NSW GOVERNMENT

SAVING OUR SPECIES

Annual Report 2018–19

environment.nsw.gov.au/sos

Contents

Saving our Species: 2018–19 at a glance

Today, we're at risk of losing a thousand of our state's native animals and plants. That's why the NSW Government established *Saving our Species* (SoS), the flagship threatened species conservation program and the biggest conservation commitment ever undertaken in New South Wales.

SoS is a movement involving volunteers, scientists, businesses, community groups and the NSW Government, all coming together to secure the future of Australia's unique plants and animals.

The main objectives of SoS are simple: maximise the number of threatened species that are secure in the wild in New South Wales for 100 years and control the key threats facing our threatened plants and animals.

A species is defined as 'secure' when it has a 95% chance of surviving in the wild for 100 years and species can only survive if existing and new threats are managed in the long term.

SoS also aligns everyone's efforts under a single banner, so investment in threatened species conservation can be accounted for and invites the NSW community and businesses to participate, because projects to save threatened species are collaborative efforts.

SoS is delivering the Biodiversity Conservation Program (in the *NSW Biodiversity Conservation Act 2016*), implementing the program's strategies through conservation action.

The success of SoS has been bolstered by an unprecedented NSW Government investment. Between 2016 and 2021, $100 million is being invested cost-effectively to secure threatened plants and animals in the wild for the next 100 years. Investment under the SoS framework is continuing to increase, with $41.3 million to reintroduce 13 locally extinct mammals and $13 million in NSW Environmental Trust grants.

In 2018–19, we invested in 450 species and ecological communities and 15 projects strategically controlling major threats, achieving tangible and positive results that help to secure a future for our threatened species.

From our successes, like the return of critically endangered Bellinger River snapping turtles to their natural habitat, to the considerable challenges of severe and ongoing drought and bushfires, our SoS team has accomplished and overcome a great deal in 2018–19.

These natural disasters pose great threats to the success of our work and the survival of our threatened species, but we continue to make great strides while working through and alongside these conditions.

SoS is committed to accelerating our on-the-ground conservation activities to help secure a future for our threatened species and continuing to invest in science and research projects to help guide major program decisions.

We would like to thank our partners, who are playing an integral role in the program's success – the Environmental Trust, Big Scrub Landcare, Bush Heritage Australia, Foundation for National Parks and Wildlife, Greening Australia, Molonglo Conservation Group and Nature Conservation Council, Landcare NSW and Local Land Services, amongst many others – for their continued and invaluable support.

Sharon Molloy
Executive Director,
Biodiversity and
Conservation Division

In 2018–19 SoS supported:

465 conservation projects across New South Wales, including

- **411** species
- **39** ecological communities
- **15** key threatening processes

Projects by management stream

Management stream	Number of projects underway
Site managed species	291
Landscape-managed species	43
Iconic species	7
Partnership species	14
Threatened ecological communities	39
Data-deficient species	55
Threatened population of a species	1
Key threatening processes	15
Total projects	**465**

Projects by investments

Funding source	$ (by million)
SoS Operating	$12.1
SoS Labour	$7.2
OEH Cash	$0.6
OEH In-kind	$4
NSW Government cash	$2
NSW Government in-kind	$2
External Cash (includes program partners)	$1.8
External in-kind (includes program partners)	$3.8
Total	**$33.6 million**

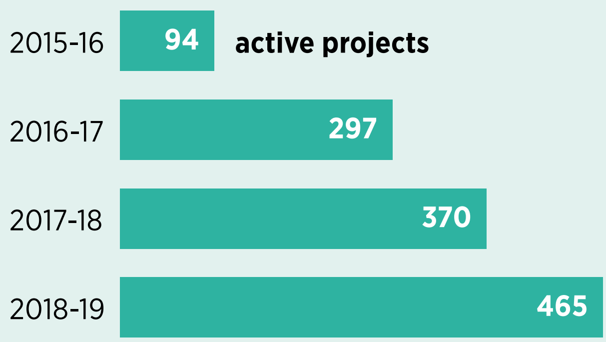
Contributions from our external partners

- The SoS program collaborated with over **173 partners** in 2018–19
- **$5.6 million** was contributed to the program.

