



Saving our Species program review 2016–21

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Water acknowledges the
Traditional Custodians of the
lands where we work and live.

We pay our respects to Elders
past, present and emerging.

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design agency Boss Lady Creative Designs created the
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Environment and Heritage

Department of Climate Change, Energy, the Environment
and Water

Locked Bag 5022, Parramatta NSW 2124

Phone: +61 2 9995 5000 (switchboard)

Phone: 1300 361 967 (Environment and Heritage enquiries)

TTY users: phone 133 677, then ask for 1300 361 967

Speak and listen users: phone 1300 555 727, then ask for
1300 361 967

Email: info@environment.nsw.gov.au

Website: www.environment.nsw.gov.au

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Executive summary

Saving our Species (SoS) is the NSW flagship program for threatened species conservation with two core objectives; to secure threatened species and ecological communities in the wild for 100 years and control key threats facing threatened plants and animals. It is driven by a long-term commitment, rigorous science, and strong partnerships. SoS fulfils a legislative requirement under the *Biodiversity Conservation Act 2016* to establish a Biodiversity Conservation Program.

The SoS program is addressing its legislative requirements under Section 4 of the *Biodiversity Conservation Act 2016*. SoS has:

- utilised the \$100m investment over the period 2016-2021 to improve high-level outcomes for the long-term security of NSW threatened species and ecological communities in the wild, increasing the number of species being effectively managed.
- implemented a process for the creation and public exhibition of strategies for recovery of threatened species and ecological communities, including making these publicly available via the online SoS database.
- developed and implemented a robust and world leading prioritisation framework for allocating resources to management streams, species, projects and sites.
- developed and implemented a robust monitoring, evaluation and reporting (MER) framework for the adaptation and continuous improvement of species outcomes.

In addition to meeting its legislative requirements, the SoS program achievements over 2016–21 have also included:

- contributing to an increase in both the number and proportion of threatened species and ecological communities with a conservation strategy to support them to survive in the wild.
- contributing to significant progress towards securing threatened species in the wild, with more than half of the species in site-managed, population and iconic management stream under SoS being classed as 'on track'.
- delivering research that is supporting decision making and informing species management within the program and benefiting conservation beyond the program.
- monitoring and evaluation activities that support the adaptive management and continuous improvement at both the individual species project level, and at the overarching program level.
- delivering engagement activities that increased public awareness and participation through community outreach and opportunities for citizen science and volunteering.

- partnerships and engagement that provide much needed supplementary support for animals and plants under the care of Saving our Species. This included attracting a further \$31 million funding from non-government partners, supplementing the \$100 million commitment from NSW State Government
- supporting the participation of Aboriginal people and communities in over 60 threatened species projects.

1. Introduction

1.1 Purpose

Australia has seen a huge rise in the number of species and ecological communities threatened by extinction, with 941 extant species and 72 extinct species, 52 populations and 111 ecological communities listed as threatened in NSW alone by 2020-21. The Saving our Species (SoS) program fulfills the role of the Biodiversity Conservation Program to address the legislative requirements of the *Biodiversity Conservation Act 2016* to maximise the number of threatened species and ecological communities secured in the wild for the next 100 years.

In line with the *Biodiversity Conservation Act 2016* (s 4.37(2)) the outcomes and effectiveness of the SoS program must be reviewed every 5 years after its establishment. This document fulfills the requirement of the review and focuses on the first 5 years of the Saving our Species (SoS) program (2016–21). It demonstrates how SoS is meeting its legislative requirements, how it is working in practice, and its achievements to date.

1.2 Scope

This report is focused on outcomes and effectiveness of the Biodiversity Conservation Program, as per the requirements under the *Biodiversity Conservation Act 2016*. The report has been informed by an independent 2016–2021 Program Evaluation, which synthesised program management data, the findings of three previous interim evaluations (2016/17, 2017/18 and 2018/19) conducted by external consultancies, one internal audit, two scientific reviews, a cost-benefit analysis (as part of the Program's business case development in 2021) and additional data collected to satisfy the information needs of the evaluation.

We note the following limitations with the methodology:

- The review relied on the data management and quality assurance processes of multiple threatened species data management systems. The process of collating and synthesising existing data surfaced some inconsistencies and variable data quality.
- The evaluation drew on the findings of past evaluations and reviews and did not seek to assess the quality of their analyses.

