Conserving threatened species

Report 7: 2018–19

Queensland Audit Office
Better public services

Queensland Audit Office
Better public services

Your ref:
Our ref: 9176P

13 November 2018

The Honourable C Pitt MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

Dear Speaker

Report to parliament

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*, and is titled Conserving threatened species (Report 7: 2018–19).

In accordance with s.67 of the Act, would you please arrange for the report to be tabled in the Legislative Assembly.

Yours sincerely

Brendan Worrall
Auditor-General

Content

Audit objective

The audit objective was to assess whether Queensland public sector entities are effectively identifying, protecting and conserving threatened species.

Our audit focused primarily on the Department of Environment and Science (the department), which has overall responsibility for identifying, protecting and recovering Queensland's threatened species.

We assessed whether the department:

- identifies and lists Queensland's threatened species
- is transitioning effectively to the Common Assessment Method (a nationally consistent method for assessing and listing threatened species)
- has strategies and plans in place to effectively protect threatened species and their habitat
- is effectively monitoring and reporting on threatened species outcomes.

We also included in our audit the Department of Agriculture and Fisheries (responsible for biosecurity, including pest and weed management) and the Department of Natural Resources, Mines and Energy (regulates native vegetation clearing), to understand their contributions to protecting and conserving threatened species.

The scope of the audit did not include all activities, legislation or entities relating to conserving and managing threatened species.

Further details about the scope and approach are in Appendix B.

We would like to express our thanks and appreciation to everyone who made a submission to our audit and to the landholders we visited for their time in contributing to the audit.

Glossary

Term	Definitions
Biodiversity	The variety of all life forms on earth; the different plants, animals and micro-organisms; their genes; and the terrestrial, marine and freshwater ecosystems of which they are a part.
Bioregion	An area comprising broad landscape patterns that reflect major structural geologies and climate as well as major flora and fauna groups.
Biosecurity	Set of preventative measures designed to reduce the risk of transmission of diseases, pest plants, animals and microorganisms.
Connectivity	The many ways that natural systems connect to each other.
Conservation	Preservation, protection or restoration of the natural environment and of wildlife.
Conservation plan	Prepared under the Nature Conservation Act 1992 and administered and approved by the State Minister. Conservation plans can allow for the ecologically sustainable taking and use of protected wildlife from the wild for commercial and non-commercial purposes.
Ecological communities	Naturally occurring group of native plants, animals and other organisms that interact in a unique habitat; structure, composition and distribution are determined by environmental factors such as soil type, position in the landscape, altitude, climate and water availability.
Ecosystem	Dynamic complex of plant, animal and micro-organism communities and their non-living environment, interacting as a functional unit. Regional ecosystems are vegetation communities consistently associated with a particular combination of geology, landform and soil.
Endemic species	Species only found within a defined area; for example, Queensland endemic species are only found in Queensland.
Environmental offsets	Compensates for unavoidable impacts on significant environmental matters, (for example, valuable species and ecosystems) on one site, by securing land at another site, and managing that land over a period of time, to replace those significant environmental matters which were lost.
Habitat	Place where a population lives and the surroundings of that place, both living and non-living.
Iconic species	Species that have inherent social and cultural value.
Key threatening process	Process that threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community.
Parks management plan	Management statement or plan for each park in the protected area estate that identifies how a park is preserved, enhanced and maintained.
Species project plan	Internal project plan to guide implementation of on ground actions for managing specific species by the Department of Environment and Science.

Term	Definitions
Recovery plan	Prepared under the *Environment Protection and Biodiversity Conservation Act 1999* on behalf of the Commonwealth Government. Administered and approved by the Commonwealth Minister. States the research and management actions necessary to stop the decline, support the recovery and enhance the chance of long-term survival in the wild, of a protected community, animal or plant species.
Remnant vegetation	Woody vegetation where the dominant canopy has more than 70 per cent of the height and 50 per cent of the cover relative to vegetation's undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. The Vegetation Management Act 1999 only regulates woody vegetation (excluding mangroves) and not grasslands.
Threatened species	Native species under threat of extinction or vulnerable to becoming endangered. A species may be threatened but not yet listed under the *Nature Conservation Act 1992.*
Threatened wildlife	Native wildlife prescribed under the *Nature Conservation Act 1992* as extinct in the wild, endangered or vulnerable. The Act defines conditions and criteria for each classification (extinct in the wild, endangered or vulnerable).
Wildlife–human interactions	Interaction between wild animals and people, and resultant negative impacts on people or their resources, or on wild animals or their habitat.

Key facts

Queensland is home to 85 per cent of Australia's native mammals, 72 per cent of native birds, just over 50 per cent of native reptiles and frogs, and more than 11 000 plant species.

Queensland has 955 threatened species listed under the *Nature Conservation Act 1992.*

The Department of Environment and Science lists the main threats to Queensland's threatened species as:

- clearing of vegetation
- invasive plants and animals
- inappropriate grazing and fire regimes
- climate change.

Management actions to protect and recover threatened species should include:

- assessing species extinction risk
- identifying and managing threats
- prioritising species for management and implementing targeted actions.

Source: State of the Environment Report 2015

Introduction

Australia is home to between 600 000 and 700 000 native species, many of which are unique to Australia. But Australia's native flora and fauna are in decline. Since European settlement, 27 mammals, 22 birds, four frogs, one earthworm and 36 plant species have been declared extinct. More than 1 700 species and ecological communities are known to be threatened and at risk of extinction.

Nature conservation legislation aims to protect Australia's native species by providing systems for identifying and listing species as threatened. This legislation restricts people from taking, keeping or using listed species. But not all threatened species are listed. For example, species are less likely to be listed if insufficient data are available to make an assessment.

In Australia, threatened species can be separately listed and classified at the state and Commonwealth levels. In Queensland, the *Nature Conservation Act 1992* defines threatened wildlife (commonly referred to as threatened species) as native wildlife (both flora and fauna) that is extinct in the wild, endangered or vulnerable. Queensland has listed 955 species as threatened wildlife under the *Nature Conservation Act 1992*; of these, 33 are extinct in the wild, 301 are endangered, 621 are vulnerable. In addition, 267 species are classed as near threatened. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* lists 414 of these as threatened nationally.

To reduce confusion and duplication of effort, the governments of Queensland, Western Australia, New South Wales, the Northern Territory, Tasmania, the ACT and the Commonwealth have agreed to establish a consistent method for assessing and listing threatened species: the Common Assessment Method. These governments have signed a Memorandum of Understanding, which includes establishing a single operational list, and cooperating and sharing information.

The diversity and geographical range of Queensland's wildlife present challenges in conserving threatened species. Addressing the decline of threatened species populations is complex and requires a targeted and coordinated approach across multiple agencies to manage threats and conserve habitats.

The Department of Environment and Science has primary responsibility for managing and conserving threatened species in Queensland under the *Nature Conservation Act 1992*. The department is also responsible for assessing nominations for listing threated species. Other legislation influencing the protection of threatened species and their habitats includes, but is not limited to, the *Vegetation Management Act 1999* and *Environmental Protection Act 1994*.

State government responsibility for native species also extends to the Department of Agriculture and Fisheries (DAF) and the Department of Natural Resources, Mines and Energy (DNRME). DAF is responsible for biosecurity issues including pest and weed management, and responsibility for fish and fish habitat. DNRME regulates the clearing of native vegetation, excluding grasslands and mangroves.

Summary of audit findings

This is a summary of the audit findings. More information is in the following chapters.

Listing threatened species

The Department of Environment and Science (the department) does not proactively nominate species for listing or encourage Queensland's community of conservation researchers and stakeholders to make nominations. Therefore, the number of species listed in Queensland's Nature Conservation (Wildlife) Regulation 2006 is likely to understate the actual number of species under threat.

Nominations must be supported by scientific evidence. For some species there is insufficient information to determine whether they are eligible for listing. Yet listing threatened species is the first critical step in their protection. Species that are at risk of extinction but are not listed (or are listed under the wrong classification status) may not be afforded the right level of protection.

Since 2011, the department has received far fewer nominations to list threatened species than in previous years. In 2017, the department received and assessed only seven nominations, compared with 168 in 2011. The average number of nominations received each year from 2012 to 2016 was 31.

Delays between the assessment process and ministers' approval results in some species being assessed as threatened but not listed for years. Of the 404 species listed in 2014 and 2015, the average period between assessment and listing was three years and 10 months. In some cases, the delays were more than seven years. The delays in listing result in delays in species protection.

Once species are listed, the department does not periodically or systematically review their classification. The department, therefore, does not know whether the extinction risk for these species has changed or remained steady.

The department does not publish the Species Technical Committee assessments after their approval (or non-approval) by the minister. This lack of transparency does not promote public trust in the species assessment process because individuals cannot trace a nomination and assessment through to its listing in the Nature Conservation (Wildlife) Regulations 2006.

Common Assessment Method

Queensland is not on track to meet all its obligations to implement the Common Assessment Method for assessing and listing native species, as outlined in the intergovernmental Memorandum of Understanding. While the department expects the necessary legislative amendments will be made within the two-year time frame, it is unlikely that the process to align all legacy species to the common classifications will be completed in that time.

The department needs to strengthen the governance framework for implementing all elements of the Common Assessment Method. There is no clear project owner or oversight committee. The department has a draft project plan for delivering the legislative reform program, but it does not include the activities needed to review and reclassify Queensland's endemic species on the threatened species list in line with the Common Assessment Method.

Without a comprehensive project plan, the department cannot effectively determine major project deliverables, milestones, activities and resources needed.

Planning and prioritising conservation

The department has no strategy or framework for conserving or managing threatened species. This is despite the *Nature Conservation Act 1992* requiring the department to develop an integrated and comprehensive conservation strategy for the whole of the state.

The department previously developed a strategy which it never implemented. Because it has no strategy, its efforts in managing threatened species lack purpose, direction and coordination. The department has not determined its priorities, clear action areas or measurable targets for the recovery of threatened species and habitats. As a result, its activities are generally focused on managing the threats to individual species rather than addressing the common causes of threats. Adopting a more strategic approach would provide a greater chance of achieving outcomes for a broader range of species.

The lack of strategy also makes it difficult for government, researchers and the community to clearly understand what the department does across its programs, why it does it, and what it is trying to achieve.

Previous strategy

The department has not taken advantage of the considerable work it previously undertook to develop a draft strategy.

In 2010, the department (as the former Department of Environment and Resource Management), developed and issued a draft strategy for public consultation. The document, *Building Nature's Resilience—A Biodiversity Strategy for Queensland,* was well researched and developed, and identified a holistic approach to conserving biodiversity. The department finalised the strategy in 2011 but never implemented it.

Prioritising resources and investment

Scientific and biodiversity research shows that the number of species at risk of extinction continues to increase.

The department does not systematically plan where to deploy its available resources to achieve the most effective balance of actions to protect habitats, mitigate threats and reduce species decline. It is not clear how much the department spends each year in total on threatened species management as it does not effectively track and account for funding used on specific activities.

Queensland was the first state in Australia to implement a prioritisation program for threatened species. The department began the Back on Track Species Prioritisation Framework in 2005 to guide conservation management and recovery by government and non-government organisations. However, they have made limited use of the Back on Track priorities. A key reason for this was ineffective engagement between the department, conservation partners and landholders best placed to action the priorities.

The department did not maintain Back on Track and it is now out of date. As a result, the department does not have a state-wide assessment of what management actions have been implemented or their collective impact.

Protecting and recovering threatened species

The department largely focuses on individual species, rather than taking a strategic approach to conserving all threatened species. The department does not currently use a method to prioritise which species will be subject to conservation and recovery projects.

Recovery of threatened species

Monitoring data on population status and trends are only available for a few species. This means that only a few recovery programs can measure the change in species population or status.

The number of recovery plans for threatened species in Queensland is low. Of the 922 species listed as either endangered or vulnerable, the department manages only 30 conservation, recovery or species project plans. The department currently has no recovery or project plans for threatened flora.

Local governments, regional natural resource management bodies, conservation groups, landholders and individuals also undertake various recovery actions for individual threatened species, but the department does not coordinate these activities. The department does engage with stakeholders through joint recovery team operations and some conservation groups.

The department does not have a system to assess and prioritise which species should have management plans. Species were selected for conservation effort based on various reasons such as species knowledge and individual interest within the department, their iconic value or where significant work was done by external conservation bodies.

Having conservation or recovery plans and monitoring programs for all threatened species listed under the Nature Conservation (Wildlife) Regulation 2006 would present significant resource, capacity and logistical challenges. However, having a system to assess and prioritise which species should have management plans would enable the department to ensure it maximises resources and efforts to achieve greater outcomes for those species most in need.