Increase in the plants and animals we're investing in

↑ 26%

The number of active projects grew by almost 26% in 2018–19, an increase of 95 species, ecological communities and key threatening processes with on-ground projects.



More projects for more species will be undertaken in 2019–20

SoS program focus areas

In New South Wales 932 species, 111 ecological communities and 54 populations of a species are listed as threatened with extinction. Threatened plants and animals have different conservation needs depending on their ecology, habitat and distribution, threats to their survival, and how much we know about them.

The SoS program manages threatened species through nine focus areas.

1 Site-managed species

291 species invested in

+19 species from 2017–18

These are threatened plants and animals with restricted distribution that can be protected at specific sites; for example, by managing critical threats such as predators, weeding, controlling erosion or revegetation, and monitoring the results. Almost half of all threatened species in New South Wales are best managed this way. They include the Tumut grevillea, smoky mouse and purple copper butterfly.

2 Landscape-managed species

43 species invested in

+26 species from 2017–18

Landscape-managed species are best assisted by addressing threats such as habitat loss or degradation within a landscape. The spotted-tailed quoll and grey-headed flying-fox are two examples.

3 Iconic species

7 species invested in

+1 species from 2017–18

Iconic species are important socially, culturally and economically, and the community expects them to be effectively managed and protected. In 2018–19, SoS allocated nearly $3.8 million to implement actions for six iconic species: brush-tailed rock-wallaby, koala, southern corroboree frog, malleefowl, Wollemi pine and plains-wanderer. The bilby is a new addition to the iconic species stream.

4 Partnership species

14 projects invested in

+13 projects from 2017–18

Partnership species are threatened species with less than 10% of their population in New South Wales. As the future safety of these species depends on populations outside the state, they may be better managed by other federal, state or territory governments, and we partner with others to protect them.

5 Keep watch species

102 species

While no immediate action is needed to protect them, SoS aims to keep an eye on more than 100 species because they are either naturally rare with few threats or they are more common than once thought. If threats increase or there is evidence that populations are declining, a species may be reviewed and moved to another management stream.

In 2019, SoS created robust criteria based on International Union for Conservation of Nature (IUCN) Red List criteria and guidelines to ensure that SoS allocates species to the keep watch management stream only if strong evidence shows the species' populations are secure without targeted management. Each species in this stream will be assessed against these new criteria to ensure they are being properly managed. The species allocated to this stream could be said to be on track for de-listing.

6 Ecological communities

39 projects invested in

+26 projects from 2017–18

Ecological communities provide natural management of clean air and water, provide nutrients for the soil, protect against erosion and salinity, and provide a healthy environment for threatened species. They can be threatened or at risk of extinction due to a disruption of ecological processes, invasion by exotic species, or habitat degradation or fragmentation.

7 Data-deficient species

55 projects invested in

+6 projects from 2017–18

We need to know more about these species before we can secure them in the wild. Research on these species to find out about their life history, their distribution and threats to their survival is a priority for the SoS program. The NSW Office of Environment and Heritage (OEH) is working with universities, museums and botanic gardens, while field naturalist groups are conducting research and surveys to identify and address major gaps in our knowledge and set survey and research priorities. The data-deficient species stream includes 73 species that we presume are extinct in New South Wales.

8 Threatened populations of a species

1 species invested in

Threatened populations are groups of native plants and animals likely to soon become extinct in New South Wales. A population is a group of organisms of the same species occupying a particular area. The coastal emu on the NSW north coast and squirrel glider in the Wagga Waggab local government area are examples of the 52 threatened populations in New South Wales.

9 Key threatening processes

15 projects invested in

+4 projects from 2017–18

Pests and weeds, climate change and habitat loss are some of the threats facing native plants and animals. Key threatening processes are managed as part of each species project under the SoS program.

NSW Hawkweed Eradication Program

Eradicating a weed from an invaded range is a deceptively difficult task, as it requires all plants to be found and eliminated.

The NSW Hawkweed Eradication Program – the largest weed eradication program in New South Wales – aims to eradicate mouse-ear and orange hawkweed in New South Wales. These environmental weeds occur in different parts of Kosciuszko National Park and are classified as key threatening processes. While they are separate species with different habitat preferences and different introductions into the park, both plants have a negative impact on ecological communities, particularly native plants.

