

## Submission - 2019 Independent review of the EPBC Act

Thank you for the opportunity to provide a submission to your review of this critically important piece of legislation.

Natural Resource Management (NRM) regions around Australia share quadruple-bottom line objectives and the need to protect and enhance our natural environment and unique valuable biodiversity. We all receive some funding from the Australian Government, guided by the EPBC Act, to achieve the latter. This is a key piece of legislation for our work.

Our submission covers the following critical issues:

- The ongoing biodiversity crisis in Australia and increasing threats to Australia's unique environment including climate change.
- Positive work happening around the country through regional NRM bodies and their partners in relation to environmental protection and biodiversity.
- Further improvement requires building upon:
  - An integrated landscape-scale approach with planning and implementation
  - Partnerships with land managers and communities
  - Collaboration and contributions across sectors and governments
  - Roles for regulation, policy, investment, market-based instruments and incentives
- Additional points:
  - Climate change
  - National Environmental Information System and environmental accounts
  - Increased role for Indigenous Australians
  - Offsetting
  - ESD principles

### About NRM Regions Australia

NRM Regions Australia is the national representative group of Australia's 54 regional NRM bodies that cover the continent.

We regard Natural Resource Management (NRM) as the responsible use of our land, water, soil, plants and animals for current and future generations, and our member organisations work to maintain healthy and productive country that supports viable communities and industries. Our members work from the paddock to the national scale to address issues that require a landscape perspective. Regions also work collaboratively together on wider landscape projects such as the Tri-State Murray alliance <http://www.necma.vic.gov.au/Projects/Current-projects/tristate-murray>, or the Rangelands alliance <http://www.rangelandnrmalliance.org.au/>. This enables us to work across State borders and ecologically connected areas, broker partnerships, and share knowledge and skills at any relevant scale.

Our approach also enables community and landcare activity to better address long-term strategic issues of national importance.

Australia is unique in the world in having a regional NRM model and ‘infrastructure’ across the country. The Act can build upon these existing arrangements.

### Australia’s Biodiversity decline

As confirmed by Australia’s 2016 State of the Environment Report, “biodiversity has continued to decline since 2011 and an increasing number of fauna (and flora) species have been listed as vulnerable, threatened or critically threatened”.

Other global organisations have drawn attention to the worldwide decline in biodiversity – for example, the UN Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) states; “that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history. The average abundance of native species in most major land-based habitats has fallen by at least 20%, mostly since 1900. More than 40% of amphibian species, almost 33% of reef-forming corals and more than a third of all marine mammals are threatened. The picture is less clear for insect species, but available evidence supports a tentative estimate of 10% being threatened. At least 680 vertebrate species had been driven to extinction since the 16th century”.

In Australia and globally we desperately need to improve what we are doing and halt this decline.

### Response to the Discussion Paper

#### *Regional NRM Planning (responding to questions 5,6, 11 & 16)*

In the review’s own discussion paper you state *“While there are a range of definitions of landscape-scale approaches, they tend to include the consideration of large spatial areas through an integrated multidisciplinary approach to better manage the cumulative impacts on the environment, with consideration of economic and social factors. The potential benefit of landscape-scale solutions is that they may enable better protection of matters of national significance, longer-term streamlining of administrative decision making and compliance, and coordinated investment in protection and restoration.”* We believe that Regional NRM plans work to achieve this – and could be better utilised to do so.

The 2016 SOE report identifies *“integrated regional or landscape-scale plans could be a priority for development in partnership with states and territories to meet a range of national and state level requirements...”* and *“A whole-of-landscape approach is required to effectively manage impacts and achieve meaningful outcomes.”*

Likewise, in 2017 the Australian Committee for IUCN recognised and advocated for strengthening the role of regional NRM organisations and to *“harness the potential of integrated regional NRM plans for regional scale conservation planning that addresses national priorities”*.

All regional NRM bodies prepare landscape scale, natural resource management plans through an integrated approach that recognises how natural resource management issues are linked. For example, how protecting Australia’s threatened flora and fauna requires us to address land and water management practices and deal with other threatening processes such as loss of vegetation, weed and feral animal impacts.