For many listed species with a recovery plan or species project plan in place, the department does not have enough information on the population and species distribution to measure and report on implementation success. With few exceptions, the department does not currently know how threatened species are faring and whether management actions are having the desired impact.

To improve its monitoring and reporting, the department needs protocols for gathering and processing threatened species data into a central database. This would improve the exchange and sharing of knowledge between its own staff and stakeholders. Better collaboration with researchers, conservation practitioners and landholders is needed to collate and analyse population trend data and to prioritise and implement management actions. There are some examples where this does exist such as for estuarine crocodiles and koalas.

Only 12 of the 30 species project plans managed by the department show how much it plans to spend in 2018–19. There is a lack of clear accountability for actions and limited evaluation of management effectiveness.

Threatened species habitat

Habitat loss is scientifically recognised as the greatest threat affecting Queensland's threatened species (flora and fauna). This is backed by habitat modelling and mapping done by the department and independent research. A key challenge for government is that actions to prevent habitat loss can compete with social and economic practices.

The Queensland Herbarium assessed the impact of land clearing on the potential habitat of more than 300 of Queensland's threatened flora and fauna species. It found that the increasing volumes of land clearing between 2013 and 2015 accelerated habitat loss for threatened species. The modelling showed that, by 2015, 26 per cent of remnant threatened fauna habitat and 35 per cent of remnant threatened flora habitat had been cleared statewide.

The *Vegetation Management Act 1999* regulates land clearing. For it to work effectively, landholders need information about the environmental values of their land. While the department's mapping shows environmental values, it does not have consistently collected data about the distribution and abundance of Queensland's threatened species. Information about species distribution underpins the regulated protection of habitats.

An increasing proportion of Queensland's land is protected, but the proportion remains the lowest of any state or territory in Australia. The proportion of protected land is currently 8.2 per cent but is not increasing at the rate needed to meet the 17 per cent by 2020 target set under the UN Convention on Biological Diversity, to which Australia is a signatory.

Despite, managing land with over 1 000 threatened species and having a total 2017–18 budget of $111.3 million, the Queensland Parks and Wildlife Service (QPWS) does not identify specific allocations of funding for the protection and recovery of threatened species on the land it manages.

In 2017, QPWS developed a research prospectus which identifies priority research areas within six themes, including species and ecosystems, significant pest species, and fire ecology and management. But, QPWS does not know if any research partners have started research projects under the identified themes. QPWS does not fund the research and does not currently have a system to gather and record information on which projects are undertaken.

Audit conclusions

Overall, the Department of Environment and Science's response to conserving threatened species lacks cross program coordination and is unlikely to effectively conserve and recover many threatened species. This is because the department has not taken a strategic approach, and has no system to prioritise, coordinate and report on recovery activities, threatened species population trends and the effectiveness of conservation management. It has some evidence of improvements in some threatened species populations or status over time, but it is limited.

Because it has no strategy, the department does not prioritise its activities to achieve the greatest conservation outcomes. Instead, its activities are largely ad hoc and focused on a relatively few individual species. It is also not proactive in listing species as threatened or updating those already listed. The department's decisions about which species receive its greatest conservation efforts are often determined by iconic value, individual interests, departmental knowledge and advocacy, rather than by objective assessments of appropriate priorities.

The department's lack of systematic and reliable threatened species monitoring also means the department cannot detect population changes or quantify the efficacy of its actions. As a result, the department often cannot show how it uses resources to achieve the best conservation outcomes.

Conserving threatened species is a difficult and complex task that requires commitment and effort across government and beyond. During the audit we received many submissions and met with landholders, researchers and conservation groups who showed a high degree of commitment and passion for conserving threatened species. While many remain enthusiastic some expressed frustration and disillusionment with the coordination of activities and the support they were provided. The department has a lead role in coordinating work to conserve threatened species and harnessing the available enthusiasm, resources and knowledge. The need to support, unite and coordinate multiple stakeholders further heightens the need for a strategy with clear objectives, actions, targets and measures.

Recommendations

Department of Environment and Science

We recommend that the Department of Environment and Science:

Listing (Chapter 2)

1. Proactively nominate species for listing or reclassification under the Nature Conservation (Wildlife) Regulation 2006. Classification reviews should be periodical.
2. Review the *Nature Conservation Act 1992* to ensure timely listing of threatened species. This should include amending the legislation so that the minister's decision of whether to add, delete or reclassify a species is reflected in the Nature Conservation (Wildlife) Regulation 2006 within a specified timeframe after receiving the Species Technical Committee's recommendation.
3. Increase the transparency of the threatened species assessment process by publishing online:
   - a public request to encourage nominations to add or delete species from the current list or to change the classification of listed species
   - species nominations received, allowing the public to submit further information that may assist the Species Technical Committee's assessment
   - meetings dates and terms of reference for the Species Technical Committee
   - Species Technical Committee's assessments and recommendations, with supporting scientific evidence to inform future nominations.

   It may be appropriate to refrain from publishing information that could result in further harm to the species.

Common Assessment Method (Chapter 2)

4. Further develop and implement its draft project governance framework and project plan for the Common Assessment Method project to ensure the department meets all its obligations under the Memorandum of Understanding.
5. Review the classification status of Queensland's native species currently listed in the Nature Conservation (Wildlife) Regulation 2006 to prepare for the transition to the Common Assessment Method.

   This includes reassessing Queensland's threatened species classifications where they are inconsistent with the Commonwealth's threatened species list.

Conservation planning and oversight (Chapters 3 & 4)

6. Develop an integrated and comprehensive conservation strategy for Queensland to meet the requirement of the *Nature Conservation Act 1992*.

   The strategy should be supported by plans for:
   - investment and implementation
   - engagement and communications
   - monitoring and evaluation.

7. Monitor and report on the population and trends of threatened species by:
    - prioritising species for monitoring to make the most of available resources
    - developing data collection protocols to ensure consistency and rigour
    - improving data management and access
    - reporting on recovery activities within government and by external partners
    - reporting on the effectiveness of conservation management outcomes.

1. Context

This chapter provides the context needed to understand the audit findings and conclusions.

Legislative framework

Threatened species listed under legislation are generally those that have experienced serious population decline and are in danger of extinction. This usually results from habitat loss or threats from invasive or introduced exotic species such as foxes, feral cats and weeds.

The state and Commonwealth protect native biodiversity through legislation that regulates a range of activities with direct and indirect impacts on threatened species populations. Relevant Acts cover the conservation of threatened species and their habitat, and the management of processes that threaten native flora and fauna.

The main Queensland legislation is the *Nature Conservation Act 1992* (NC Act) and the Nature Conservation (Wildlife) Regulation 2006. The main Commonwealth legislation is the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Commonwealth Government's Department of Environment and Energy administers the EPBC Act.

Appendix C provides more detail about relevant Queensland and Commonwealth legislation.

Roles and responsibilities

Securing the long-term recovery of threatened species and their habitats is a challenging task. It depends on a network of partnerships between government and industry groups, landholders and community and corporate entities to balance biodiversity and economic outcomes. To do this effectively requires clarity of purpose, roles and relationships between those involved in implementing threatened species activities.

Figure 1A shows the key government agencies involved in threatened species activities.

Figure 1A
State Government roles and responsibilities in threatened species recovery

Body	Roles and responsibilities
Department of Environment and Science	
Conservation and Sustainability Services division	Administers the NC Act and the *Environmental Offsets Act 2014.* Overall responsibility for the identification, protection and recovery of Queensland's threatened species.
Queensland Herbarium	Centre for science, research and information on Queensland's ecosystems and species of plants, fungi and algae. Responsible for the state botanical collection of 860,000 plant specimens which inform species identification, distribution, status, flora survey trigger map and essential habitat maps. Delivers services to government, business and community including regional ecosystem mapping, wetland and groundwater dependent ecosystem mapping and information.
Queensland Parks and Wildlife Service	Manages 12.5 million hectares of land with 1000 threatened species. Some protected areas are specifically designated for the protection of threatened species.
Science Information Services	Provides Wildnet information and maps on the web facilities for threatened species, essential habitat and regional ecosystems.
Species Technical Committee	Assesses nominations to list Queensland's threatened native species and recommends classifications under the NC Act. Note: while the department provides the committee with secretariat support and most committee members are employed by the Department of Environment and Science, the Species Technical committee is designed to be independent of the department.
Other Queensland government agencies	
Department of Natural Resources, Mines and Energy	Administers the VM Act. Overall responsibility for the sustainable use of Queensland's natural landscape and native vegetation, including the protection of essential habitat for threatened species Responsible for maintenance of Queensland's spatial and information services.
Department of Agriculture and Fisheries	Administers the *Biosecurity Act 2014.* Biosecurity Queensland coordinates the government's efforts to prevent, respond to and recover from pests and diseases that threaten the economy and environment Administers the Fisheries Act 1994. Overall responsibility for the management, use and protection of fisheries resources and fish habitat.

Body	Roles and responsibilities
Commonwealth Government	
Department of Environment and Energy	Administers the *Environmental Protection and Biodiversity Conservation Act 1999.*
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Research to help halt the decline in Australia's biodiversity by understanding species and ecosystems and informing better management.

Source: Queensland Audit Office

Figure 1B shows an overview of the many non-government organisations and industry groups involved in threatened species activities.

Figure 1B
Conservation partner roles and responsibilities in threatened species recovery

Body	Roles and responsibilities
Local Governments	Local government, often jointly with state and federal governments, works with local communities to support delivery of on-the-ground conservation initiatives that protect threatened species and their habitat. They have a commitment to conserve biodiversity in the council area.
Non-government organisations	A range of non-government organisations funded by government grants and private donations contribute to conservation outcomes for threatened species, including: • natural resource management organisations • researchers and scientists • Queensland's Traditional Owners • conservation groups and individuals.
Industry	Industry groups play an important role in nature conservation in partnership with government, through mechanisms such as nature refuges and land management agreements. They include: • rural industries • urban development companies • mining companies • tourism industry.
Individual landholders	Individual private landholders often partner with government to achieve conservation outcomes. For example, in the nature refuge program, landholders enter a voluntary agreement with government committing to protect land with significant conservation value, while allowing for compatible and sustainable land uses to continue.

Source: Queensland Audit Office

2. Listing threatened species

This chapter assesses how the Department of Environment and Science identifies and lists threatened species and its transition to the national Common Assessment Method.

Introduction

Listing threatened species is the first critical step in protecting native flora and fauna under the *Nature Conservation Act 1992* (NC Act).

The Department of Environment and Science (the department) is responsible for assessing and recommending the listing of Queensland's threatened native species. Under the NC Act, a regulation may prescribe native wildlife under one of five prescribed classifications:

- extinct in the wild
- endangered
- vulnerable
- near threatened
- least concern.

A species is considered threatened if it is classified as extinct in the wild, endangered or vulnerable.

If the minister approves the recommended classification, the department amends the Nature Conservation (Wildlife) Regulation 2006.

The regulation currently lists 955 Queensland threatened species. Figure 2A shows the number of listed species by classification status.

Figure 2A
Number of threatened species listed in Queensland

Classification status	Number of listed flora	Number of listed fauna	Total
Extinct in the wild	22	11	33
Endangered	225	76	301
Vulnerable	484	137	621
Total	731	224	955

Source: Nature Conservation (Wildlife) Regulation 2006

In addition, there are 267 species classified as near threatened. With the exception of invertebrates, which are specifically listed, all other species not listed under any other status are classified as least concern.

Australia's states and territories do not currently use a consistent method for listing threatened species. As a result, there is duplication of effort to list species that occur in multiple jurisdictions and inconsistency in the classification of some native species.

Aligning the conservation status across all jurisdictions is critical to achieve the best conservation outcomes. Inconsistencies between jurisdictions can lead to uncoordinated and misdirected investment in the protection and recovery of threatened native species.

In March 2017, the Queensland Government signed a Memorandum of Understanding with the Commonwealth Government and all other states and territories, except Victoria and South Australia, to implement a Common Assessment Method for assessing and listing native species.

In this audit, we assessed whether the department effectively manages the process for listing species under the *Nature Conservation Act 1992.* We did this by examining whether the department:

- has effective systems, policies and procedures for identifying, assessing and listing all threatened species
- is efficiently and effectively implementing the intergovernmental Memorandum of Understanding for the *Agreement on a common assessment method for listing threatened species and threatened ecological communities*.

Nominating and listing threatened species

The number of threatened species in Queensland listed in the Nature Conservation (Wildlife) Regulation 2006 is likely to be understated. The department does not effectively engage with key stakeholders to encourage nominations and does not systematically review whether species should be nominated. In addition, the department does not adequately assess and review the status of Queensland's native species listed in the regulation, because it has not dedicated the resources needed to do this.