2. Legislative context

In 2017, the NSW Government implemented the Land Management and Biodiversity Reforms. The reform package included the *Biodiversity Conservation Act 2016* and amendments to the *Local Land Services Act 2013*. The reforms are delivered through four key pillars, one of which is the \$100 million investment in SoS for on-ground threatened species conservation. SoS' objectives are to maximise the long-term security of threatened species and threatened ecological communities in the wild and to minimise the impact of key threatening processes.

Part 4, Division 6 of the *Biodiversity Conservation Act 2016* outlines the legislative requirement for a Biodiversity Conservation Program. Table 1 below outlines these requirements, summarises how the SoS Program satisfies each of them, and references the section of this review report where further detail is provided.

Table 1 How SoS addresses the requirements of Part 4, Division 6 of the *Biodiversity Conservation Act 2016*

Legislative requirement as per Part 4, Division 6 <i>Biodiversity Conservation Act 2016</i>	Saving our Species elements that address the legislation
<p>s. 4.35 (1) The Environment Agency Head is to establish a Biodiversity Conservation Program.</p>	<p>The Saving our Species (SoS) Program was established in 2016 as the Biodiversity Conservation Program.</p>
<p>s. 4.35 (2) The program’s objectives are: (a) To maximise the long-term security of threatened species and threatened ecological communities in nature, and (b) To minimise the impacts of key threatening processes on biodiversity and ecological integrity.</p>	<p>The SoS program logic shows the program’s high-level outcome is the long-term security of threatened species and ecological communities in NSW is maximised (a), and an intermediate outcome is to minimise the impacts of key threatening processes (b).</p> <p>Achievements to date (2016-2021) toward these objectives include:</p> <ul style="list-style-type: none"> • Increasing threatened species being managed for conservation outcomes by 95 to 400 since its inception (see section 3.1 & 4.2). • Increasing the proportion of species on track within site-managed, iconic and population management stream to be secured in the wild to over 50% (see section 4.2). • \$100m investment over the period 2016-2021. • Increasing community awareness and leveraging an additional \$31 million investment in biodiversity from non-government partners (see section 4.4). • Producing robust scientific knowledge that is informing better species management (see section 4.3).
<p>s. 4.36 (1) The biodiversity conservation program is to consist of: (a) Strategies to achieve the objectives of the Program in relation to each threatened species and threatened ecological community.</p>	<p>(a) SoS includes a process for the creation and public exhibition of conservation strategies for recovery of threatened species and ecological communities (see section 3.1).</p> <p>(b) SoS includes a the SoS prioritisation framework that sets the priorities for implementing strategies (management stream, species, project and site) (see section 3.2).</p> <p>(c) SoS includes a program Monitoring and Evaluation Framework, which draws on the Project Monitoring, Evaluation, and Reporting Framework (MER) (see section 3.3).</p>

**Legislative requirement as per Part 4, Division 6
Biodiversity Conservation Act 2016**

Saving our Species elements that address the legislation

- (b) A framework to guide the setting of priorities for implementing the strategies.
- (c) A process for monitoring and reporting on the overall outcomes and effectiveness of the program.

s. 4.36 (2)	Strategies to minimise the impacts of key threatening processes may but are not required to be included in the Program.	SoS includes a management stream for Key Threatening Processes (see section 4.1).
s. 4.37 (1)	The Environment Agency head is to review the outcomes and effectiveness of the Biodiversity Conservation program every 5 years after the establishment of the Program.	In line with the SoS program Monitoring and Evaluation Framework, an independent evaluation of the 2016–2021 SoS Program was commissioned and completed in 2021 and informed this review report.
s. 4.37 (2)	The Environment Agency Head is to prepare a report of the review and publish the report on a government website maintained by the Environment Agency Head.	This report meets this requirement.
s. 9.7	A public register of the conservation strategies must be kept and made available.	SoS includes a database of conservation strategies that is publicly accessible through the Department’s Webpage (see section 3.1).

3. Saving our Species framework

This section demonstrates how the SoS framework and program is addressing all elements of section 4.36(1) of the *Biodiversity Conservation Act*.