The landscape scale allows us to address issues such as habitat and wildlife corridors at an appropriate scale whilst engaging with all land managers (i.e. farmers, indigenous communities, as well as public land managers).

NRM Planning plays a key role in protecting our environment and natural biodiversity. The 2013 discussion paper, *Regional NRM Planning in Australia. What is it? Where is it heading?* (Ryan et al 2013) identified three core characteristics, or underpinning objectives, of NRM plans across the nation:

- The plans take a long view into the future. They recognise that landscape change can be slow, but that clear guidance is needed on the priority actions that need to be taken now. The plans therefore also spell out intermediate objectives and clear pathways from the present to the future.
- The plans are highly integrative. They involve all land uses and their socio-economic values across their regional landscapes, and they take into account the ecological interactions that influence natural resource outcomes. In this way the plans are distinguished from, but complementary to, those that deal with single industries, single issues or single natural resources.
- The plans are built with broad stakeholder and community involvement so that they reflect local knowledge and aspirations, gain local credibility, commit local organisations to a role in implementation and empower local communities to be involved. The broad directions for each plan come from relevant overarching plans and strategies at higher scales so that the result is an alignment of interests and opportunities across multiple scales.

Many plans use an 'assets based' approach in which biodiversity, land, water and people are used as the classifying principle. The approach then considers pressures and threats to those assets and following appropriate prioritisation methods (that take account of national, state and regional priorities) identify investment opportunities. Some have evolved to adopt a resilience or social-ecological systems approach.

The plans are embedded in an adaptive management framework (review, plan, implement, monitor, review). To strengthen this framework NRM Regions Australia has been a strong advocate for a national environmental information system and a set of national environmental accounts that can demonstrate outcomes from the investments of all governments in NRM and identify long-term trends.

We propose that the review consider how bioregional planning, and potentially regional conservation planning, can link with or utilise regional NRM planning processes. Species specific plans would remain important, yet with their objectives more efficiently achieved within a landscape framework.

Regional NRM plans could develop a conservation plan to standards specified by the government which would be developed in the context of our integrated NRM planning framework. These would then relate to land and water management issues and identify conservation investment priorities that considers the range of instruments available (regulation, incentives, education, market-based

approaches etc). They would select the appropriate instrument(s) to respond to the issue and the unique regional socio-ecological environment.

We propose that a significant area for consideration by the EPBC Act review is how Regional NRM Planning can be used to achieve the Act's objectives.

### *NRM Plans and EPBC Strategic Assessments*

We believe that regional NRM organisations are well placed to deliver strategic landscape-scale assessments which complement the existing roles of regional NRM organisations, most significantly the regional NRM strategies.

If the Minister is satisfied that a strategic plan or program will deliver acceptable environmental outcomes, then developments in accordance with the plan or program do not require further Australian Government environmental assessment.

These examples reflect the flexibility and diversity of those strategic assessments completed under the EPBC Act, with a variety of parties, including:

- BHP Billiton Iron Ore Pty Ltd - strategic assessment of an area in the Pilbara region of Western Australia and assessed the cumulative impacts of their future iron ore mines on matters protected under the EPBC Act.
- SA Government - strategic assessment of fire management policies and procedures for lands under the care and control of the South Australian Minister. The process approved actions associated with bushfire management on public lands in South Australia as described in the endorsed Policy.
- Gandangara Local Aboriginal Land Council (GLALC) - strategic assessment of the proposed development at Heathcote Ridge, NSW. The Program Report for the Strategic Assessment of the Heathcote Ridge Development, West Menai was approved and allows for development and other related activities identified in the program.

### *NRM Plans – protection, restoration and engagement (Question 11)*

Our planning processes are designed to identify environmental assets requiring protection and those where restoration efforts are required. If the Act is to achieve its objective of “promoting the conservation of biodiversity” it needs to give emphasis to restoration efforts.

This question reinforces our earlier responses regarding the importance of a national monitoring and evaluation framework – the framework must provide data that is useful to landscape scale planning.