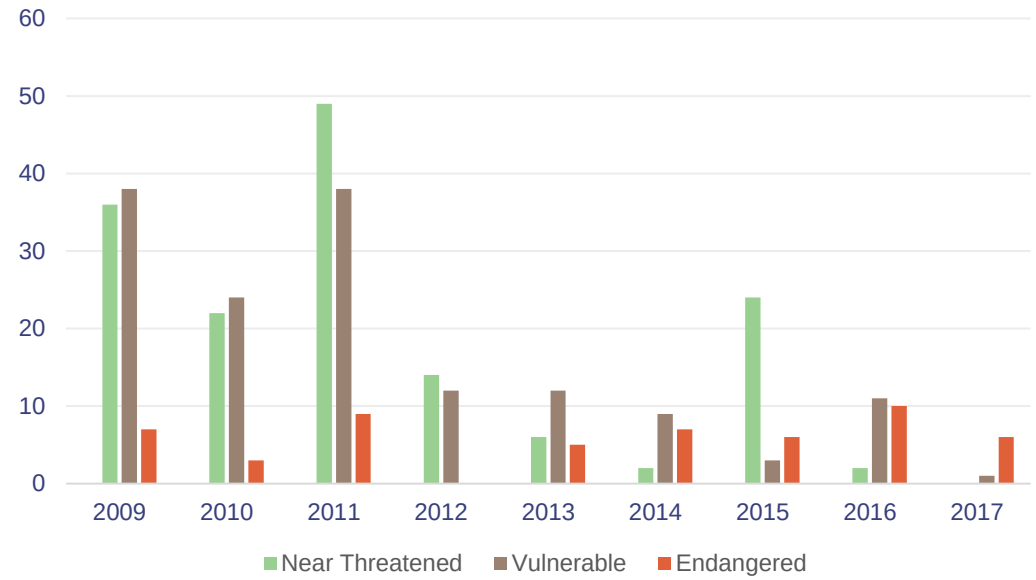
Nominating threatened species

To classify a species as threatened in the Nature Conservation (Wildlife) Regulation 2006, the department relies on interested parties to complete and submit a threatened species nomination form. A nominator must provide scientific evidence to support their proposed classification and, therefore, nominators usually have relevant scientific expertise.

In October 2007, the department set up the Species Technical Committee (STC) to assess nominations for listing threatened species. The STC assesses the scientific evidence to assign a conservation status to a species and can either support or change the nominator's proposed classification. The STC recommends to the minister whether a species should be listed, and its proposed classification. The minister has the discretion to approve or not approve the recommendation.

Between 2009 and 2011, the STC made a significant number of assessments to clear a backlog. Since then, the number of nominations has slowed. In 2017, the department received and assessed only seven nominations. Figure 2B shows the number of nominations assessed by the STC each year since 2009.

Figure 2B
Species assessments 2009–2017



Source: Species Technical Committee

The department is not proactive in increasing nominations for listing threatened species. It has not allocated resources to either systematically survey species for assessment or leverage off the work performed by Queensland's large community of conservation researchers and stakeholders.

The STC's primary role is to assess nominations, not to develop them. It is right that the STC retain its independence as assessors. Therefore, nominations to the STC need to be completed by the department or by species experts encouraged by the department.

For example, the Queensland Herbarium, which is part of the department, publishes an annual Census of the Queensland Flora. More than 20 species are added to the flora census each year, but there is no requirement for scientists who publish information on a new species to consider the species for listing under the *Nature Conservation Act 1992.*

Listing threatened species

Timeliness of the listing process

The Nature Conservation (Wildlife) Regulation 2006 is not updated in a timely manner.

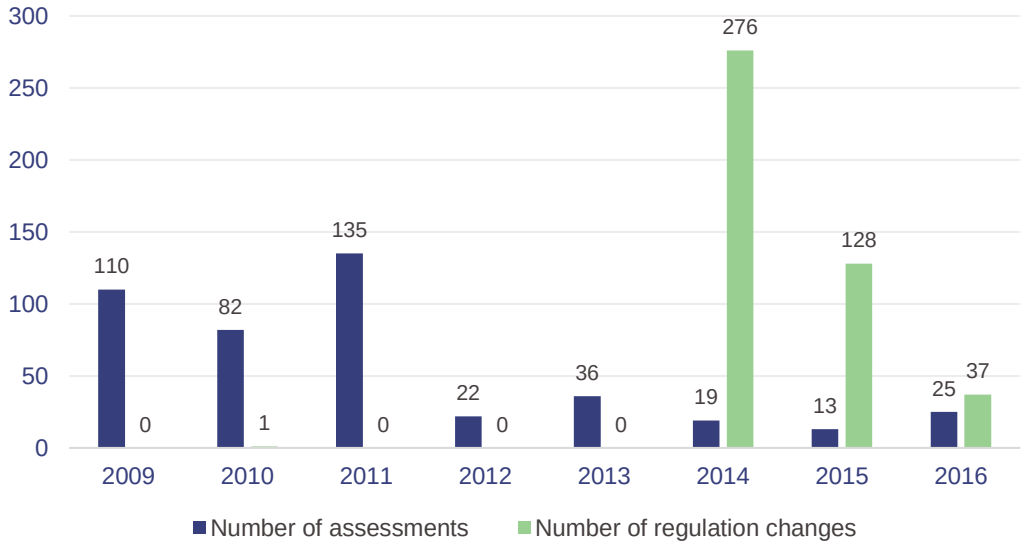
After assessing a nomination, the STC decides whether the species needs listing in the Nature Conservation (Wildlife) Regulation 2006. The committee's chair forwards its recommended changes to the Legislation and Policy team within the Conservation and Sustainability Services (CSS) division of the department.

The Legislation and Policy team circulate the proposed changes to several Queensland government departments for comment. After comments are received, the department recommends an update in the regulation for the minister's approval.

There is currently no time limit for updating and, in some cases, it took more than seven years for threatened species recommended for listing to be listed in the regulation. Between 2009 and 2013, only one species was listed in the regulation. Most of the 404 species listed in 2014 and 2015 were for nominations received and assessments made in the previous five years.

Figure 2C shows the number of assessments and recommendations made each year from 2009 to 2016, and the subsequent changes in regulation.

Figure 2C
Number of assessments and regulation changes



Source: Queensland Audit Office

In comparison, after assessment by the Commonwealth's Threatened Species Scientific Committee, the Minister for the Environment and Energy has 90 days to decide whether to update *the Environment Protection and Biodiversity Conservation Act 1999*.

Reviewing threatened species classifications

The department does not systematically review the classification of threatened species listed in the Nature Conservation (Wildlife) Regulation 2006. Under the current process, a species classification is not usually reviewed until the department receives a new nomination form for reclassifying that species.

There have been some exceptions. For example, the STC initiated a review of several plant species due to the significant threat posed by the airborne plant disease, Myrtle Rust. In 2010, it also reviewed the status of 490 plant and animal species to reflect an amendment to the *Nature Conservation Act 1992* which removed the rare classification for species.

However, the low number of nomination forms received each year to review the classification status of listed species means the status of many of the 955 listed species is likely to be based on out-of-date information.

Transparency of the listing process

The department does not publish a list of the nominations received.

In Western Australia, the Department of Parks and Wildlife publishes the list of nominated species that its Threatened Species Scientific Committee will assess at a fixed annual meeting. Interested stakeholders can nominate more species or provide information and data to support existing nominations prior to a cut-off date.

In Queensland, the department does not publish the STC's assessments after their approval (or non-approval) by the minister. Access to the STC assessments, conclusions and supporting scientific evidence could inform future nominations. This lack of transparency does not promote public trust in the species assessment process because individuals cannot trace a nomination and assessment through to its listing in the Nature Conservation (Wildlife) Regulations 2006.

The Common Assessment Method

Queensland is not on track to meet all its obligations in the intergovernmental Memorandum of Understanding to implement the Common Assessment Method.

Implementing the Common Assessment Method

A consistent approach to classifying threatened species will enable greater collaboration between jurisdictions. It could potentially lead to more effective use of investment and resources to help save threatened species nationally.

The Common Assessment Method enables mutual recognition of threatened species by jurisdictions in which a species occurs. Only one jurisdiction performs an assessment of the species' status, using data and expertise gathered across all jurisdictions where the species naturally occurs.

Under the Common Assessment Method, jurisdictions will align their listing categories with the categories adopted by the International Union for Conservation of Nature. These categories are: extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent (fish only).

In Queensland, adopting these categories will require an amendment to the *Nature Conservation Act 1992*, to add the categories extinct, critically endangered and conservation dependent (fish only).

Project governance

In March 2017, Queensland's Minster for the Environment signed the Memorandum of Understanding to transition to the Common Assessment Method by March 2019. To implement the Common Assessment Method, the department needs to:

- achieve passage through parliament of the necessary amendments to the *Nature Conservation Act 1992*
- review and reclassify Queensland's endemic species on the threatened species list in line with the Common Assessment Method
- reach agreement with the other jurisdictions about the protocols and processes for the classification of new species using the Common Assessment Method.

The department has not developed comprehensive project governance covering all elements of its implementation of the Common Assessment Method. While the Legislation and Policy team, the Threatened Species Program, and the STC chair are working on aspects of the Common Assessment Method, there is no clear project owner, oversight or overarching plan in place to coordinate their activities. The lack of an approved project plan means the department cannot effectively determine major project deliverables, milestones, activities and resources needed. It also makes it difficult for senior management to actively check progress to ensure the department meets its obligations under the Memorandum of Understanding.

Legacy threatened species list

The department has not completed any nomination forms or assessments of endemic species currently listed in the Nature Conservation (Wildlife) Regulation 2006 to prepare for the transition to the Common Assessment Method.

To transition to the Common Assessment Method, the department will need to review the 692 listed species endemic to Queensland that are either not listed or are inconsistently listed by the Commonwealth under the *Environment Protection and Biodiversity Conservation Act 1999.*

In preparation for the Common Assessment Method, the STC has begun to classify some of its new nominations under both the current and future classification systems. However, the department has not dedicated any resources to this or developed a plan to estimate the resourcing and time needed to reclassify legacy species.

3. Planning and prioritising conservation

This chapter assesses how threatened species activities are planned, prioritised and reported on.

Introduction

The *Nature Conservation Act 1992* (NC Act) calls for an integrated and comprehensive conservation strategy to achieve the conservation of nature for the whole of the state.

Strategic management is needed to halt the decline and support the recovery of threatened species. Effective conservation management should focus on prioritising species and threats and developing a framework for monitoring and reporting the outcomes achieved.

An evidence-based approach to protecting threatened species includes protecting and conserving individual species and biodiversity at ecosystem and landscape scales. Strategies to achieve this include:

- building protected areas—including managing the extent and condition of protected areas
- managing threats to biodiversity—including habitat loss and degradation, invasive species (pests and weeds), fire and climate change
- protecting and recovering species and ecological communities.

In this audit, we assessed whether the Department of Environment and Science (the department):

- has effective strategies and plans in place for protecting threatened species and their habitat
- identifies and prioritises management actions that make best use of limited resources while achieving conservation objectives
- appropriately measures and reports on threatened species outcomes.

Planning to protect threatened species

The department does not have a conservation strategy or framework that clearly shows priorities, action areas and measurable targets for the recovery of threatened species and habitats, including lessening the impact of key threats.

The department cannot show how it uses its resources to achieve the best conservation outcomes. There is a lack of transparency and accountability on what the department does and what it is trying to achieve.

Strategies and plans

Queensland has a range of plans about managing protected areas, environmental threats and species recovery. But overall, Queensland has a fragmented approach to conserving threatened species. Often the plans are in draft, no longer used, outdated, or not monitored by the department.

In 2010, the Queensland Government, through the former Department of Environment and Resource Management, issued a draft biodiversity strategy for public consultation. The document, *Building Nature's Resilience—A Biodiversity Strategy for Queensland,* was finalised in 2011.

The department developed the strategy to meet a requirement of the *Nature Conservation Act 1992* for an integrated and comprehensive conservation strategy for the whole of the state. It set objectives on building and managing protected areas and conserving species. The department finalised the Biodiversity Strategy in November 2011, but did not implement it.

Protected areas

An increasing proportion of Queensland's land is protected (currently 8.2 per cent), but the proportion remains the lowest of any state or territory in Australia.

In 2016, the department released the draft *Queensland Protected Area Strategy* as a discussion paper on building a diverse and effective protected area system. The strategy was designed to achieve the target of protecting 17 per cent of the land in Queensland. This is in order to meet the UN Convention on Biological Diversity target (17 per cent by 2020). The Queensland Government is addressing how to grow and fund the land-based protected area system to meet the target.

The Queensland Parks and Wildlife Service (QPWS) manages about 12.5 million hectares of land—approximately seven per cent of Queensland's land mass. QPWS has a series of strategies, plans and a values-based framework related to managing its land, which forms a significant part of the protected area system. These plans include the QPWS master plan and park management plans or statements. Activities within the plans cover fire management and control of invasive species.