Finding new infestations is key to the program's success, so with support from SoS, the hawkweed team is drawing on cutting-edge surveillance technologies and traditional methods to track down these weeds.

The team is incorporating integrated surveillance methods for a greater chance at eradication, including line and grid surveys, helicopter-assisted surveys, Weed Eradication Detection Dogs and drones.

The number of new orange and mouse-ear hawkweed detections is decreasing, even though the search area and intensity increased. In 2018–19, the area of orange hawkweed discovered decreased by 60% compared to the previous season and has dropped by nearly 97% since 2010–11. Only 0.8 square metres (160 plants) of mouse-ear hawkweed was found in 2018–19, indicating eradication of this species is on target.

The National Parks and Wildlife Service (NPWS) is conducting research to improve the program, including trialling boot cleaning stations along walking trails and using data from wind stations to develop models to determine where hawkweed seeds are most likely to disperse.

The program is being delivered in partnership with the NSW Environmental Trust, Department of Primary Industries, South East Local Land Services and a range of other partners, along with a large group of technical experts and volunteers.

Making a difference for threatened species in NSW

Highlights of SoS in 2018–19

SoS is a movement involving the NSW Government, volunteers, scientists, businesses and community groups, all coming together to secure the future of Australia's unique plants and animals. The following are some of the program's key achievements in 2018–19.

1

We returned 10 critically endangered Bellinger River snapping turtles to their natural habitat in 2019, after a freak virus in 2015 wiped out around 90% of the population. In a captive breeding program at Taronga Zoo, 22 healthy turtles hatched within the first year and 31 in the second year. Before the disease outbreak, there were up to 4500 of the turtles living in the Bellinger Catchment – the only place on Earth they're found.

2

As part of the Glossies in the Mist project, over 300 citizen scientists recorded sightings of glossy black-cockatoos, helping to highlight areas that are significant glossy black-cockatoo feeding and nesting habitats. The project also planted over 5500 foraging and nesting habitat trees throughout the corridor.

3

Through a conservation breeding program with Taronga Western Plains Zoo, 30 purpose-built aviaries were built in the 110-hectare sanctuary at the zoo in Dubbo for the critically endangered plains-wanderer. The new facilities can hold and breed about 30 plains-wanderers per annum.

4

Koala surveys in the Blue Mountains revealed the highest altitude koalas in Australia at 1100 metres above sea level, where it occasionally snows.

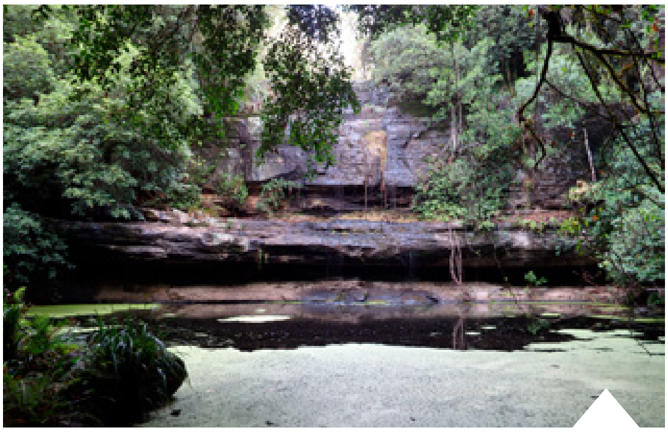
In the Gunnedah area, 20 koala water stations were installed in trees on private properties to provide koalas with drinking water during times of heat stress and drought. About 120,000 images captured by automatic cameras will be made available on DigiVol for the worldwide community to help identify animal visitors to the drinking stations.

5

To better understand how climate change might impact nesting green and loggerhead marine turtles in New South Wales, SoS, in partnership with Griffith University, has deployed long-term temperature data loggers every 0.5 degrees of latitude from the Queensland border to Wollongong. This will help to identify suitable nesting locations for green and loggerhead turtles and understand how a changing climate will impact turtles in New South Wales in the future, to allow for adaptive management.