Incorporation of indigenous land management practices (and cultural values) into the regional NRM planning processes is core business for our members. We note that those practices and values can be regional specific supporting the need for their incorporation to be a regional scale.

## Additional points

### *Climate change (Question 7)*

We stress the urgency for climate change action, both mitigation and adaptation, in order to protect our environment and biodiversity. The Act has a role to play in addressing this.

To do this we also need better data and information to support adaptive management efforts. This includes understanding climate projections and their implications to the environment and biodiversity, and to our investments in protection and restoration (where and how).

Our 2013 discussion paper recommended “Re-thinking biodiversity conservation strategies as climate change unfolds. Conservation planning based on in situ conservation of individual species might not be the best strategy when ecosystems are changing rapidly.....”

In 2014 the Australian government provided funding to regional NRM bodies to update regional NRM plans to take account of latest climate change data. A unique feature of this approach was harnessing scientific expertise from R&D organisations, universities and others, at a multi-regional landscape scale. We have a good overview of future climate change impacts and the strategic actions required to mitigate some of those impacts on biodiversity.

The next review (following this one) of the EPBC Act will be around 2030, by which time climate change impacts will be more established, widespread and perhaps irreversible– how can this review provide a foundation to manage this threat to our biodiversity?

### *National Environmental Information System (including data) and Environmental Accounts (Question 15)*

Monitoring of Australia’s biodiversity and environmental health has been inadequate. Since 2010 NRM Regions Australia has been strongly advocating for monitoring, evaluation and information systems to provide evidence to assist with adaptive planning, and we appreciate the complexity of this.

In 2010, the annual national NRM Regions Chairs’ Forum agreed that resource condition monitoring was vitally important for “accountability, priority setting, improving effectiveness of investment and intervention, being answerable to ANAO, to funders and to communities and to understand trends and identify emerging issues”.

The Chairs felt strongly about this topic and made the distinction between the collection of data through resource condition monitoring and the aggregation and presentation of this through a set of national environmental accounts. Chairs committed to a national resource condition monitoring system and pursuing the development of a set of a National Environmental Accounts presenting this to the then NRM Ministerial Council of COAG (there was an emphatic willingness to participate in trials based upon principles that have been established by the Wentworth Group of Concerned Scientists).

To strengthen our adaptive planning and implementation NRM Regions Australia has been a strong advocate for a set of national environmental accounts that can demonstrate outcomes from the investments of all governments in NRM. We have partnered with the Wentworth Group of Concerned Scientists in running a Regional Environmental Accounts trial (2012-2015) (see:

<http://nrmregionsaustralia.com.au/regional-environmental-accounts/>) and more recently we have been engaging with the Australian Government on the development the *Environmental Economic Accounting: A Common National Approach Strategy and Action Plan*.

A national spatial overview of environmental condition and trends is an increasingly critical need. NRM Regions Australia has been working with Geoscience Australia on developing tools to assist with regional NRM planning.

We note the 2016 SOE report commented that:

“Australian governments and NRM bodies that manage biodiversity are now considering the adoption of environmental accounting that includes trend and condition reporting for environmental assets, to better evaluate the status of our natural capital and better assess the return on investment in the environment.

More and more biodiversity management in any location involves a co-investment of multiple partners, and therefore reporting needs to move to measurements that report on the outcome of the total investment” (Creswell et al, 2017).

Government priorities need to remain dynamic and respond to current issues (drought, bushfires and recovery, COVID-19 etc). Your review might consider whether an entity, supported by legislation, offers the best approach to addressing the critical need.

### *Role for Indigenous Australians (Question 19)*

We strongly support efforts leading to a greater involvement by Aboriginal and Torres Strait Islander peoples in delivering the EPBC Act, whether through increased and culturally appropriate use of Indigenous knowledge (including what is sometimes referred to as Traditional Ecological Knowledge), acknowledgement of Indigenous values, participation in assessment and approval of projects, or other processes under the EPBC Act. This could be achieved through ongoing support for Indigenous Advisory Committee (IAC), as well as adding new requirements for more localised input via land councils, native title representative bodies and registered native title bodies corporate. These new processes can balance efficient administration of the Act while encouraging a more responsive framework that recognises the unique circumstances and limited resources of experts in responding to and guiding appropriate land use and development.