SoS provides a framework for developing conservation strategies, prioritising investment in threatened species and ecological communities' management, and monitoring and reporting on the outcomes of this investment to support safeguarding of species in NSW. The SoS framework:

- Uses a science-based approach to plan and prioritise actions needed to conserve each species in the wild for the next 100 years, producing practical plans for actions at each site. This is captured as part of the conservation strategy for the threatened species or ecological community, monitored via the monitoring and reporting plans.
- Drives evaluation and public reporting through a monitoring, evaluation and reporting methodology that aims at ensuring threatened species recovery is driven by the best available data.
- Provides opportunities for organisations to partner with, invest in and deliver effective work on the ground. Partners contribute funding and in-kind support, generating new investment by business and the community.

The SoS Framework ensures that public investment is used efficiently, by prioritising projects based on the cost-effectiveness of targeted project actions at specific sites, to secure the maximum number of species in the wild for the long term. To gain funding under SoS, a species must have a highly targeted plan, developed in partnership with scientific experts and practitioners, and demonstrate that it will generate results by delivering effective actions at sufficient sites to secure a species for the future.

Since 2016:

- SoS has ensured an increasing number of species have been prioritised and have had conservation strategies put in place.
- SoS' prioritisation process was assessed as scientifically robust by scientific reviews and evaluations.
- Monitoring and evaluation processes have been feeding into species management knowledge and strategies.

3.1 Conservation strategies

Under section 4.36(1).1 of the *Biodiversity Conservation Act*, a strategy for any listed threatened species or ecological community must be included in SoS within two years of it being listed by the independent NSW Threatened Species Scientific Committee. Each conservation strategy outlines the minimum set of actions needed to maintain viable populations of each species or ecological community in the wild.

Since 2016, SoS increased both the number and proportion of threatened species and ecological communities with a conservation strategy to support them to survive in the wild. During its first 5 years, SoS developed and published 266 new management strategies for public exhibition, allowing members of the public to participate in the decision making for biodiversity conservation in NSW. These strategies are all publicly available via the SoS online database, fulfilling the requirements under section 9.7 of the Act.

3.2 Prioritisation

SoS applies a robust prioritisation approach to support cost effective decision making, maximising the number of entities secured in the wild for the next 100 years for the available funding. This approach has been designed in line with the requirements under 4.36(1).2 of the Act. The prioritisation of species and ecological communities for management is based on the benefits of actions to species populations, the feasibility of management, and cost effectiveness relative to other projects.

Under SoS, every threatened species is allocated to a management stream according to their characteristics, available knowledge and imminent threat. Each management stream employs specific approaches to develop conservation projects, identify priorities for investment and care for species to ensure they are safeguarded. For example, within the site-managed stream, the SoS program has adopted the Project Prioritisation Protocol (PPP), developed by the Australian Research Council Centre of Excellence for Environmental Decisions (University of Queensland). This PPP approach incorporates values associated with the benefit, likelihood of success and cost of action implementation for projects to assist with the funding allocations to individual species (SoS Technical Report, 2013).

The SoS prioritisation model has received international recognition (Brazill 2020) as an effective scientific approach and a cost-effective way to protect species.

3.3 Monitoring, evaluation and reporting framework

SoS monitoring and evaluation activities are supporting adaptive management and continuous improvement at both the individual species project level, and at the overarching program level. SoS is required by section 4.36(1).3 of the *Biodiversity Conservation Act* to establish a process for monitoring and reporting on the overall outcomes and effectiveness of the program.

At the **project level**, as part of managing threatened species and ecological communities, monitoring activities are undertaken to keep track of the success of species management. SoS project MER systems and processes are working well and are providing improved knowledge on how to manage species. Annual reporting shows whether individual species are on track to be secure, as well as actions implemented, partners involved, and costs incurred.

These report cards are publicly available, and the results inform ongoing adaptive management and revisions to conservation strategies as appropriate.

At the **program level**, SoS has been evaluated annually on its overall program performance, guided by its Program Evaluation Framework. Since 2016, there have been three annual evaluations, an audit, two scientific reviews and an evaluation of the entire 2016–2021 program period, all of which have informed continuous improvement of the program.

4. Key findings

SoS is effectively contributing to minimising the threats to threatened species and ecological communities and maximising the number that are secure in the wild. This section will focus on the key achievements made towards this long-term goal.