6

The third year of the Save our Scarlet Robin program added an additional 40 hectares of protected and revegetated land to the scarlet robin landscape, bringing the program's total project area to 334 hectares. Two years of funding remain to keep building connectivity in the landscape to support our threatened woodland bird species. Year three of the program also saw the propagation of five threatened plant species by the National Botanic Gardens. These are currently being planted back into the landscape to boost local populations and provide education opportunities.



7

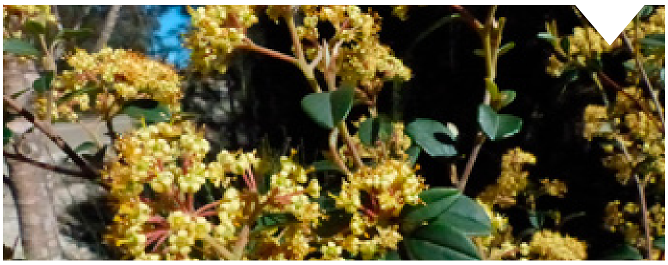
SoS is helping to conserve the endangered Milton Ulladulla Subtropical Rainforest. In the first full year of the project, there are six active sites, fencing to prevent stock access to four rainforest remnants totalling 11.3 hectares, 1.6 hectares of primary revegetation with over 2000 trees planted, and four hectares of primary weed control. Another three landholders are preparing for revegetation activities this year, which will include a further 3000 trees and further fencing of remnants.

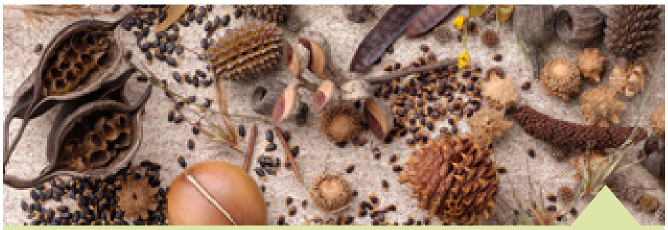
8

Once abundant on the NSW north coast, there may now be fewer than 100 emus remaining in NSW coastal areas. Three community workshops were held to increase participation in citizen science reporting of emus and to share knowledge about threats such as road strike, fencing, feral pigs and wild dogs. Based on community sightings, detector dog and camera trap surveys, the endangered coastal emu population appears stable. Genetic analysis of the population has progressed, laying crucial groundwork for possible future captive breeding. A significant cultural event was held across three Aboriginal language groups who have close ties to the coastal emu (Gumbaynggirr, Bundjalung and Yaegl), sharing information on coastal emu movements, behaviour and ecology through language, story-telling, song and dance.

9

A total of 160 critically endangered delicate pomaderris were planted in tubes in the Nadgigiomar Nature Reserve, as part of a translocation project. The plants were grown and planted by staff at the National Botanic Gardens, with the support of local volunteers. Carrington Falls pomaderris was also reintroduced back into its natural habitat in December 2018. A guard was placed around each plant to see if this helps protect them from feral animals like deer, which pose a major threat.





10

As part of a three-year project, the first implementation year of SoS and Royal Botanical Garden's ex situ seed program resulted in a total of 300 new threatened species seed collections, representing 87 species. These new collections exceeded the program's target of 50–60 collections per year. The program's objective is to ensure seed collections are adequate (in terms of quantity, quality and provenance) and able to support the full range of SoS on-ground conservation actions, associated research and long-term conservation storage.

Case Study

Bilbies run wild again

The innovative Reintroduction of Locally Extinct Mammals Project – a partnership between NPWS, the Australian Wildlife Conservancy (AWC) and the University of NSW – which is a significant component of SoS, aims to reintroduce at least 13 mammal species currently extinct in New South Wales.

The AWC has reintroduced 60 bilbies into a predator-free section of the Pilliga State Conversation Area near Narrabri in north-west New South Wales, which are running wild for the first time in more than 100 years.

Bilbies were common in many parts of the state, until habitat loss and the introduction of non-indigenous predators such as foxes and cats, saw them disappear in the wild in the early 1900s.

The landmark project to reintroduce bilbies and other mammals into the wild in New South Wales saw the AWC and NPWS construct a 5800-hectare predator-free fenced area in the Pilliga. We anticipate that a population of around 850 bilbies will flourish there, with the last report of bilbies in the wild in New South Wales recorded in 1912.