Threat management

The major threats to biodiversity in Queensland are loss of habitat (including fragmentation and degradation of condition), invasive species and fire.

Figure 3A outlines state government strategies in place to mitigate these threats.

Figure 3A
Strategies to mitigate key threats to biodiversity

Key threat	Major cause/impact	Strategies
Habitat loss	Land clearing for agriculture and urban development	Protected Area Strategy (Draft) State Planning Policy and Regulatory Provisions
Invasive species	Weeds and pests that out-compete or directly prey on native species	Queensland Biosecurity Strategy 2018–23 Queensland Invasive Plants and Animals Strategy 2018–23 (Draft) QPWS Strategic Pest Management program
Fire	Poor fire management impacts on species diversity in many ecosystems	QPWS Strategic Fire Management program

Source: Queensland Audit Office

While all these strategies include actions to reduce threats to native plant and animal species, they also address and balance the effect on the economy, human health and social amenity. Some cover only land managed by QPWS.

Other regional plans and species recovery plans include actions to manage threats, but these are often not managed or monitored by the department. Therefore, it is difficult to assess whether threat mitigation actions are targeted at priority areas and priority species, and what impacts these efforts are having on protecting threatened species.

Queensland does not have an overall strategy to manage major threats and reduce the impact on threatened species.

Species recovery

Recovery plans are key to guiding the recovery of a threatened species. Of the 1 222 species listed under the Nature Conservation (Wildlife) Regulation 2006, the department manages recovery activities for just 30 species.

These are examined in Chapter 4.

Prioritising activities and investment

The department does not systematically plan where to deploy its limited resources to achieve the most effective balance of actions to protect habitats, mitigate threats and reduce species decline.

It does not effectively track and account for funding used for threatened species activities, whether that funding is used internally and provided to external partners. This results in a lack of transparency and accountability about how the department is using its funds.

The number of species at risk of extinction continues to increase, while resources available for conservation are far less than what is needed. Effort needs to be prioritised to get the best result from limited resources.

Back on Track Species Prioritisation Framework

Queensland was the first state in Australia to implement a prioritisation program for threatened species. The department began the Back on Track Species Prioritisation Framework in 2005 to guide conservation management and recovery by government and non-government organisations.

By 2010, the department had named 274 priority species from a total of 4 247 species assessed. The department also identified common threats and actions that affect a range of species to encourage a multi-species or landscape approach to conservation and opportunities for cross-regional projects. The process resulted in the most comprehensive data on threatened species ever assembled for Queensland, and highlighted the conservation needs of many lesser-known and unlisted species.

One of the original aims of Back on Track was to highlight species that were eligible for listing under the NC Act to speed up the listing process. For this reason, Back on Track prioritised species regardless of their current classification under the NC Act or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This process was not used for this purpose.

There has been limited use of the Back on Track priorities across Queensland. Reasons for this include criticism of the scoring approach and the framework's delivery, as well as ineffective communication and engagement between those setting the priorities and those best placed to implement them.

Back on Track is now out of date because the department has limited time and resources to continuously update the information needed to sustain it.

The department cannot assess the success or failure of Back on Track on species recovery. This is partly because species recovery takes time. But it is mainly because limited data were gathered on management actions implemented and their impacts on threats and species.

The department attempted to gather data through a Recovery Actions Database created as part of Back on Track. Few people submitted data and technical difficulties with the application compounded the problem. The department replaced the Recovery Actions Database with The Spring (Species Recovery Information Gateway), but its use also remains low.

Between 2012 and 2014, the department reviewed threatened species prioritisation in Queensland. It produced a discussion paper with a revised methodology—Back on Track Phase II. However, the department has not allocated any funding to implement it.

Investment framework

The department does not have an implementation and investment plan that prioritises threatened species activities and investment. It is not clear how much the department spends each year on activities that specifically target conserving threatened species.

There are four different divisions within the department that contribute to the protection and recovery of threatened species:

- Conservation and Sustainability Services (CSS)
- Sciences—includes the Queensland Herbarium and Science Information Services
- Queensland Parks and Wildlife Service (QPWS)
- Environmental Policy and Planning (EPP).

All four divisions undertake activities that relate to recovering and protecting threatened species and ecological communities.

As the department does not currently track investment for specific activities, the figures used in the following sections could include funding for activities that are not specific to threatened species and could exclude funding that is relevant.

Conservation and Sustainability Services

CSS is currently implementing more meaningful and detailed financial reporting that will map all cost centres to the objectives, strategies and actions outlined in the 2018–19 CSS business plan. While not yet a mature model, it has linked actual spend to some high-level activities in the 2017–18 CSS business plan.

Figure 3B summarises the CSS spend by activity in 2017–18.

Figure 3B
CSS spend on threatened species activities

Activity description	FTE	Actual spend ($m)	% of total spend
Activities directly aimed at protecting threatened species			
Recovery of threatened species	28	3.9	7
Protect species and landscapes	27	3.0	6
Activities related to protecting threatened species			
Conservation by traditional owners	12	10.9	20
Wildlife–human interactions	67	9.2	17
Conservation sustainability grants	8	6.8	12
Protected areas**	31	6.3	12
Native biodiversity	23	4.9	9
Develop and maintain legislative framework	14	1.6	3
Develop partnerships and networks	5	1.0	2
Offsets	12	1.3	2
Other expenditure			
Other*	42	5.7	10
Total	**268**	**54.6**	**100**

** Note: The department allocated an additional budget of $7.9m in 2017–18 to the Protected Area Innovation Engagement Policy team, which sits outside CSS. This is not included in the total for protected areas.

* Note: Includes allocation of costs of executive directors and the Deputy Director General that cannot be charged directly to an operational activity; includes spend on the management of world heritage sites.

Source: Queensland Audit Office

In 2017–18, CSS spent $6.9 million on activities directly aimed at protecting threatened species—13 per cent of CSS's total actual spend.

Several CSS activities relate to habitat conservation, which directly impacts on the survival prospects of threatened species. For example, 12 per cent of CSS's spend is on the selection, purchase and management of protected land. The department uses several criteria to select protected land, including assessing its value as habitat for threatened species.

Around one-third of CSS's annual spend—$20.1 million—is on two activities: conservation conducted by traditional owners and wildlife–human interactions. While these are critical activities, the protection of threatened species is not their primary focus. CSS allocates one-quarter of its staff to wildlife–human interactions.

The Queensland Herbarium and Queensland Parks and Wildlife Service

The Queensland Herbarium dedicates $185 000 each year to coordinate and help the STC—eight per cent of its 2017–18 overall budget of $2.3 million. However, the herbarium's business-as-usual activities also help to protect threatened species. For example, the herbarium keeps and enhances specimen collections and databases that enable the operation of the *Vegetation Management Act 1999*, which is integral to the protection of Queensland's threatened plants, essential habitats and threatened regional ecosystems.

QPWS manages parks with consideration to the protection and recovery of threatened species. This covers land with over 1 000 threatened species, including over 100 threatened species endemic to its parks. Its total budget for 2017–18 was $111.3 million. While some parks and pest programs received funding for threatened species focussed activities, it did not systematically allocate funding for the protection and recovery of threatened species on QPWS land.

Measuring and reporting results

The department cannot effectively measure the efficacy of government and community effort and investment in threatened species conservation. This is because the department has no system to coordinate and report on recovery activities, threatened species population trends and the effectiveness of conservation management. The department is not applying a strategic approach to managing, monitoring and reporting on threatened species.

Reporting performance

The department reports on conservation activities in three places:

- State of the Environment Report—a statutory requirement and public statement on the condition of the state's environmental assets, which examines how government is addressing key challenges and pressures affecting Queensland's biodiversity, heritage, pollution and climate
- Report on the administration of the *Nature Conservation Act 1992*—which lists amendments to legislation, protected areas, wildlife and habitat conservation, conservation orders and offences, and prosecutions
- Annual Report—which reports against objectives and service delivery statement standards.

None of these reports adequately identifies whether conservation activities have led to the protection and recovery of listed species and priority habitats. Reporting shortfalls are caused by insufficient data and the lack of clear measurable outcomes.

Population status and trend data are available for a small number of species that are targets of recovery and conservation activities. However, the level of monitoring and availability of data are variable. For most listed species, there is no monitoring and reporting. This absence of data means the department mainly relies on indirect measures that are not meaningful outcome measures or indicators of success.

One useful service delivery standard is the percentage of Queensland's land mass that is protected. However, another service standard—the percentage of threatened species targeted under recovery plans which maintain or improve their classification—is made meaningless because the department does not review species classifications. The department stopped using this service standard in its 2018–19 Service Delivery Statement.

Other measures used by the department are mostly indicators of activity, such as the indicator of average cost per wildlife permit or licence issued. These indicators have limited or no value in tracking overall trends and being able to demonstrate and report on outcomes and conservation success.

Where the department reports internally on specific projects and election commitments, the reporting is adequate. The department uses standard project management plans, reports and a management dashboard. However, not all activities are covered by this reporting process.

Evaluating outcomes

The department does not sufficiently evaluate the state’s conservation activities and impact on threatened species to inform future delivery and investment. It is, therefore, difficult to assess whether management of and investment in conservation activities has been effective.

Program evaluation

We identified only one known program evaluation—the Queensland Indigenous Land and Sea Ranger program (evaluated in 2015). The department selected it for evaluation based on program longevity and investment.

The review found that activities had contributed to conserving biodiversity and protecting threatened species. It made recommendations to inform future program decisions and drive continuous improvement in program delivery.

In 2017, the Koala Expert Panel reviewed the effectiveness of the State Government’s approach to koala conservation in South East Queensland. The purpose was to develop recommendations for future policy and management initiatives informed by consideration of existing approaches. In particular to understand where policy and management had failed to deliver on koala protection.

During 2018, the department reviewed recovery activities for 10 specific species. These reviews provide useful information about whether a project is doing the right things in the right ways, and whether program delivery could be improved. However, the reviews are not sufficiently designed to show the efficiency of project delivery or the effectiveness of outcomes. For example, whether threat mitigation such as pest and fire management had the desired effect (of increasing the abundance of a threatened species population in the affected area).

The department has not set up and funded a program to evaluate the performance of the state's threatened species activities. We found that threatened species recovery plans managed by the department are difficult to evaluate because they lack defined and measurable outcomes.

The department has not taken a program logic approach to achieve the best outcomes for threatened species and their habitats. A program logic approach would:

- show the relationships between resources, activities and planned outputs and outcomes
- guide decision making
- show how planned activities contribute to objectives
- help effective planning, implementation and evaluation.

4. Protecting and recovering threatened species

This chapter examines actions by the department to protect and recover threatened species and their habitat.

Introduction

Managing threatened species is central to limiting biodiversity loss. Management includes assessing species extinction risk, identifying threats, prioritising species for management and implementing targeted management actions.

Entities managing threatened species need critical information on species population trends to diagnose the causes of decline and determine appropriate management action. Information from research and monitoring of threatened species comes from conservation partners, including government agencies, universities, research bodies and members of the public.

Activities to manage threatened species can include species recovery programs, expanding and conserving protected areas, and controlling threatening processes. The most significant threatening process is the loss of threatened species habitat, which the Queensland Government aims to protect and recover by:

- regulating land clearing and vegetation management
- establishing and managing protected areas, including national parks, nature refuges and special wildlife reserves
- using environmental offsets to compensate for the biodiversity impacts of development.

The *Nature Conservation Act 1992* (NC Act) states that the management of a protected species should ensure its survival and natural development in the wild by:

- conserving its biological diversity to the greatest possible extent
- identifying and reducing or removing the effects of threatening processes
- identifying its critical habitat and conserving habitat to the greatest possible extent.

We assessed whether the Department of Environment and Science (the department):

- effectively gathers, shares and uses information on threatened species and their habitats to inform conservation action
- effectively coordinates and manages threatened species activities and resources to achieve the best outcomes for the protection and recovery of threatened species and their habitats.

Species recovery

The department's threatened species recovery efforts are not effectively coordinated and managed. Few recovery programs can show an improvement in species population or status. The limited monitoring data across the state means the department cannot measure trends in threatened species and report on the success of recovery program actions.

Of the 922 species listed under the Nature Conservation (Wildlife) Regulation 2006 as either endangered or vulnerable, only 30 have conservation or species project plans managed by the department. Of these, 12 also have a Commonwealth recovery plan. Many of the 30 with plans are inadequately funded and implemented. There is a lack of clear accountability for actions outlined in these plans.

Securing the long-term recovery of threatened species and their habitats is a challenging task. It involves many individuals, organisations and government agencies. The department needs to build more effective partnerships to improve knowledge sharing and collaboration between its own staff and with stakeholders such as researchers and conservation practitioners.