Over the period 2016-2021, SoS engaged in **conservation planning, management and monitoring, research, and partnership and engagement** activities. These activities contributed to:

- Increasing the number of threatened species and ecological communities that are being effectively managed in NSW from 95 to nearly 400.
- More species being on track to being secured in the wild across the program i.e. 262 of 294 projects within the site-managed, iconic and population management streams are on track (see Table 2).
- Greater knowledge and improved species management through research (see Table 3).
- An expanded network of organisations and individuals engaging with SoS and biodiversity (see Table 4 and Table 5).

4.1 Outcomes hierarchy establishes SoS long-term objectives

SoS has been driven by a defined Program Logic since the initiation of the program (Figure 1), ensuring it fulfils requirements under 4.35(1) and 4.35(2).

A Program Logic is a visualisation of the relationships between the key outcomes and objectives of a program, as they build from short term and tactical targets to long term and aspirational objectives. It clearly articulates how change is expected to happen and contribute to the intended long-term changes.

The SoS program logic demonstrates how the legislated outcomes and associated State Outcome Indicators are supported by objectives within the program. Figure 1 demonstrates the programs' approach that pairs technical objectives with a commitment to partnerships and stakeholder engagement, all applying adaptive management informed by science-based information, monitoring, evaluation and reporting. The objective of SoS is to maximise the number of threatened species secure in the wild in NSW for 100 years and to control the key threats facing threatened plants and animals.

Legislative objective

The long-term security of threatened species and ecological communities in nature in NSW is maximised
(Biodiversity Conservation Act 2016)

End of program outcomes

Threatened species and ecological communities in NSW are on track to being secure in the wild (State outcome indicator -LAG)

Threatened species and ecological communities are under effective management by NSW Government programs (State Outcome Indicator - LEAD)

Stakeholders and communities are active partners, helping to deliver Saving our Species by aligning activities and investment to the program's objectives

Intermediate outcomes

Improved or stabilised condition/abundance of threatened species and ecological communities in NSW

Improved habitat conditions and/or availability for threatened species and ecological communities in NSW

Reduced number of data deficient threatened species and ecological communities in NSW

An increased number of Saving our Species projects are being delivered, all to agreed standards and timeframes

Saving our Species partners use adaptive management principles in all projects

Increased investment in Saving our Species projects by partners

Figure 1 Saving our Species program logic

4.2 More species are being managed effectively in NSW

SoS is making significant progress towards its long-term objectives of securing threatened species in the wild (the objectives as set out in line with 4.35(2)).

As of 2021, 33 per cent of listed threatened species and ecological communities are being managed by SoS. That is 398 threatened species and ecological communities being serviced compared to 95 in 2016. Sixteen (16) key threatening processes are also being researched and / or managed.

SoS has effectively managed 398 species and ecological communities, with 262 of 294 projects from site-managed, iconic and population management stream reported to be on track to be secure in the wild in 100 years' time in 2020-21 (see Table 2).

Many more sites are also now being managed for conservation. In 2020-21, 978 priority sites are managed for conservation compared to 234 in 2016. SoS also adapted well in the face of environmental disasters such as the catastrophic 2019/20 bushfires where fire-affected threatened species received emergency support.

Table 2 SoS species on track in the wild

Saving our Species management streams		Number of projects effectively managed		Number on track in 2020-21
		2015-16	2020-21	
Site-managed	Threatened species that can be secured by conservation projects at specific sites	88	282	253
Iconic	Threatened species that are socially, culturally, and/or economically important	6	11	8
Populations	Groupings of native plants or animals likely to become extinct in NSW	0	1	1
Partnership	Threatened species found mainly in other states and territories. We partner with others to conserve them	0	17	NA
Landscape-managed	Species that are highly mobile or dispersed, or affected by landscape-scale threats	0	50	NA
Threatened Ecological Communities	Ecological communities at risk of extinction because of a significant reduction in their distribution across regions or a decline in ecological function	0	39	NA
Data deficient	Threatened species that we need to know more about before we can secure them in the wild	0	NA	NA
Keep Watch	Threatened species where no immediate action is needed to protect them	0	0	0
Key Threatening Processes	The threats which negatively affect listed species or communities, responded to with on-ground management to protect threatened species and threatened ecological communities	0	16	NA

4.3 The SoS program is underpinned by scientific research

Improved ‘knowledge, information and science’ is an overarching theme interwoven throughout the framework of the *Land Management and Biodiversity Conservation Reforms* (Independent Panel Report Dec 2014). The panel summarised the reform rationale in this area, noting that:

Building and sharing knowledge about the status and values of biodiversity and the effectiveness of interventions is critical to making informed decisions about how best to protect and manage biodiversity and increase ecosystem services. Bringing together information on biodiversity, including local and Aboriginal knowledge, and making this information publicly available, should be priorities for the Government.