The bilby is just the first mammal species to be reintroduced as part of the project. Further reintroductions of bridled nail-tail wallabies, brush-tailed bettongs and numbats will see these species released under SoS into three national parks in western New South Wales.

Case Study

Glossies in the Mist

Glossies in the Mist, a collaborative project between OEH, Wingecarribee Shire Council, Friends of the Glossy Black-Cockatoo and Forestry NSW, works with over 300 landholders and citizen scientists to spot glossy black-cockatoos and protect, connect and enhance their habitat across the Great Western Wildlife Corridor, a critical pinch point in the vegetation connecting Morton National Park in the south to the Blue Mountains National Park in the north.

This year, over 300 citizen scientists have been the eyes and ears of the project, recording sightings of glossy black-cockatoos and highlighting areas that are significant feeding and nesting habitats for this vulnerable species.

The project planted over 5500 foraging and nesting habitat trees throughout the corridor. One property-scale planting was undertaken by 50 volunteers to link two remnant vegetation corridors in Penrose. Two thousand mixed species trees were planted for foraging and nesting habitat to create a 50 metre wide corridor spanning the property.

During 2018–19, the Glossies in the Mist team presented four community information sessions with 112 attendees, stimulating more recorded sightings of glossy black-cockatoos throughout the corridor and encouraged landholders to correctly identify and report breeding behaviour.

Two five-day breeding habitat surveys were conducted in 2018–19. Breeding behaviour and juvenile birds were observed during both surveys, but no nests were confirmed. One nest was found outside of the SoS site and will be monitored in coming years to further understand threats and breeding behaviour in the local area.

Science and research

Research is incorporated into almost every aspect of SoS. Data are gathered throughout the implementation of SoS conservation strategies. Major program decisions are guided by strategic research, applying the best evidence available.

SoS research focuses on five main areas:

- Strategic decision making
- Monitoring and adaptive management
- Climate change and adaptation
- Threat management
- Ecological knowledge including fire and ecosystem function.

This financial year, $776,000 was spent on 29 continuing science and research projects, with more than 46 threatened ecological communities, six key threatening processes and 100 species benefitting directly and indirectly from the research and multiplied funding.

Two projects involving a partnership between SoS and the CSIRO are ongoing, with a total funding of $305,000:

- $195,000 to jointly deliver Stage 1 of the Integrated Spatial Prioritisation tool, plus approximately $130,000 of in-kind contributions from CSIRO
- $110,000 for improving conservation decision-making for on-ground management and monitoring using artificial intelligence (AI).

Highlights from 2018– 19

- SoS science and research worked with 11 primary external partners during 2018–19. Each project worked with an average of three internal and external partners.
- Thirty landscape species were modelled to understand where populations of these species can persist through expected geographic shifts to their habitat due to climate change; or where connectivity-focused habitat restoration and active translocation may be needed to maintain viable populations.
- The viability of translocation as a management action was assessed and it was identified as a management option for 30% of threatened plants. A decision framework to assist managers to determine when translocation is likely to be beneficial was developed.

New and ongoing science and research projects

New science and research projects for 2018–19 are being delivered at various sites across New South Wales by scientists from OEH and several universities. These will continue in 2019–20 under the newly formed Department of Industry, Planning and Environment.

With a total funding of $1.3 million, each of these projects has a three-year duration. These projects also leveraged additional funds and support through in-kind contributions from partners, which nearly doubled the grants provided by SoS.

Some of the projects include:

- $224,493 for techniques to maximise ecosystem function and adaptive capacity in TEC restoration
- $220,000 for assessment of exposure of threatened plants to adverse fire impacts: frequency and season of burn
- $213,528 for abating the threat of exotic vines and scramblers in coastal forests and woodlands
- $199,457 for assessing adaptive capacity of species in TECs by mapping thermal tolerance thresholds.

Projects from 2017–18 continued throughout 2018–19, totalling a further investment of $700,000.

In 2018–19, the *Development of functional group or habitat-based conceptual models of species' population response to management of threats to guide MER management* project was completed.

Scientific publications

In total SoS contributed to and published 24 scientific publications and other resources on threatened species and their habitats in 2018–19, which can be accessed via the SoS website.