Recovery activity and plans

Recovery or conservation plans are important tools in protecting threatened species. They set out the research and management actions necessary to stop the decline and support the recovery of threatened species. They give a basis for prioritising and directing funds for biodiversity protection and conservation.

Recovery plans may be formal plans adopted under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or conservation action plans developed by Queensland to recover species.

There are currently 94 threatened species listed under the NC Act with a recovery plan adopted under the EPBC Act. Many organisations and individuals undertake recovery actions proposed in a recovery plan. These include state and local governments, regional bodies, and conservation groups. While the Commonwealth does not specifically fund recovery plans, it has funded a range of recovery programs devolved through natural resource management bodies.

The NC Act does not mandate a recovery plan for each listed species. However, the Nature Conservation (Wildlife) Regulation 2006 requires the state, to the extent practicable, to prepare and put into effect recovery plans or conservation plans for endangered and vulnerable wildlife, including their habitat.

The department is not responsible for reporting on recovery activities undertaken by external partners or the effectiveness of conservation management outcomes. These are the responsibility of the respective recovery teams. This means that the department does not have clear oversight over conservation activities conducted by other organisations and individuals. This reduces accountability for species declines and extinctions with no coordination of management plans.

Of the 30 Queensland plans, only two are conservation plans—for estuarine crocodiles and koalas. Both are listed as vulnerable in the Nature Conservation (Wildlife) Regulation 2006. The remaining 28 are species project plans managed by the department for recovery activities involving 33 named threatened fauna species. Three are multi-species plans for seabirds and shorebirds.

The department currently has no recovery plans or projects for threatened flora. The Queensland Herbarium conduct an annual census of the Queensland Flora and provides a published list of all the known native and naturalised species of plants, algae, fungi and lichens in the state. More than 20 species are added to the flora census each year, but there is no systematic process for them to be nominated for listing under the *Nature Conservation Act 1992.*

Figure 4A shows the number and percentage of fauna classified as endangered or vulnerable with a current conservation or recovery plan.

Figure 4A
Number of endangered and vulnerable species with a conservation or recovery plan

NC Act classification	Number of fauna listed	Number with plan*	Percentage with plan
Endangered	76	17	22%
Vulnerable	137	13	9%
Total	213	30	14%

*Note: Some recovery plans cover multiple species.

Source: Queensland Audit Office

As noted in Chapter 3, the department does not currently use a method to prioritise species for conservation and recovery projects. Some species were selected for conservation effort based on species knowledge within the department (for example, marine turtles). Others were selected due to their iconic value (such as the koala, wombat and bilby). For other selections, the department used significant work done by external conservation bodies (for example, on seabirds and shorebirds).

The number of projects undertaken by the department is limited by available resources and funding. The timeframes for projects range from one to 50 years, with an average of 17 years. Half of the projects have been running for less than 10 years, with five lasting more than 30 years.

Only 12 of the 30 conservation/ species project plans show how much the department forecasts to spend in 2018–19. The total annual amount for the 12 plans is $633 051. Of this, $480 124 (76 per cent) is for four Northern Hairy Nosed Wombat projects.

For most threatened species, there is no evidence about how they are faring or whether management actions are having the desired impact. Monitoring data on population status and trends are available for only a few species.

Three of Queensland's species project plans (the Northern Hairy Nosed Wombat; the Proserpine Rock Wallaby; and the Bridled Nailtail Wallaby) show small recorded improvements in species population or status. The estimated population of the Northern Hairy Nosed Wombat has increased from 36 to 250 over the last 20 years. The estimated population of the Proserpine Rock Wallaby has increased from 720 to 1 700 since 2004.

Case study 1 summarises recent recovery efforts in Queensland on the Bridled Nailtail Wallaby and how they have contributed to an increase in species population.

Case study 1 The Bridled Nailtail Wallaby

The Bridled Nailtail Wallaby—recovery efforts in Queensland

Background

Between 1937 and 1973 the Bridled Nailtail Wallaby (BNTW) was considered extinct before being sighted near the town of Dingo in central Queensland. The BNTW is listed as endangered under the Nature Conservation (Wildlife) Regulation 1994.

The reasons for decline include habitat loss, competition with domestic herbivores (notably sheep) and predation by introduced predators. Current threats include predation, habitat degradation, drought, disease and parasites, weed invasion and fire.

Current populations are recorded at Taunton National Park (Scientific) and Avocet Nature Refuge in central Queensland, and Scotia Nature Reserve, New South Wales.

Recovery efforts in Queensland

The Bridled Nailtail Wallaby recovery plan has not been updated since 2005, despite requests from conservation officers. However, there is an active recovery program and team which includes landholders, volunteer teams, local natural resource management bodies, department conservation officers and the QPWS.

Recovery efforts are ongoing at Taunton National Park (Scientific) and Avocet Nature Refuge. They focus primarily on improving predator control, improving and monitoring habitat condition, implementing appropriate fire regimes and monitoring the BNTW population.

Recent efforts include:

- constructing a nursery at Avocet Nature Refuge, in 2015, to reduce mortality of vulnerable young BNTWs due to predators – funded and constructed by conservation volunteers
- government funding for a genetic management plan to aid the recovery of the BNTW
- government funding towards maintenance, water supplies and supplementary feeding
- creating habitat corridors at neighbouring Nature Refuges to Taunton National Park (Scientific) to increase the range of BNTWs.

Stakeholder involvement

The recovery of threatened species and ecological communities is generally a highly complex, multi-disciplinary task usually involving many individuals, organisations and agencies.

In our discussions with non-government stakeholders, including during regional visits, we noted a high degree of commitment and passion for conserving threatened species. In the Avocet Nature Refuge many recovery activities are undertaken and funded by conservation groups. The landholder and individual volunteers freely give their time, and often materials. For example, fixing fences and maintaining fire breaks.

Outcome

The estimated core population of the BNTW on Taunton National Park (Scientific) has increased from 70 in 2007 to 392 in 2017. The available data recorded in 2016 by the landholder estimated the population to be between 70 – 100 on the Avocet Nature Refuge.

While progress is being made to ensure the long-term survival of the BNTW, the population is not yet considered thriving.

During the audit, the department gave approval to begin efforts to update the recovery plan.

Source: Queensland Audit office from information from the Department of Environment and Science, and Recovery Planning in Australia, National Environment Science Programme

Other reported successes include captive breeding programs, translocations and improved understanding of species distribution and threats.

Monitoring threatened species

The limited systematic and reliable threatened species monitoring means the department cannot consistently detect changes in population or quantify the efficacy of management actions.

The department does not systematically collate and record information and data in a consistent and usable form. Reasons for this include:

- many projects are managed by field officers who keep manual or local records and systems; for example, the Queensland turtle database is held on local hard drives and QPWS systems
- some projects are managed by non-government agencies such as natural resource management bodies or universities, which are not required to formally report back to the department other than via a permit return
- where updates are provided to the department, they are often not in a useful format

Wildnet

The department's database for recording wildlife sightings and listings in Queensland, WildNet, is not up to date. WildNet is based on information provided by government agencies and conservation partners. Due to limited resources, there is a backlog of information to be uploaded.

WildNet holds information on species taxonomy, status, distribution and abundance (including monitoring data). Species taxonomy and status information is routinely updated particularly with changes to NCA and EPBC listings. In terms of distributional records of threatened species, the database is far from complete, with significant datasets not yet incorporated.

Limitations include:

- some digital datasets are awaiting uploading
- historical datasets in paper form need significant effort to input
- lack of routine validation resulting in a small proportion of erroneous and duplicate records
- some datasets are summarised or provided with poor spatial precision reducing their utility
- many departmental projects do not provide systematic monitoring data to WildNet, and tools for efficiently capturing the data in WildNet are not available

The department could leverage potential data inputs on threatened species populations and activities more. For example, the department could:

- encourage the return of survey data by landholders in a form that could be easily uploaded to WildNet
- more effectively collate and use information gathered by QPWS from on-the-ground threatened species actions and monitoring in national parks
- meaningfully engage with citizen scientists to capture data on species that are easily identifiable (for example, cassowaries or koalas).

Knowledge and research

Decisions affecting how threatened species are managed should be based on the best-available science, knowledge and understanding of Queensland's biodiversity. Data should be accessible, shared and used to support policy development and decision making.

The department does not systematically capture and publish information about threatened species to help understand the actions and outcomes influencing threatened species populations. While the department uses scientific research in shaping certain activities, how the department shares this knowledge is not always clear.

In 2017, QPWS developed a research prospectus to guide research needs and highlight partnership opportunities to expand its knowledge and understanding of protected areas and their threats. QPWS aims to use science to better inform the management of protected areas. The prospectus names priority research areas within six themes, including species and ecosystems, significant pest species, and fire ecology and management.

QPWS does not know if any research partners have started a research project under the identified themes. QPWS does not fund the research and does not currently have a system to gather and record information on which projects are undertaken. A project to develop a database to gather and record this information is currently being scoped.

The department could expand the QPWS research prospectus to cover broader threatened species management to drive survey work and direct researchers to areas of need. However, to benefit from this work, the department needs to improve its collection and sharing of information on threatened species—between its staff, conservation partners and the public.

Governance and coordination

The department is not coordinating, managing and holding parties accountable for Queensland's threatened species conservation activities. There is no overarching strategy that clearly shows priorities, action areas, and measurable and reportable targets.

The Conservation and Sustainability Services (CSS) division of the department has overall responsibility for identifying, protecting and recovering Queensland's threatened species. But other divisions also contribute, including the Queensland Herbarium in the Science division, Queensland Parks and Wildlife Service and Protected Area Innovation, Engagement and Policy. The purpose, roles and relationships of those involved in implementing threatened species activities is not always clear. For example:

- seven business units have protected-area-related responsibilities; recently the department set up the Protected Area Coordination group to improve oversight and cohesion
- threatened species recovery activities are conducted by multiple teams, including the Threatened Species Program, and teams for aquatics species, koalas, northern wildlife and southern wildlife
- multiple teams work on environmental offsets, including offsets policy, review, fund management and delivery.

Department staff are involved in over 40 committees, working parties or recovery teams relating to threatened species. While some committees oversee progress, achievements and outcomes, most of the committees lack accountability and transparency. Many are not decision-making committees or have no assigned responsibility for results.

Participation in committee meetings promotes mutual understanding, but it is not clear how knowledge is pooled and shared with others to build knowledge and improve the quality of decision making.

The department is missing a governance mechanism to coordinate and oversee its overall conservation effort. The fragmented governance arrangements mean that there is no clear accountability for conserving threatened species. This suggests an overall lack of urgency, priority and purpose.

Threatened species habitat

The department does not have regular and consistently collected data about the distribution and abundance of Queensland's threatened species, which is needed to underpin regulated protection of essential habitats.

The department plays an important role in collating and disseminating information to all levels of government about Queensland's threatened species and their habitats. The department helps decision makers to assess the environmental impacts of developments and incorporate better environmental information into their long-term planning.

An increasing proportion of Queensland's land mass is protected, but Queensland still has the lowest proportion (8.2 per cent protected) of any Australian state or territory. Protected land is not increasing at the rate needed to meet the 17 per cent target set under the UN Convention on Biological Diversity, to which Australia is a signatory.

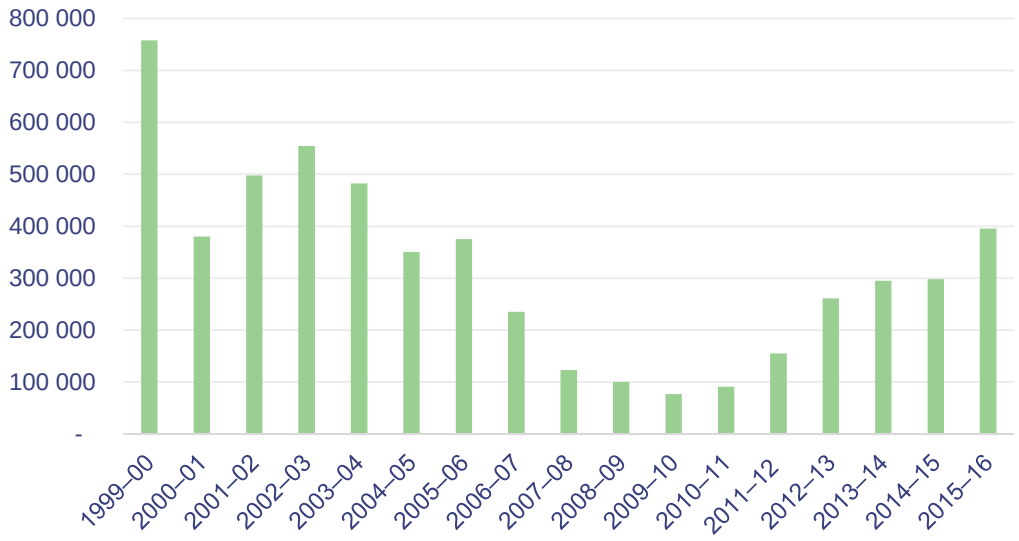
Since the department began using environmental offsets in 2014, it has implemented three of the 107 approved offsets. The steps needed to deliver an offset are complex and time consuming. It is therefore, too early to assess the effectiveness of environmental offsets to compensate for development impacts on biodiversity.