Research is supporting decision making, with the new knowledge generated benefiting the conservation management of threatened species. SoS funded 31 discreet research projects over the period 2016-2021, helping 326 threatened species and ecological communities and targeting 5 key threatening processes. 107 on-ground management actions including a research element were also implemented or partially implemented across the program.

Research helped categorise species into appropriate management streams and adjust their conservation strategies. Research also led to the production of new knowledge and technologies contributing to the mitigation of key threatening processes and improved understanding of data deficient species (see Section 4.3.1).

SoS shared research and knowledge publicly to benefit conservation initiatives outside of the program. SoS contributed to 113 publications including 79 peer reviewed journal articles, 4 technical reports and 1 book. Data was made publicly available through BioNet, Sharing and Enabling Environmental Data (SEED) and the Information Asset Register (IAR).

Moving forward, SoS is looking to improve its science and research approach, so research projects better align with information gaps for prioritised animals and plants and the needs of on-ground practitioners.

4.3.1 Research contributing to new knowledge and tools to mitigate threats to species safeguarding

Climate impacts on alpine frogs

Alpine frogs are particularly vulnerable to climate change. Research produced new knowledge of climate impacts on alpine frogs, and on how to measure them. The research will inform on-ground practices to mitigate the impacts of increasing temperatures for these frogs, through the creation of refuges to allow the amphibian to shelter from the heat.

Fungal pathogens infecting vulnerable flora in NSW

Phytophthora cinnamomic is a water-based mould infecting plants via their roots. It is identified as a key threatening process in NSW and nationally. Research validated and refined hygiene protocols to prevent the spread of *Phytophthora cinnamomic*. New knowledge products will help shape management approaches as well as restrict the human-related spread of the pathogen.

State-wide risk mapping for threatened plant species

A state-wide risk mapping tool was developed to better understand the impacts of fire and climate on threatened flora. The spatial database helps users understand the interaction of multiple key threatening processes on threatened species, to enable better strategic decisions for conservation.

Piloting drones and AI in monitoring

A pilot research project investigated the use of drones and Artificial Intelligence (AI) as a cost-effective alternative to traditional species monitoring. Drone capture imagery and AI were used to identify the distribution of species in hard-to-reach locations. This technology could be used in the future to inform the management of remote, hard-to-find species.

4.4 Partnerships and engagement are supporting threatened species

Partnerships and engagement provide much needed supplementary support for animals and plants under the care of Saving our Species. Partnerships leveraged considerable additional support, with \$31 million received in cash and in-kind from external partners in addition to \$60 million from NSW State government outside of the program. Together these almost doubled the \$100 million investment in the SoS Program.

SoS successfully operated as a connector, bringing together different partners to work together to contribute to species safeguarding. The program appropriately engaged with partners to ensure the success of partnerships (Table 4).

The partnership approach has been refined since inception in 2016. Increased flexibility in ways of partnering led to embracing ideas from partners that align with SoS priorities, rather than requiring partners to select a predetermined project from an existing prospectus.

While partnerships are being maintained and improved, the Program is looking to address the level of resourcing available for partnership development.

Table 3 What types of partnerships exist and how many are there?

Partnership type	Description	Number of partnerships
Co-Investment	Agreements with NGOs to leverage in-kind cash contributions and their existing networks with landholders, volunteers, and local communities. These help manage threatened species and threatened ecological communities across landscapes.	9 partnerships
Contestable Grants	Agreements with community, NGOs, and/or businesses to deliver on ground actions. Administered by the Environmental Trust.	27 grant agreements
Partnership Grants	Long-term agreements with community, research institutions, and/or industry organisations to implement monitoring and management actions. Administered by the Environmental Trust.	11 grant agreements with community and industry