These last measures are not controversial: the EPBC Act requires public consultation or comment to be invited on various stages associated with the referral, assessment and approval of proposed actions (controlled actions). Including more tailored provision for comment from, or consultation with, Indigenous bodies or persons would be a more appropriate way to ensure engagement, outside of the general public process.

### *Offsetting (Question 24)*

Offsets are potentially a beneficial tool in our restoration efforts however there is a need for greater accountability and transparency, particularly in relation to tracing payments and offset outcomes over time.

NRM organisations could play a valuable role in supporting the integrity of any system for clear and accountable offsetting arrangements. For example, regional NRM bodies can play a useful and efficient role in land and water management planning, technology and monitoring. Establishing innovative financing may enable these activities to provide ‘real time’ information and accountability. In this way, regional NRM bodies continue to play a productive and trusted role, in the space between regulators and participants, to ensure broader environment/natural resources outcomes.

Environmental offset markets need to be coherent across state, territory and federal jurisdictions. If not, transparency and accountability issues create the potential for double (or triple) dipping across schemes (and adverse environmental / biodiversity outcomes). Enabling a centralised platform under national environmental law and regulation could assist all stakeholders ensure the integrity of outcomes across carbon, water quality, and environmental/biodiversity offset and trading schemes.

### *ESD principles and CBA (Question 2)*

The challenge for ESD principles since the 1992 intergovernmental agreement is how to give effect to them in the decision-making process. While it is important for the Act to establish them as guiding principles, a supporting planning and implementation framework is required.

Regional NRM Planning addresses the ESD principles – integration of short and long terms economic, environment and social considerations, the precautionary principle etc.

Cost benefit analysis is an important element of NRM decision making process, but we must caution that this is one of a range of decision support tools that attempt to systematically assess the costs and benefits of actions where the monetary value of environmental assets are not able to be determined.

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## References

Cresswell ID & Murphy HT (2017). *Australia State of the Environment 2016: biodiversity*, independent report to the Australian Government Minister for the Environment and Energy, Australian Government Department of the Environment and Energy, Canberra.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report, approved at the 7th session of the IPBES Plenary April 2019

Ryan S, O’Neill D, Chrystal J and McKee J (2013) *Regional NRM Planning in Australia. What is it? Where is it heading?* National NRM Regions Working Group, Canberra.

<http://nrmregionsaustralia.com.au/wp-content/uploads/2017/09/Regional-NRM-Planning-final-draft-February-2014.pdf>

Zischka K, Figgis P, Dovers S and Debus B (Eds) (2017). *Maintaining Australia’s Natural Wealth: Priorities for Terrestrial Conservation*. Australian Committee for IUCN, Sydney.

## Attachment – Current examples

Our web site ([www.nrmregionsaustralia.com.au](http://www.nrmregionsaustralia.com.au)) contains many examples of the biodiversity and conservation work of regional NRM Organisations. This attachment contains few case studies to illustrate the practical efforts to address environmental protection and biodiversity in Australia.

### *Case Study: Territory Conservation Agreements (TCA) – Territory NRM, Northern Territory*

#### *The challenge*

The TCA program has been designed to reflect the priorities concerns and opportunities of Landholders in the NT, and the extraordinary ecological values which can be found on private lands and pastoral leaseholds. It has been in operation since 2011. While it was initially developed to promote off-reserve conservation of habitats for threatened species and underrepresented Territory bioregions, It has evolved into a mechanism that can encompass relatively large sites with extraordinary ecological values, as found across the Northern Territory.

The program has evolved an increasing focus upon fostering conservation on pastoral lands and mainstreaming conservation into the management of working properties and pastoral enterprise. TCAs are voluntary agreements between landholders and TNRM to mutually develop and implement a conservation plan for an identified high conservation value site. TCAs are contracts committing the landholder to implement management actions for 10 years, but is not registered on property title nor binding upon future owners. Conservation agreements support participant landholders to reconfigure their properties to conserve key sites and enable them to access ongoing support or technical advice

#### *The results*

As of the end of 2017 the program accounted for 43 TCAs (55,146Ha). The average area of a TCA is about 1500 Ha, although most are less than 500 hectares. Practice change in conservation has been enabled at an average of \$140/Ha. TCAs have leveraged 200% co-investment for every dollar invested.