Habitat loss

Habitat loss is the greatest threat affecting Queensland's threatened species. A key challenge for government is that actions to prevent habitat loss can compete with social and economic practices in rural and mining industries and with urban development.

Figure 4B shows the change in total hectares of cleared woody vegetation between 1988 and 2015. The *Vegetation Management Act 1999* regulates land clearing in Queensland. Changes were made to the *Vegetation Management Act 1999* in 2013. On 3 May 2018, the Queensland Parliament passed new vegetation management laws.

Figure 4B
Hectares of woody vegetation clearing in Queensland per year

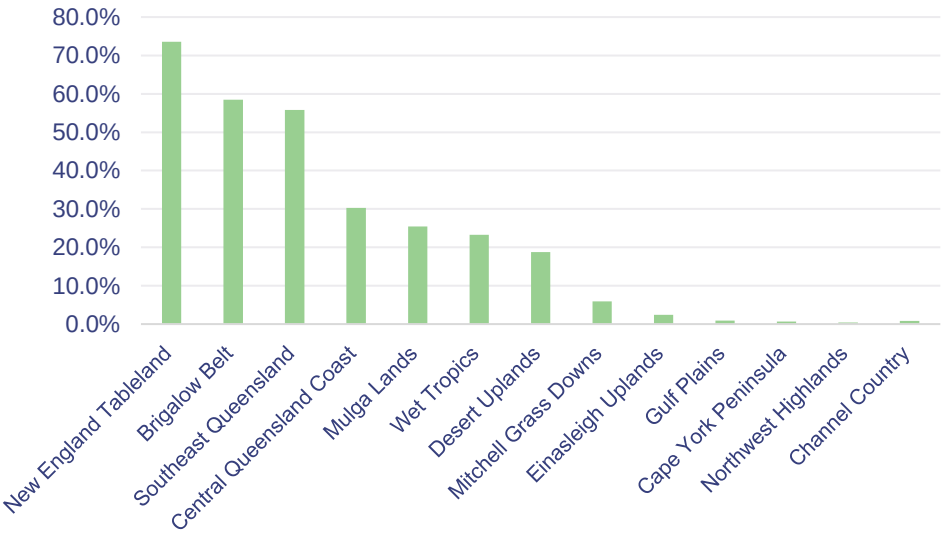


Source: Land cover change in Queensland 2015–16: State-wide Landcover and Trees Study report (Department of Science, Information Technology and Innovation)

In 2015, an independent scientific report by the Species Technical Committee showed the link between land clearing and loss of threatened species. The cumulative effect of on-going vegetation clearing is that the available habitat for threatened species is reduced over time. Queensland has seen a decline in available habitat for threatened species.

Figure 4C shows the percentage of remnant vegetation cleared in Queensland bioregions.

Figure 4C
Percentage of remnant vegetation cleared in Queensland



Source: Remnant Regional Ecosystem Vegetation in Queensland, Analysis 1997–2015. Department of Environment and Science

The Queensland Herbarium has modelled the impact of land clearing on the habitat of more than 300 of Queensland's threatened flora and fauna species. It found that the increasing volumes of land clearing between 2013 and 2015 accelerated habitat loss for threatened species.

The modelling showed that, by 2015, 26 per cent of remnant threatened fauna habitat and 35 per cent of remnant threatened flora habitat had been cleared statewide. This includes almost 50 per cent of threatened reptile habitat and 62 per cent of threatened invertebrate habitat.

Regulated maps

The department in partnership with the Department of Natural Resources, Mines and Energy (DNRME), regulates threatened species habitat. The department provides maps to DNRME that indicate high risk areas where threatened and near threatened species are known or likely to occur. DNRME regulate these maps under the *Vegetation Management Act 1999.* These maps provide landholders with information about the environmental values of their land, such as the presence of:

- threatened plants
- threatened regional ecosystems
- threatened species essential habitat and modelled essential habitat.

Landholders rely on the mapping to understand their obligations and the restrictions on their use of land, primarily under the *Vegetation Management Act 1999*. However, the department does not systematically survey to increase flora and fauna records, particularly in areas away from main roads and iconic locations and where surveying species is difficult. Without this systematic survey data informing its mapping and modelling of threatened species populations and distribution, the legislated protection of threatened species habitats is likely to be reduced.

Habitat knowledge and research

The department systematically assesses the conservation value of Queensland's landscape and habitat, which helps inform government decision making. Its key assessments include the Biodiversity Planning Assessments and Aquatic Conservation Assessments. These provide a consistent approach for assessing relative biodiversity values for Queensland, without social or economic bias and independent of land tenure considerations.

Biodiversity Planning Assessments and Aquatic Conservation Assessments provide the government with a decision-support tool with a wide range of applications, including:

- determining matters of state environmental significance
- assessing large-scale developments
- planning processes at local and regional levels
- determining priorities for protection, regulation or rehabilitation in terrestrial and aquatic ecosystems.

Geographically, Biodiversity Planning Assessments cover approximately 95 per cent of Queensland, or 11 of its 13 bioregions. However, researching and producing the assessments is resource intensive and time consuming, with only one new assessment produced each year. Each assessment covers a single bioregion and, as a result, the assessments range in date from 2007 to 2018.

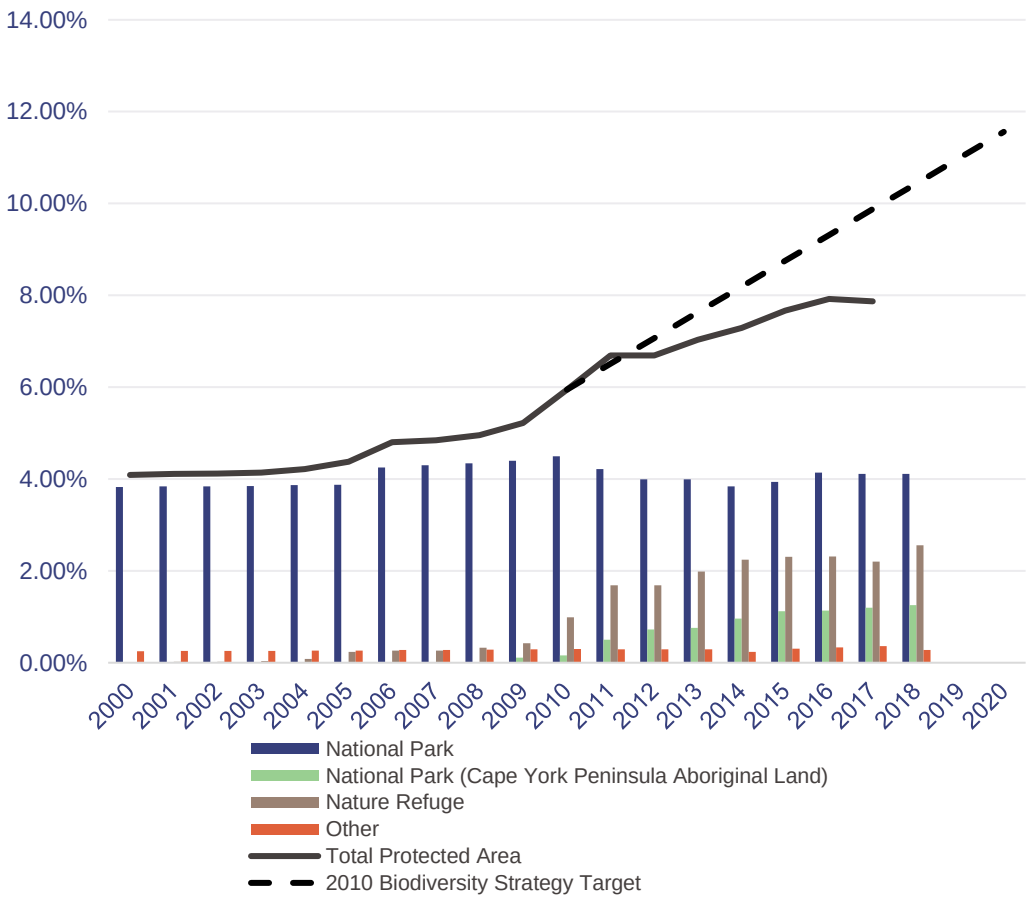
Queensland's protected areas

Currently, 8.2 per cent of Queensland is protected in national parks, conservation parks, resources reserves and nature refuges. In the long term, the Queensland Government has committed to expanding the protected area estate to 17 per cent of the state.

To support this target, the 2010 Biodiversity Strategy for Queensland projected increases in different types of protected areas to protect approximately 11.5 per cent of the state by 2020.

Figure 4D shows the proportion of Queensland land protected since 2000.

Figure 4D
Annual increase in proportion of Queensland that is protected land



Source: Queensland Audit Office

While the area of protected land has almost doubled in the last 17 years, on the current trajectory it is unlikely that the state will increase the protected area estate enough to meet the 11.5 per cent target by 2020.

One type of protected area that has increased over the last decade is nature refuges. The nature refuges program is the Queensland Government's primary voluntary conservation covenanting program. Landholders can play a vital role in protecting the state's biodiversity by establishing a nature refuge on their property.

Under the nature refuge program, landholders enter a voluntary agreement with government committing to protect land with significant conservation value, while allowing for compatible and sustainable land uses to continue. The agreement can cover the whole or part of the landholder's property. A nature refuge is perpetual—so if the property subsequently changes hands, responsibility for the nature refuge rests with the new owners or lessees. However, a mining lease can override the nature refuge agreement.

As well as protecting the state's biodiversity, the intended benefits for the landholder include:

- creating a legacy on their land, particularly where there is a family or historical association
- negotiating continued economic use of their land
- support and advice from Department of Environment and Science (the department) nature refuge officers on protecting the conservation values of the land
- potential financial aid for projects to improve sustainable land use or managing threats through NatureAssist and Nature Refuge Landholder Grants.

The area of nature refuges has increased from 570 514 hectares in 2008 to 4 418 884 hectares in 2018. Nature refuges now account for 31 per cent of all protected areas in Queensland. There are currently 516 approved nature refuges.

In 2017-18, the department provided funding to landholders of $923 995 through NatureAssist and $322 170 in Nature Refuge Landholder Grants.

Case study 2 gives some insight on landholder experiences at two nature refuges we visited. In both the landholder expressed a view that the department has not always managed the relationships with landholders well.

Case study 2 Nature refuges

Nature refuges—landholder experiences

Background

We visited two landholders in central Queensland who have had a nature refuge agreement covering part of their property for more than 20 years. Both landholders were driven by their passion for conservation – their chance to do the "right thing for the environment". One landholder specifically wanted to create a family legacy.

Landholder experiences

While both landholders are committed to the continued protection of their land and spoke positively of regional departmental staff, their experiences since agreeing to a nature refuge have left them disillusioned. Reasons they provided include:

- potential mining activity on part of the land protected by the nature refuge agreement, with the threat of government leasing the rights to mining companies. For one, the negotiations have continued for 25 years with no decision made. This means the landholder is reluctant to implement permanent plans for his land
- limited support from department staff. Both acknowledge the commitment and experience of regional conservation and nature refuge officers, but the large area and tasks covered by a few staff limit their availability. They believe some decisions were made centrally without fully understanding the circumstances or impact
- one landholder cleared a patch of land to protect a key threatened species from predators as part of a recovery program. The landholder was threatened with prosecution despite recognition that the land clearing was appropriate in the circumstances
- little species or habitat monitoring is carried out by the department on the nature refuges, limited by available resources. One landholder offered their own data to the department but it was not accepted. This makes it difficult to assess improvements in habitat condition or increase in species population.

Conclusion

Establishing nature refuges has increased the protected area estate in Queensland. However, mining activity can compromise the land's conservation value. The threat of mining at one of these nature refuges would significantly impact on a habitat corridor that links to a national park. This is despite the landholder entering into a perpetual agreement to protect the land.

One of the landholders has tried to revoke his nature refuge agreement. This was prompted by the threat of prosecution and lack of communication by government, but also seeing other nature refuges impacted by mining and drilling.

Source: Queensland Audit office from information from the Department of Environment and Science, and discussion with landholders.