Using innovation to aid decision-making and prioritisation

Integrated Spatial Prioritisation tool

The CSIRO Conservation Decisions Team has worked with SoS to develop the world-leading Integrated Spatial Prioritisation (ISP) tool. The tool aims to determine the sites and actions across New South Wales that will deliver benefits to the most threatened species and delivers a spatially-explicit solution for prioritising species, sites and activities across the state, for a given budget.

The tool's simplicity will allow conservation managers to choose from multiple starting points, whether it is their budget, how many species they want to save, which species they are prioritising, or locations they wish to target. The tool increases cost-efficiencies by allowing multiple species and actions to be considered together. For example, the project found that managing one vulnerable bat species – the southern myotis – would have benefits for more than 350 other species.

SoS will further expand on this tool next year to include management sites for more species and ecological communities and to explore opportunities for considering multiple threatened species values in the tool's solutions.

Case Study

Quantifying the impact of uncertainty on threat management for biodiversity

This research investigated the question: which key threatening processes should be research priorities to save more threatened species? For some threats, we have good management knowledge and know that on-ground action provides good results, but for others we don't have a good understanding of how best to manage them or how severely they are impacting threatened species. This study used a value of information analysis to understand the potential gains from removing knowledge gaps on key threatening processes.

The project analysed almost 1000 threatened species and threatened ecological communities affected by 20 key threatening processes. In their analysis, experts estimated the effectiveness of best-practice management and the expected persistence of species with and without each threat.

The research found that managers were confident about controlling invasive plant threats, but very uncertain about the benefits of managing high frequency fire, invasive predators, and the plant pathogen *Phytophthora cinnamomi*. Overall, we are more certain in our ability to control threats than in our understanding of how species respond to threats.

This study is the first to quantify the value of information about threat management on such a broad scale. While many previous value of information studies have focused on single species and found minor benefits from removing uncertainty, this study showed that when small benefits are aggregated across the many species impacted by threats, there can be large potential gains for management from reducing knowledge gaps.

Translocation policy

Translocation – the intentional, human-mediated movement of organisms from one place to another – is increasingly being used to improve the outlook of threatened plants and animals. Translocations are often complex and difficult, so it is important to have a robust policy framework to guide the development and assessment of translocation projects.

The *Translocation operational policy* was published in early 2019, following consultation with translocation experts, practitioners and non-government organisations (NGOs). The goal of the updated policy is that we improve the way we do translocations by:

- increasing consistency in translocation planning between plants and animals
- providing up-to-date guidance on translocation planning, based on expert advice
- considering contemporary challenges for conservation, such as climate change and development.

The policy also applies to the establishment of captive breeding programs, which should support broader conservation objectives for a species.

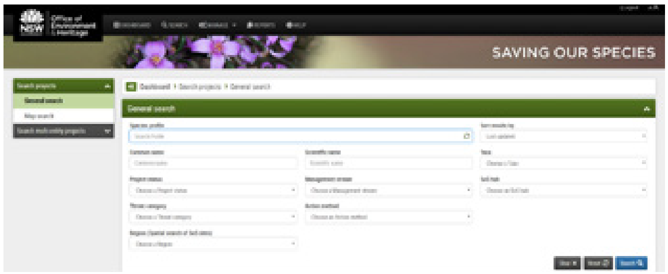
Translocation and captive breeding are important components of more than 150 SoS strategies. In 2018, the yellow-spotted bell frog was brought back from the brink of extinction. Following a successful captive breeding program led by Taronga Conservation Society and SoS, 750 yellow-spotted bell frogs were released into the wild. The new population will be closely monitored over the coming years to provide an indication of population health and to guide future intervention strategies.

Visit the Environment, Energy and Science website to read more about translocation.

Monitoring, evaluation and reporting

The SoS program is committed to continuous improvement, which we achieve through regularly monitoring, evaluating and reporting (MER) both our implementation and performance:

- SoS MER guidelines are available to describe how MER is undertaken for species and ecological communities
- report cards are available for each funded species
- annual reports are available for 2017–18 and 2016–17
- SoS is collecting monitoring data to build our knowledge of threatened species.



