applied environment and climate science, supporting world-class collaborative and practical research that informs decision-making and on-ground action. NESP funding of \$145 million over the six years from 2014-15 to 2020-21 supports six thematic research hubs, along with projects to address emerging environmental research needs.

Funding agreements require that all NESP funding is met with equal value or greater in cash or in-kind co-contributions.

The Threatened Species Recovery Hub is one of the six thematic research Hubs, with \$29.98 million in NESP funding. The TSR Hub is a partnership of ten Australian universities (ANU, The University of Queensland, The University of Sydney, University of Tasmania, The University of Western Australia, RMIT, UNSW, University of Melbourne, Monash, Charles Darwin) and the Australian Wildlife Conservancy.

The Threatened Species Recovery Hub delivers research projects to improve the management of threats and improve recovery of threatened species. Research projects are developed in consultation with a range of end users and stakeholders to ensure the research is targeted to the needs of decision-makers. Researchers will work across key themes to inform and support on-ground responses that reduce threats and promote recovery of threatened species; and build a better understanding of their status, threats and management options. The Hub's six research themes are:

1. Taking the threat out of threatened species
2. Red Hot Red List: no surprises no regrets
3. Monitoring and management
4. Reintroductions and refugia
5. Enhancing threatened species policy
6. Using social and economic opportunities for threatened species recovery.

Threatened Species Recovery Hub research includes a number of interlinked projects that aim to improve the design and implementation of cost-effective monitoring programs. This work includes critical analysis and the production of best-practice guidelines for a range of practitioners, and the development of approaches for incorporating new technologies into monitoring. It supports the longer-term development of a national monitoring and reporting system for threatened species. Further information about the Threatened Species Recovery Hub's research is available at <http://www.nespthreatenedspecies.edu.au/research>.

Monitoring research by the Hub is captured in a book published in 2018, *Monitoring Threatened Species and Ecological Communities*. The book can assist conservationists, community groups and governments across Australia to better evaluate their approaches to monitoring, which can improve the effectiveness of monitoring as a critical element to saving our threatened species.

The Threatened Species Recovery Hub is also undertaking a project to identify the Australian fauna species at the most acute risk of extinction, and describe priority management actions to prevent the extinctions. The project has ranked Australian threatened birds and terrestrial mammals by extinction-risk, and predicted the number of likely extinctions over the next 20 years under current management practices. The researchers have created cost estimates for the actions needed to prevent extinction of the 20 most threatened birds and mammals and developed metrics to gauge progress in understanding and alleviating threats to species, which can be used to prioritise actions across taxa.

To better support national reporting on trends in threatened species, a project established by the Hub aims to develop a national Threatened Species Index, based on aggregating disparate datasets on population trends. The project will develop an index that can provide measures of trends across Australia's threatened species, and allow for interrogation. Interrogation would allow comparison of trends: between different taxonomic groups; between species affected by the same threatening process; or in relation to management investment and intervention type.

Further information about this project is available at <http://www.nespthreatenedspecies.edu.au/projects/threatened-species-index>.

While the Threatened Species Recovery Hub is dedicated to the topic, each of the NESP research hubs is delivering research that supports the recovery of threatened species, including the Marine Biodiversity Hub and the Northern Australia Environmental Resources Hub. Further information about the other five NESP Hubs is available at <https://www.environment.gov.au/science/nesp>.

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