The Nature Conservation (Special Wildlife Reserves) and Other Legislation Amendment Bill 2018, currently going through the Parliament, introduces reforms that provides national park level protection to private lands of exceptional natural and cultural value. If the legislation is passed, Special Wildlife Reserves will be established by a voluntary agreement between the State and a landholder in accordance with strict statutory management principles and an approved management regime. Crucially, incompatible land uses, including mining and forestry, will not be permitted in Queensland's Special Wildlife Reserves.

The draft Queensland Protected Area Strategy, which the department published for consultation in 2016 and is currently reviewing, recognised that many local governments in Queensland also own and manage areas of high conservation value. The department has recently had some success in working with councils. In 2017, Noosa Council and the State Government signed a memorandum of understanding to co-fund the acquisition of 2400 hectares of land in Tewantin and convert it to conservation tenure. The land has significant conservation value and is key koala habitat.

The department advised us that intends to build on that success by pro-actively approaching local governments to encourage them to consider similar partnership arrangements. To maximise the potential, the department could consider a program for state and local governments to coordinate the selection and expansion of protected areas to reach both statewide and local conservation objectives.

Environmental offsets

Environmental offsets may be needed for certain developments where there is an unavoidable impact on significant environmental values. An offset compensates for the loss by providing an equivalent conservation outcome elsewhere.

Offsets are delivered either as a land-based direct offset, a financial offset or a combination of both. In a financial offset, the person submitting the application is authorised to impact on the identified environmental values once the department receives the agreed value in its offset fund account. The department is then responsible for using those funds to develop and implement an appropriate offset.

Figure 4E shows the number and type of environmental offsets obtained since offsets began in 2014.

Figure 4E
Environmental offsets summary

Type	Number*	Proportion	Implemented
Financial settlement offsets	97	91%	0
Land-based direct offsets	10	9%	3
Total	107		3

* Note: Does not include offsets entered under coordinated projects, advanced offsets, or where the person submitting the application has not selected a method of delivery.

Source: Queensland Audit Office

Most applicants choose to make a financial offset rather than implement their own land-based offset. Offset payments have been received progressively since the Offsets Act was introduced in 2014. The total value of payments made into the offset fund account is $9.64 million.

The exploration and acquittal of offsets is a time intensive process involving substantial negotiation, contract development and probity checks to ensure offset sites can be managed over a twenty-year timeframe and legally secured.

Only three land-based offsets have been implemented to date and no financial payment offsets have been fully implemented. However, the department is negotiating offsets for 26 marine plant impacts, a protected plant and five fish passage impacts.

Environment offsets review

The use of offsets presents conceptual and practical challenges, including understanding, measuring and reporting whether offsets deliver the expected outcome.

The government has committed to review the Biodiversity Offsets Framework within the current term of government. Conservation and Sustainability Services (CSS) will undertake the review, aiming to assess the effectiveness and efficiency of the framework since its implementation in 2014. CSS expects to complete the review and implement the revised offsets framework by 2020 subject to government consideration.

Appendices

A. Full responses from agencies

As mandated in Section 64 of the *Auditor-General Act 2009*, the Queensland Audit Office gave a copy of this report with a request for comments to the:

- Department of Environment and Science
- Department of Natural Resources, Mines and Energy
- Department of Agriculture and Fisheries.

The head of each agency is responsible for the accuracy, fairness and balance of their comments.

This appendix contains the detailed responses from the three agencies to the audit and the response from the Department of Environment and Science to our audit recommendations.

Comments received from Director-General, Department of Environment and Science

Queensland Government

Department of
Environment and Science

Our Ref: CTS 29813/18
Your Ref: 9176P

IN-CONFIDENCE

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Dear Mr Worrall

Thank you for your letter of 10 October 2018 providing the Queensland Audit Office's (QAO) proposed report to Parliament on *Conserving Threatened Species*.

I accept the findings of the report and welcome QAO's recommendations for improving the Department of Environment and Science's (DES) effectiveness in identifying, protecting and recovering Queensland's threatened species.

Queensland's flora and fauna species are a valuable part of the State's rich biodiversity. Under state legislation, there are currently 224 fauna and 731 flora species listed as threatened ('extinct in the wild', 'endangered' or 'vulnerable'). The diversity and geographical range of Queensland's wildlife, and the pervasive nature of the drivers of species loss, including habitat loss, climate change and invasive pests, weeds and pathogens, present significant challenges. Addressing the decline of threatened species requires a targeted and coordinated approach across multiple agencies.

DES has many dedicated and skilled species conservation staff and many productive partnerships in place to improve species outcomes. However, the audit findings highlight the need for improvements in the department's approach to the nomination and listing of threatened species and to planning and oversight of its threatened species conservation effort if we are to be successful in reversing the rate of species decline.

In response to the audit, DES has commenced work to develop a comprehensive biodiversity conservation strategy including through a review of the best practice literature and inter-jurisdictional approaches to threatened species conservation. DES has also engaged with eminent threatened species experts to gain their advice on further opportunities to improve species outcomes.

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ABN 46 640 294 485

As noted in the audit report, in the interests of streamlining effort, Queensland has entered into agreement with the Federal Government and other states and territories for a common approach to assessment and listing of threatened species. DES will implement the report's recommended improvements to project management of the associated legislative reform program.

The response to the audit recommendations will build upon the actions that DES already has underway to improve threatened species outcomes including:

- work to improve species data management capability, access and tools
- adding more than one million hectares of land to Queensland's protected area estate since 2015 to increase the size of Queensland's protected area estate to 14,189,680 hectares
- reducing the rate of habitat loss through working with the Department of Natural Resources, Mines and Energy to reinstate responsible vegetation protection framework and improving safeguards for threatened species habitat
- introducing the Nature Conservation (Special Wildlife Reserves) and Other Legislation Amendment Bill 2018 to Parliament in February to create special wildlife reserves, a new class of protected area that will afford the highest levels of protection to areas of outstanding natural and cultural value on private lands
- developing a new South East Queensland Koala Conservation Strategy, delivering on the recommendations of the Koala Expert Panel
- the Biodiversity and Ecosystems Climate Adaptation Plan, developed with the conservation sector and other stakeholders to promote the climate resilience of our natural environment
- establishing the $500 million Land Restoration Fund to support land-sector projects that deliver co-benefits such as habitat restoration for threatened species as well as carbon sequestration; and
- addressing the threat that climate change poses to species' survival more broadly through the Queensland government's Climate Changes Response and associated Strategies, for the transition to a low carbon future and adaptation to a changing climate.

Please find attached DES' response to the recommendations included in the report. We agree to all of the report recommendations and will actively seek to secure the resources required to support full and timely implementation.

Thank you again for the opportunity to comment on the proposed report.

Yours sincerely

Jamie Merrick
Director-General
3/10/18

Encl. (1)

Responses to recommendations

Queensland Audit Office
Better public services

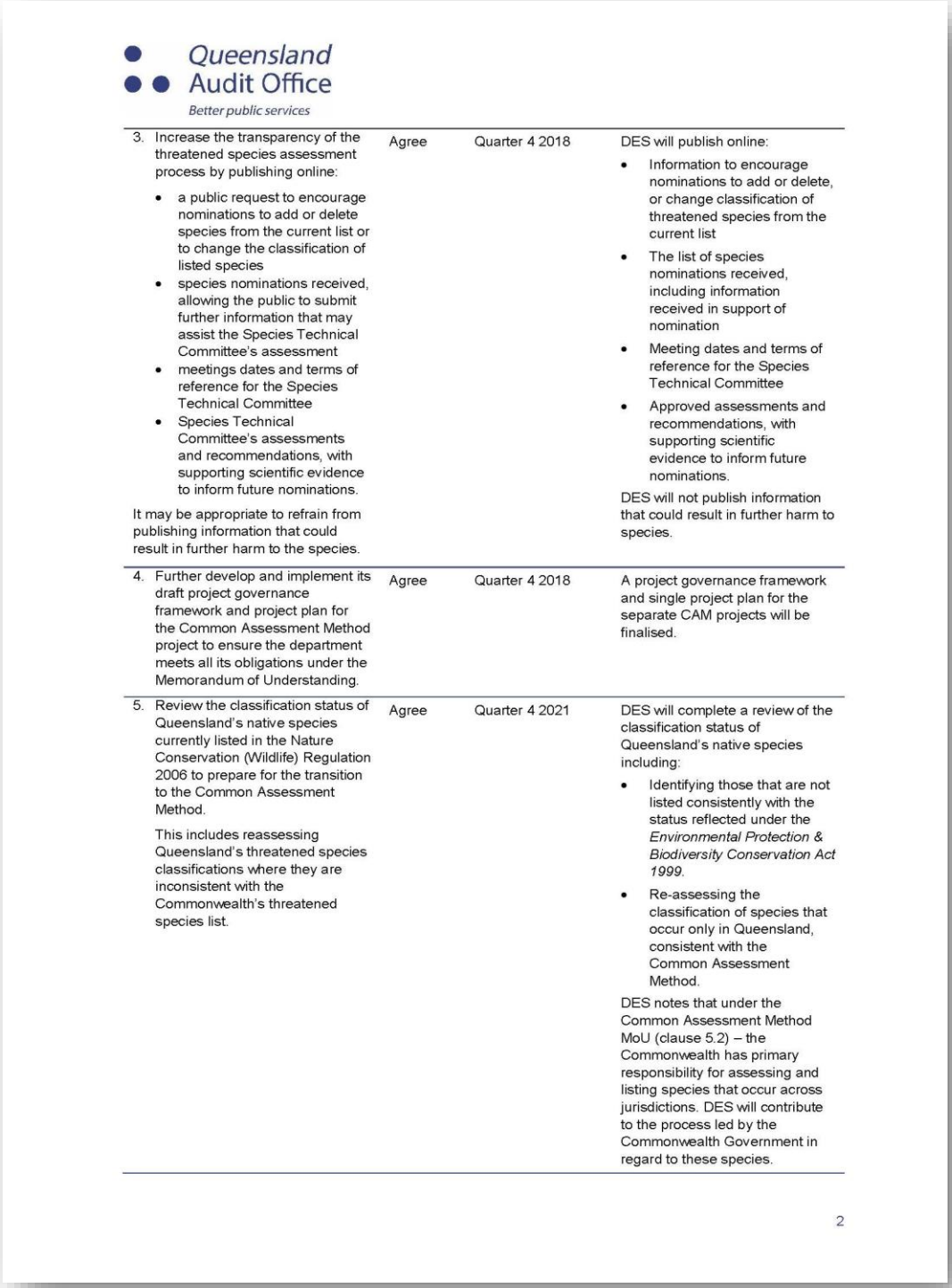
Department of Environment and Science

Conserving threatened species

Response to recommendations provided by Jamie Merrick, Director-General, Department of Environment and Science on 31 October 2018.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and year)	Additional comments
1. Proactively nominate species for listing or reclassification under the Nature Conservation (Wildlife) Regulation 2006. Classification reviews should be periodical.	Agree	Quarter 2 2019	The Department of Environment and Science (DES) will enable and encourage proactive nomination of species for listing or reclassification under the Nature Conservation (Wildlife) Regulation 2006. DES will implement an engagement and communication plan to promote better awareness of the process for making nominations for species listing
		Quarter 3 2019	DES will establish a process to systematically update the classification of wildlife in Queensland consistent with that being developed by the inter-jurisdictional Common Assessment Method working group.
2. Review the *Nature Conservation Act 1992* to ensure timely listing of threatened species. This should include amending the legislation so that the minister's decision of whether to add, delete or reclassify a species is reflected in the Nature Conservation (Wildlife) Regulation 2006 within a specified timeframe after receiving the Species Technical Committee's recommendation.	Agree	Quarter 2 2019	DES will complete a review of the effectiveness of the nomination and listing approaches used across other jurisdictions in achieving timely species listings.
		Quarter 2 2020	The Nature Conservation (Wildlife) Regulation will be updated to include a timeframe for listing as indicated by the review.

1



Queensland Audit Office
Better public services

3. Increase the transparency of the threatened species assessment process by publishing online: • a public request to encourage nominations to add or delete species from the current list or to change the classification of listed species • species nominations received, allowing the public to submit further information that may assist the Species Technical Committee's assessment • meetings dates and terms of reference for the Species Technical Committee • Species Technical Committee's assessments and recommendations, with supporting scientific evidence to inform future nominations. It may be appropriate to refrain from publishing information that could result in further harm to the species.	Agree	Quarter 4 2018	DES will publish online: • Information to encourage nominations to add or delete, or change classification of threatened species from the current list • The list of species nominations received, including information received in support of nomination • Meeting dates and terms of reference for the Species Technical Committee • Approved assessments and recommendations, with supporting scientific evidence to inform future nominations. DES will not publish information that could result in further harm to species.
4. Further develop and implement its draft project governance framework and project plan for the Common Assessment Method project to ensure the department meets all its obligations under the Memorandum of Understanding.	Agree	Quarter 4 2018	A project governance framework and single project plan for the separate CAM projects will be finalised.
5. Review the classification status of Queensland's native species currently listed in the Nature Conservation (Wildlife) Regulation 2006 to prepare for the transition to the Common Assessment Method. This includes reassessing Queensland's threatened species classifications where they are inconsistent with the Commonwealth's threatened species list.	Agree	Quarter 4 2021	DES will complete a review of the classification status of Queensland's native species including: • Identifying those that are not listed consistently with the status reflected under the *Environmental Protection & Biodiversity Conservation Act 1999*. • Re-assessing the classification of species that occur only in Queensland, consistent with the Common Assessment Method. DES notes that under the Common Assessment Method MoU (clause 5.2) – the Commonwealth has primary responsibility for assessing and listing species that occur across jurisdictions. DES will contribute to the process led by the Commonwealth Government in regard to these species.