### *Case Study: South East Queensland Land for Wildlife – Healthy Land and Water Queensland*

#### *The challenge*

In SEQ, over 70% of the region is within private ownerships, reinforcing the need to engage with non-government land managers. The SEQ Land for Wildlife program has been in existence for 15 years, with regional coordination by Healthy Land and Water for the 15 years.

#### *The results*

This program engages with over 4,000 landholders within the region (collectively managing over 60,000 hectares) and, through Memorandums of Understanding with 11 local governments, provides support with property management for biodiversity outcomes, particularly targeting nationally threatened species.

*Case Study: Warru recovery program - Natural Resources Alinytjara Wilurara, South Australia*

*The challenge*

In 2007, the very real concern that warru (black-footed rock-wallaby) could become extinct in South Australia led to the formation of the warru recovery team. The warru recovery team has five main areas of work in order to recover populations of warru:

- managing existing warru populations
- establishing a captive warru population in order to facilitate eventual reintroductions
- research into the ecology of warru
- ongoing governance of the program through the warru recovery team
- monitoring warru populations.

*Engaging farmers and coordinating stakeholders*

This team is a partnership between: traditional owners of the APY Lands, the communities of Kalka, Pipalyatjara, Pukatja and Kenmore Park on the APY Lands, the Australian Government, the South Australian Government (Natural Resources Alinytjara Wilurara), APY Land Management, Ecological Horizons Pty Ltd, Conservation Ark (Zoos SA), University of Adelaide.

The warru recovery team has implemented a range of recovery actions that bring together contemporary science, practical on-ground threat management and traditional Anangu ecological knowledge.

*Results*

The two existing warru populations are managed through a range of measures including:

- ongoing fox and cat baiting regime at the Eastern Musgrave Ranges site
- fire management at known sites in order to protect populations but also enhance their habitat
- ongoing warru survival monitoring through radio-telemetry
- monitoring of population sizes through annual trapping and warru scat abundance monitoring
- ongoing surveys for new populations
- management of buffel grass.

In 2010, a 100-hectare predator-proof warru enclosure – known as the ‘warru pintji’ (warru fence) – was constructed to help the captivity-bred warru safely acclimatise and adapt to local conditions.

The site was chosen with full consultation with the warru recovery team and traditional owners through a process that combined local knowledge and scientific criteria, with the pintji itself built entirely by Anangu and warru rangers. Since 2011, more than 15 warru raised in captivity at Monarto Zoo have been released into the warru pintji, and free breeding is now taking place.

Over the past decade, the Warru Recovery Team and employees from the APY Lands have successfully undertaken black-footed rock wallaby trapping surveys. Performed annually until 2014 and every second year thereafter, the 11th trapping survey in the Musgrave and Tomkinson Ranges, located north-east and north-west of the APY Lands in South Australia showed encouraging signs that the warru population was in recovery.

*Case Study: Grow West – Port Phillip and Westernport CMA, Victoria*

*The challenge*

Grow West's vision is to rejuvenate 10,000 hectares of the upper Werribee Catchment, west of Melbourne by connecting large areas of public reserves; Brisbane Ranges National Park, Werribee Gorge State Park and up through to Lerderderg State Park, through a mosaic of restoration works on private property. Grow West is improving the health and production of farmland, creating habitat links between the parks, stopping erosion and reducing the amount of sediment being washed into waterways and reservoirs.

*Engaging farmers and coordinating stakeholders*

While the targets of Grow West extend across a large landscape, its success is achieved by working with landholders to design and deliver revegetation projects that suit the requirements of individual properties. Grow West secures funds and employs skilled personnel to make major works feasible, affordable and expertly delivered. Grow West brings together planners and practitioners from a range of organisations and community groups including Moorabool Shire Council, Melbourne Water, Southern Rural Water, Parks Victoria, Department of the Environment, Land, Water and Planning, Conservation Volunteers Australia and the Moorabool Landcare Network.