Partnership type	Description	Number of partnerships
Corporate & Innovation	Agreements with NGOs and private organisations to explore sponsorship, engagement, or innovation opportunities. These are state-wide and cross-cutting opportunities.	26 agreements with private organisations and NGOs
Research	Agreements with research institutes, individuals, or research consortia to conduct high-level research into cross-cutting areas such as threats affecting multiple species	31 agreements with 16 universities, 2 government research organisations (CSIRO and Australian National botanic gardens), 3 NGOs and 4 other government departments
Private landholders	Access to SoS sites on private land is essential for species and threat monitoring and for the implementation of management activities. In addition to landholder access agreements, in-perpetuity conservation agreements are also facilitated through the Biodiversity Conservation Trust that have active SoS project sites.	Increasing number of private landholder agreements. Increasing number of in-perpetuity agreements.

4.4.2 Public participation

The *Biodiversity Conservation Act* has broad objectives for public participation including to ‘support public consultation and participation in biodiversity conservation and decision-making about biodiversity conservation.’ Since 2016, SoS has enabled participation through various avenues, including community engagement, citizen science and volunteering.

Community engagement

SoS’ communication strategy has supported creative and impactful communications, while its engagement strategy has continued to evolve and improve. Since 2016, more than 1,164 community engagement events have been delivered, engaging more than 57,242 people. There were more than 1,788 media stories, with 488 social content pieces published in financial year 2020-21. Newsletter subscribers grew to more than 4,300 in 2020/21. Three creative social media campaigns contributed to raising awareness of threatened species and the SoS program with new audiences.

Citizen science and volunteering

Citizen science and volunteering were utilised effectively to engage communities in conservation. They helped increase awareness of threatened species and the SoS program and contributed to species monitoring and research.

SoS volunteers contributed 2,672 days to management actions. Two citizen science projects that engaged the community in threatened species monitoring actions - DigiVol and TurtleWatch - are presented below.

Citizen science contributing to species monitoring, research, and awareness

DigiVol volunteers taking action for the *Bossiaea fragrans*, malleefowl, koala and mountain pygmy-possum

SoS partnered with DigiVol to recruit volunteers to process camera trap imagery for four threatened species. Camera traps were installed in the wild and captured thousands of images. DigiVol volunteers then went through the photos online, identifying what they saw and leaving helpful notes for SoS. DigiVol saved SoS time and monitoring resources, with volunteer hours equating to a monetary value of over \$250,000 in the 2019-2020 financial year. The partnership contributed to species knowledge and could eventually inform revisions to how the threatened species are managed.

TurtleWatch contributing to the conservation of the green sea turtle and loggerhead turtle

SoS partnered with TurtleWatch to engage volunteers in monitoring and addressing threats to the vulnerable green sea turtle and endangered loggerhead turtle. The program also worked to improve public awareness through media, e-newsletters, giveaways, community training, workshops, and beach clean-ups. From 2019 to 2021, 204 volunteers monitored beaches for the presence or absence of nesting sea turtles and threats. The activity led to 19 turtle nesting activities being reported in financial year 2020-21 compared to just 3 in 2018-19. A 2021 survey also showed an increase in public knowledge of turtles since 2019.

4.4.3 Aboriginal people and communities

Aboriginal people and communities participated in over 60 threatened species projects. Aboriginal participation in the SoS program has been driven by existing local relationships, an example of which is included below.

Case Study: Cultural knowledge informs coastal emu management

The Gumbaynggirr, Yugambeh and Yaegl people came together with SoS to share cultural knowledge and stories to support the conservation of the threatened coastal emu. The partnership led to mutual outcomes, with new knowledge informing management actions, and the cultural events providing an opportunity to honour the traditional kinship relations with the Elders, and to reinvigorate kinship between the coastal emu and the young Goori people.

Aboriginal people on New South Wales' north coast share an ancient cultural relationship with the coastal emus, once abundant across Bundjalung, Gumbaynggirr and Yaegl Country. Unfortunately, fewer than 50 coastal emus remain in the wild today.

The Northeast SoS Regional Hub recognised the unique knowledge and kinship local Aboriginal communities have of, and with, coastal emus, and connected with the local Aboriginal communities to facilitate the incorporation of cultural knowledge into the management of the threatened species and help raise awareness with the broader community.