2

Queensland Audit Office
Better public services

6. Develop an integrated and comprehensive conservation strategy for Queensland to meet the requirement of the *Nature Conservation Act 1992*. The strategy should be supported by plans for: • investment and implementation • engagement and communications • monitoring and evaluation	Agree	Quarter 4 2018 Quarter 1 2019 Quarter 3 2019	DES will engage with an expert forum of scientists to commence developing key principles for threatened species conservation under a biodiversity strategy. DES will establish stakeholder consultation mechanisms for development of a biodiversity conservation strategy DES will complete an overarching Queensland Biodiversity Strategy, inclusive of specific strategies required under the *Nature Conservation Act 1992* for threatened species, protected areas and wildlife. The strategy will be supported by an implementation and investment plan, engagement and communication plan, prioritisation framework and a framework for monitoring, assessing and reporting on progress. The implementation of the strategy will require consideration of additional resources required.
7. Monitor and report on the population and trends of threatened species by: • prioritising species for monitoring to make the most of available resources • developing data collection protocols to ensure consistency and rigour • improving data management and access • reporting on recovery activities within government and by external partners • reporting on the effectiveness of conservation management outcomes.	Agree	Quarter 3 2019	DES will establish a renewed framework to effectively monitor and report on the population and trends of threatened species including to: • Prioritise species for monitoring • Develop and publish a research prospectus • Better capture outcomes from research permits • Improve data collection, management and access • Improve reporting on recovery activities and outcomes • Establish formal partnerships with relevant external science research bodies.

3

Comments received from Executive Director Land Policy, Department of Natural Resources, Mines and Energy

Queensland Government
Department of
Natural Resources, Mines and Energy

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Dear Mr Worrall

I refer to your letter dated 10 October 2018 addressed to Mr James Purtill, Director-General of the Department of Natural Resources, Mines and Energy (DNRME) regarding the Queensland Audit Office's (QAO) report *Conserving Threatened Species*. The Director-General has asked me to respond on his behalf.

Thank you for the opportunity to comment on the QAO's report. As the report outlines, the clearing of native vegetation in Queensland is regulated by the *Vegetation Management Act 1999* (the Act). The Act provides for an essential habitat map for endangered, vulnerable and near threatened species which is based on data provided by The Department of Environment and Science. Essential habitat is protected through development assessment and accepted development vegetation clearing codes.

Amendment to the Act that were passed by the Queensland Parliament on 3 May 2018 provided further protections for Queensland's threatened species. These changes included expanding the regulation of —

- essential habitat to include near-threatened species in addition to endangered and vulnerable species, and
- high-value regrowth vegetation to include regrowth vegetation that has not been cleared in the last 15 years.

As the essential habitat map covers high-value regrowth vegetation and remnant vegetation, both changes resulted in an increase in the area of protection for essential habitat.

DNRME supports an effective and efficient system for delivering the conservation of Queensland's wildlife. DNRME acknowledges that the QAO's recommendations will contribute to improving the data underpinning DNRME's essential habitat map, which DNRME supports.

Should you have any questions about the information I have provided, please contact Mr Peter Lazzarini, Director Vegetation Management, who will be happy to assist on telephone 3199 7364.

Yours sincerely

L. Hinrich

Lyall Hinrichsen
Executive Director, Land Policy

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Comments received from Director-General, Department of Agriculture and Fisheries

Queensland Government

Department of
Agriculture and Fisheries

Our ref: CTS 29905/18

30 OCT 2018

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Dear Mr Brendan Worrall

Thank you for your letter of 10 October 2018 regarding the proposed report to the Queensland Parliament - "Performance audit on Conserving Threatened Species".

I note that the audit focused primarily on the Department of Environment and Science's administrative responsibility for identifying, protecting and recovering Queensland threatened species under the *Nature Conservation Act 1992*.

I understand that the audit involved consultation with staff from the Department of Agriculture and Fisheries to the extent that was necessary for your staff to understand the contribution of pest and weed management to protecting and conserving threatened species.

As the report's conclusions and recommendations are directed to the Department of Environment and Science, I will not be providing comment.

If you require any further information, please contact Dr John Robertson, General Manager, Invasive Plants and Animals on 3087 8065 or by email at john.robertson@daf.qld.gov.au.

Yours sincerely

Elizabeth Woods

Dr Elizabeth Woods
Director-General
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B. Audit objectives and methods

Audit objective and scope

The objective of the audit was to assess whether Queensland public sector entities are effectively identifying, protecting and conserving threatened species.

We addressed the audit through the following sub-objectives and criteria:

The Department of Environment and Science:

- is effectively managing the process for species to be listed under the *Nature Conservation Act 1992*
- has effective and efficient systems, policies and procedures for identifying, assessing and listing all threatened species, habitats and common threats
- is efficiently and effectively implementing the intergovernmental Memorandum of Understanding for the *Agreement on a common assessment method for listing threatened species and threatened ecological communities*
- has strategies and plans that are effective in protecting threatened species and their habitat
- effectively monitors and reports on achievement of threatened species outcomes.

Scope exclusions

The scope of the audit did not include all activities relating to conserving and managing threatened species. We did not include:

- the licensing system to protect native wildlife species that regulates the sustainable taking, keeping, using or moving of wildlife for commercial, recreational or other purposes
- implementation of legislation affecting land clearing, development and planning, and environmentally relevant activities
- koala conservation, crocodile conservation and management, flying fox management and macropod management
- grant and funding programs such as Community Sustainability Action grants, Everyone's Environment grants and Nature Assist.

Entities subject to this audit

We focused the audit on the state governments role in conserving threatened species. Local governments, non-government organisations, researchers, industry groups and individuals (including landholders) also play valuable roles in conserving threatened species. We did not audit local governments or these other organisations, groups or individuals. Our focus was on how the state government is providing strategic leadership and coordination to partner with these entities.

Therefore, our audit focused on assessing the Department of Environment and Science.

We consulted with the Department of Agriculture and Fisheries and the Department of Natural Resources, Mines and Energy to understand their contributions to protecting and conserving threatened species.

Audit approach

We conducted the audit between May 2018 and October 2018. The audit included:

- interviews with staff from the Department of Environment and Science (including regional staff), the Department of Natural Resources, Mines and Energy and the Department of Agriculture and Fisheries
- document reviews and analysis of data
- interviews with threatened species key stakeholders and experts
- visits to two nature refuges in central Queensland, including discussion with the landholders.

Submissions received

Anyone can contribute information to an open performance audit. Contributions can be made confidentially and are protected by legislation.

We received 31 written submissions to the conserving threatened species audit. The majority came from universities, conservation groups, wildlife parks, zoos and private individuals with an interest in conserving biodiversity and threatened species.

The key themes from our analysis of the submissions included:

- identification of species for listing under regulation
- how threatened species recovery activities are managed and resourced
- recovery plans for threatened species including accountability and transparency of actions and results
- monitoring of threatened species populations and trends
- engagement and collaboration between government and non-government organisations
- captive breeding as a conservation tool.

We have incorporated information from these submissions into the audit report where relevant and appropriate.

We thank everyone who made a submission and the landholders we visited for their time in contributing to the audit.

C. Relevant legislation

Figures C1 and C2 provide detail on relevant Queensland and Australian legislation for conserving threatened species.

Queensland legislation

Figure C1 summarises the key Acts in Queensland and, where applicable, how they interrelate.

Figure C1
Summary of Queensland's threatened species legislation

Legislation/regulation	Description
Nature Conservation Act 1992 (NC Act)	Regulates the protection of Queensland's native wildlife Supports the making of subordinate legislation, including regulations, notices and conservation plans Prescribes the classification categories of wildlife in Queensland
Nature Conservation (Wildlife) Regulation 2006	Lists Queensland's native wildlife under the NC Act's prescribed categories Establishes the permit and licencing requirements for the take, keep and use of each species class
Vegetation Management Act 1999 (VM Act)	Regulates the clearing of vegetation to conserve remnant and high-value regrowth vegetation, prevent land degradation and loss of biodiversity, maintain ecological processes and reduce greenhouse gas emissions Supports the protection of essential habitat for threatened and near threatened wildlife listed under the Nature Conservation (Wildlife) Regulation 2006
Biosecurity Act 2014	Provides comprehensive biosecurity measures to safeguard the state's economy, agricultural and tourism industries, environment and way of life from pests, diseases and contaminants

Legislation/regulation	Description
Environmental Offsets Act 2014	Regulates and outlines the framework for environmental offsets to compensate for unavoidable impacts on significant environmental matters, such as highly valuable species and ecosystems

Source: Queensland Audit Office

Commonwealth legislation

The Commonwealth Government's Department of Environment and Energy administers the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Figure C2 summarises the key differences and interactions between the Commonwealth's EPBC Act and Queensland's NC Act.

Figure C2
Comparing Commonwealth and Queensland legislation

EPBC Act function	NC Act comparison and integration
Identification and listing of species as threatened	The EPBC Act provides for the listing of threatened native species and ecological communities, native migratory species and marine species. Similarly, the NC Act provides for the listing of Queensland's threatened species*. The Commonwealth and Queensland maintain separate threatened species lists and there are some differences in the classification used to describe a species' status. A change in the Queensland threatened species list does not trigger a change in the Commonwealth threatened species list, and vice versa. The NC Act lists 538 species that are not identified as threatened under the EPBC Act. Similarly, the Commonwealth lists 66 species that occur in Queensland, but which are not listed under the NC Act.
Identification and listing of ecological communities as threatened	Queensland's NC Act does not provide for the listing of threatened ecological communities. However, the VM Act regulates the protection of threatened regional ecosystems. Queensland's Regional Ecosystem Mapping Framework is the most comprehensive ecosystem-level mapping and classification system of any state in Australia. It helps to inform the listing of ecological communities under the EPBC Act.

EPBC Act function	NC Act comparison and integration
Development of conservation advice and recovery plans for listed species and ecological communities	Any state or territory can adopt and implement a Commonwealth recovery plan for species listed under the EPBC Act. However, the Commonwealth does not fund these plans.. Queensland's NC Act does not mandate recovery plans but supports the development of conservation plans. There are only two current conservation plans (for estuarine crocodiles and koalas, both of which are listed as vulnerable in the Nature Conservation (Wildlife) Regulation 2006).
Development of a register of critical habitat	The NC Act and the EPBC Act provide for the designation of critical habitat. Under the EPBC Act, the Department of Environment and Energy maintains a register of critical habitat. There are currently five critical habitats listed in the register. Queensland has not listed any critical habitats under the NC Act.
Recognition and abatement of key threatened processes	The EPBC Act supports the identification and listing of key threatening processes. Once a threatening process is listed, a threat abatement plan can be established if shown to be 'a feasible, effective and efficient way' to abate the threatening process. The NC Act does not provide for the listing of key threatening processes or threat abatement plans.

* Note: The NC Act uses the term threatened wildlife instead of threatened species. There is no substantive difference in meaning.

Source: Queensland Audit Office

Auditor-General reports to parliament

Reports tabled in 2018–19

1. Monitoring and managing ICT projects (Report 1: 2018–19)
   10 July 2018
2. Access to the National Disability Insurance Scheme for people with impaired-decision making capacity (Report 2: 2018–19)
   27 September 2018
3. Delivering shared corporate services in Queensland (Report 3: 2018–19)
   27 September 2018
4. Managing transfers in pharmacy ownership (Report 4: 2018–19)
   28 September 2018
5. Follow-up of Bushfire prevention and preparedness (Report 5: 2018–19)
   9 October 2018
6. Delivering coronial services (Report 6: 2018–19)
   18 October 2018
7. Conserving threatened species (Report 7: 2018–19)
   13 November 2018

Audit and report cost

This audit and report cost $206 000 to produce.

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Performance engagement

This audit has been performed in accordance with ASAE 3500 *Performance Engagements.*

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Queensland Audit Office

Better public services