*The results*

Since 2003 Grow West has worked with numerous landholders on revegetation projects ranging from 1 – 100+ hectares. In total, over 2,500 hectares have been revegetated with the aim to enhance biodiversity, reduce the spread of noxious weeds and pest animals, reduce erosion and improve landholder skills and participation.

*Case Study: The Naturally Inspired Grants program – NRM South, Tasmania*

*Challenge*

NRM South's Naturally Inspired Grants is an ongoing grants program for landowners, community groups and schools to deliver projects which support positive environmental change and sustainable farming initiatives in Southern Tasmania. These include projects that:

- Increase engagement, participation and capacity building in NRM;
- Include on ground works to protect national and state listed species, communities and places; or
- Encourage farmers and fishers to adopt sustainable practices.
- If you need any assistance or advice, please get in touch with us as follows:

*Results*

NRM South have been offering this funding stream annually since 2009. Now in its tenth round, the Naturally Inspired Grants for community have supported 95 different community groups and schools with more than \$450,000 in funding for a diverse range of activities; including native plant revegetation, rehabilitating sensitive habitat, weed management, controlling invasive species, developing awareness raising tools, running engagement events, and many more. Naturally Inspired Grants for farmers and fishers has supported 34 landowners with \$157,000 since 2014, encouraging the adoption of innovative sustainable land use practices.

Support for the Naturally Inspired Grants is provided through Australian Government funding via the Regional Landcare Facilitator and National Landcare Programme.

*Case study: Environmental stewardship in iron grass grasslands and peppermint box woodlands - Natural Resources SA Murray-Darling Basin, South Australia*

*Challenge*

This 15-year conservation stewardship program assisted land managers to undertake management activities that protect, enhance the threatened ecological communities of iron grass natural temperate grasslands and peppermint box grassy woodlands.

*Results*

Who participated?

Individuals or organisations that owned or managed freehold, leasehold or native title land within the target area (parts of the Adelaide and Mt Lofty Ranges, Northern and Yorke and SA Murray-Darling Basin regions) and who have iron grass natural temperate grassland or peppermint box grassy woodland on their property.

How did the tender process work?

Land managers set their own price for the conservation management services they were prepared to undertake to protect and improve their native vegetation, such as fencing, grazing pressure reduction and pest animal and plant control or buffering. Successful tenders were those that offered the best biodiversity value for money.

Results from the project

67 Funding agreements from 10 to 15 years were offered to land managers whose bids were successful. Over 9600 hectares of critically endangered threatened ecological communities are protected and managed on private land Investment of over \$32 million in protecting threatened vegetation communities in South Australia by the Australian Government

*Case study: Yalgogrin Malleefowl Survey- Riverina Local Land Services NSW, Donato Environmental Services, Landowners and Land Managers*

*Challenge*

The objective of the Malleefowl Survey was to conduct and collate Malleefowl activity, threats, presence and breeding into GIS mapping format.

Donato Environmental Services (DES) conducted electronic surveillance of known Malleefowl mounds in the region. The aim was to gather information on the impacts on the mounds from predators and landuse practices and to use this information for: Reducing permanent habitat loss; Reducing the threat of grazing pressure on Malleefowl populations; Promoting Malleefowl friendly agriculture practices and Reducing predation

*Engaging farmers and coordinating stakeholders*

The Lake Cowal Foundation (LCF) has supported and assisted Riverna Local Land Services and DES with field work

*The results*

12 monitoring cameras set up in various locations over a three-year time period and have provided a very good understanding of the feral animal population as well as capturing information on the Malleefowl to inform further projects particularly future fox baiting programs.

*Case Study - Biodiversity Refugia & Linkages, South West Catchments Council, Western Australia*

*Challenge*

The Western Ringtail Possum, a nationally-listed threatened species, was targeted for conservation action as part of this project. This initiative included the capturing of individuals from the southern forest population around Manjimup and translocating them into the 420-hectare predator-free Perup Sanctuary.