In 2019, SoS participated in a local Aboriginal intercommunity gathering in South Grafton, bringing together Elders, knowledge holders and storytellers to honour traditional kinship relations to the coastal emu and discuss population threats and management actions. The event was attended by local Aboriginal people and non-Aboriginal guests, where Gumbaynggirr Elder Aunty Nita Taylor spoke of the traditional reciprocal relationship and responsibilities between the People and the coastal emu. Two traditional stories were shared. The gathering also passed on knowledge to Yaegl participants to be culturally empowered in their custodianship role. Dancers from all three language groups interpreted the knowledge shared into a cultural dance to help continue the cultural story of the coastal emu and its significance to the people and the land. An SoS Project Officer also briefed participants on the threatened status of the coastal emu and the SoS management strategy.

Following the gathering, the Gumbaynggirr Aboriginal community shared their version of the emu story by creating a short film: 'The Emu and the Platypus'. The film created strong community engagement with a local screening launch and more than 60,000 views on social media.

After the gathering, the Northeast SoS Regional Hub worked with the Aboriginal communities to integrate Aboriginal cultural and local knowledge with the SoS coastal emu management project.

The event from the above case study was important for both SoS and the participating Aboriginal communities in creating an enabling environment in which traditional knowledge and science can together inform species management. It also offered an opportunity for Elders to reinvigorate kinship between the coastal emu and the young Goori people. The collaboration helped raise awareness of the importance of the coastal emu and the need to preserve its habitat, reminding the broader community that we all have a responsibility to look after the species.

Moving forward, SoS is looking to address parts of the Program's design that currently limit the strategic engagement of Aboriginal people or integration of Aboriginal knowledge in threatened species management and to align where appropriate with commitments to Closing the Gap.

5. Conclusion

The SoS program 2016-2021 addressed its legislative requirements under Section 4 of the *Biodiversity Conservation Act 2016*. SoS has:

- established with the high-level outcome that the long-term security of threatened species and ecological communities in NSW is maximised.
- utilised the \$100m investment over the period 2016-2021.
- implemented a process for creation and public exhibition of strategies for recovery of threatened species and ecological communities, including making these publicly available via the online SoS database.
- developed and implemented the robust world leading prioritisation framework for allocating resources to management streams, species, projects and sites.
- developed and implemented a robust monitoring, evaluation, reporting (MER) and adaptation framework.
- made progress towards its high-level outcomes by securing more threatened species in the wild.

The SoS program is likely to continue to show positive results and maximise the number of species secured in the wild in 100 years' time. However, several recommendations were made in the 2016–2021 evaluation to improve the programs potential impact. These have been summarised below.

6. Recommendations

Strategic recommendations

1. Establish a clear and transparent Program-level performance framework that enables an assessment of the Program's contribution to its primary objective - and an assessment of the program's influence on species rates of decline or improvement.
2. Prioritise research activities to ensure they both target the information needs of on-ground species managers and facilitate collaborative partnerships between on-ground managers and researchers - to ensure research is useful and used.
3. Incorporate Aboriginal aspirations into the program framework, to better demonstrate the program's recognition of the value of Aboriginal knowledge and provide opportunities for participation in effective species conservation.
4. Consolidate program-level continuous improvement processes under one strategic monitoring, evaluation and learning (MEL) framework that reflects the maturity of the Program.

Operational recommendations

5. Continue to refine the Program prioritisation processes to ensure transparent and strategic investment decisions across management streams.
6. Continue to refine program level information management systems to meet the needs of program staff (including on-ground staff) and program partners to support program and project implementation and review.
7. Continue to refine the program-level approach to communications, engagement and partnering - to ensure these activities are strategic and targeted, and that the outcomes and achievements across the Program are monitored, reported and used to inform continuous improvement.
8. Establish an appropriate method to demonstrate the significant contribution of private landholders to the achievement of SoS Program outcomes.
9. Continue to deliver MER capacity building activities to ensure Project MER is of consistently high-quality across the Program, and that staff are clear on how Project MER informs program-level decision making and reporting.

References

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Buxton RT, Avery-Gomm S, Lin H-Y, Smith PA, Cooke SJ and Bennett JR (2020), 'Half of resources in threatened species conservation plans are allocated to research and monitoring', *Nature Communications*.

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More information

- [BioNet](#)
- [Saving our Species online database](#)
- [Sharing and Enabling Environmental Data \(SEED\)](#)