*Results*

To date, 15 individuals have been translocated and were reporting to be thriving at least two months post-release. Monitoring will continue until June 2018 to determine the success of this action in conserving and protecting this threatened species. This project is designed to work at a landscape scale across the South West to protect biodiversity and restore ecosystem function and resilience. The focus is on the protection of flora and fauna species, particularly threatened species, and Threatened Ecological Communities (TECs) through increasing connectivity in the landscape and restoring priority habitats.

This project works on strategic Land for Wildlife properties across the South West. Up to December 2016, the project has included 19 hectares of rabbit control, planted 28,371 seedlings and included 2.2 kilograms of seed spread. It has also included 3 events, attracting 176 participants and relocated 15 Western Ringtail Possums to Perup Sanctuary.

*Case Study: Threatened Vegetation Communities Protection and Enhancement, Wimmera CMA, Victoria.*

*The challenge*

This project protects and enhances threatened EPBC Act listed vegetation communities on private land. The project delivers funding directly to landholders and provides training and education in conservation and land management practices to enable better management of threats to the condition these vegetation communities in the Wimmera.

*The results*

Funded by the Australian Government's National Landcare Program, the project successfully assisted landholders to protect 11 seasonally herbaceous wetlands resulting in 288 hectares of this endangered vegetation community being actively managed under 10 year management agreements. In partnership with Trust for Nature, the project secured 6.5 hectares of Buloke Woodland under permanent protection through a Trust for Nature Covenant. This brings the total area of EPBC listed vegetation communities under active management to over 670 hectares since the project commenced 3 years ago.

The project was well supported by landholders with 28 landholders expressing interest in undertaking wetland protection and enhancement works in 2016/17. In addition to funding the on-ground management actions being undertaken the project raises the profile of these important vegetation communities and builds landholders capacity to protect these areas on their properties by providing best practise management advice and techniques during one on one site visits.

The project supported Park Victoria as the land manager to undertake targeted pest plant and animal control in priority locations to compliment the on ground being undertaken by landholders. These works provided employment and training opportunities for Traditional Owners and the local indigenous community by utilising them to undertake these on-ground works.

*Case study: Orange-bellied Parrot Project - Corangamite CMA, Victoria*

*The challenge*

The Orange-bellied Parrot is listed as critically endangered nationally and in the State of Victoria. This small, migratory parrot breeds in summer in remote south west Tasmania and migrates to coastal habitats of Victoria and South Australia for autumn and winter. Priority recovery actions for the species are set out in the National Recovery Plan (DELWP 2016), and implementation of this plan is overseen by a national Recovery Team. DELWP is an active member of this team and participates in setting priorities at a national and state scale.

During implementation of this project the total wild population numbered fewer than 50 individuals. The population was supplemented annually with captive-bred individuals to prevent extinction in the wild from occurring in the near-term. Every year, only a small proportion of the known wild population are found within the non-breeding range. At current population levels, fewer than 10 individuals are likely to be found each winter.

*Results*

During implementation of this project, separately funded research and management projects identified that:

- since 2010 there has been a decline in survival of adult females, and juveniles of both sexes, with most mortality occurring in the non-breeding season (DPIPWE, unpublished data),
- the current population is reliant on effective supplementation from the captive population, and measures to improve survival of adult females and juveniles, to prevent extinction in the wild (unpublished draft PVA model, National Recovery Team, 2016)
- habitat extent on the mainland largely recovered after the millennium drought and is not currently likely to be limiting recovery (White et. al. 2016) (i.e. there is sufficient habitat for over 50 birds)
- wild food availability in the breeding range is currently limiting, which may influence current breeding outcomes and survival (Stojanovic et al. 2017)
- migration success, non-breeding habitat selection, and survival may be impacted by very small population size, as Allee effects begin impacting this species' flocking ability (Crates et al. 2017).

Given the vast range of this highly mobile species and the complexity of threats facing this very small population, actions in only one region in Victoria will not be sufficient to achieve recovery objectives. However, appropriate local contributions delivered across the range, will allow progress to be made against the recovery objectives collectively.