SoS database

The SoS database is the register of conservation strategies for all NSW threatened species and ecological communities, and priority key threatening processes.

Capital works of $500,310 in 2018–19 supported SoS database developments. Key developments targeted improving functionality for annual reporting, keeping SoS spatial functionality current, updating the public face of SoS threatened species management, and improving administrative ability to manage and serve SoS data.

SoS database improvements for supporting field staff are important for reducing required staff effort, and address user feedback. Improvements to the SoS database user experience focused on streamlining annual reporting. Database functionality for reporting on ecological community viability, which is based on the IUCN Red List of Ecosystems theoretical framework, is new this year.

Spatial upgrades are keeping SoS data accurate and current. Improvements include software upgrades, switching the database to referencing dynamically updated administrative layers including local government areas and NPWS estate, areas, and branches, and updating the look and functionality of maps displaying SoS sites across the state.

Citizen science

Citizen science is scientific work undertaken by members of the general public, often in collaboration with or under the direction of professional scientists and scientific institutions.

Our vision is to drive this new era of public participation in science by developing collaborative and engaging projects that support decision-making.

In 2018–19, the SoS citizen science team worked with 19 new project partners on NSW TurtleWatch and DigiVol, helping to multiply the investment from the NSW Government.

The online platform DigiVol, developed by the Australian Museum and the Atlas of Living Australia, enables citizen scientists to volunteer from the comfort of their living rooms.
In 2018–19, SoS conducted testing to upgrade the DigiVol system, with 15 volunteers processing 19,000 images and donating 127 hours of their time, which is worth more than $5000. The testing and upgrades resulted in a 90% reduction in image processing time, making the platform a more efficient tool for users and SoS scientists.

More SoS projects will launch in 2019–20 to pilot these upgrades.

Case Study

Sloane's champions: Citizen scientists saving a threatened frog

Extensive surveys completed throughout New South Wales by OEH threatened species officers between 2013 and 2016 demonstrated that Sloane's froglet is now found in only a few locations along the Murray River. These diminutive winter-breeding frogs are hanging on in shallow vegetated wetlands and artificial waterbodies, such as dams, roadside swales, and even stormwater basins.

Citizen scientists have banded together to help save the tiny Sloane's froglet. In partnership with Woolshed Thurgoona Landcare Group, Corowa Landcare Group, Federation Council, and the Australian Museum, OEH initiated the Sloane's Champions program to improve knowledge of the distribution and population dynamics of Sloane's froglet. The program engages local citizen scientists – dedicated Sloane's Champions – to visit wetlands in and around the towns of Albury and Corowa, and record frog calls with the Australian Museum's FrogID app.

Since the program's inception in 2017, and as of September 2019, Sloane's Champions have collected over 850 records of Sloane's froglet, effectively doubling the number of records for the species in Australia. The data being collected by these citizen scientists are supplementing OEH's monitoring program and assisting with conservation planning for Sloane's froglet by helping to build a picture of how the froglet's distribution changes over time.

Corporate and philanthropic partnerships

Collaboration with our partners allows us to deliver even more positive results for NSW threatened species. Through the additional capabilities and resources of our partners, we can create a greater force for conservation.

Partners are supporting our program through:

- strategic partnerships
- conservation co-investment partnerships
- the SoS Partnership Grants Program with the Environmental Trust
- direct investments into SoS projects.

Prospectus

In February 2019, SoS released its first prospectus for investment in threatened species conservation, addressing the increased appetite from organisations, philanthropists and investors to support conservation projects.

The aim of the prospectus is to provide opportunities for partners to participate in on-ground conservation and impact investment and increase the number of partnerships established with stakeholders, volunteers and the community.

It includes specific projects ready for investment and gives an overview of the types of projects we can tailor for prospective partners interested in investment. The prospectus is available for download, with a webpage to be regularly updated as new projects are developed or others are funded.

Prospective projects that partners can invest in include:

- making marine nests safe for shorebirds and turtles
- urgently helping the regent honeyeater
- boosting the coastal emu population on the NSW central and north coasts
- finding fungus-free frog zones for the spotted tree frog.

After launching in February 2019, the investment for 2019 totalled $38,500 and the projected investment for 2020 is $90,000.

New partnerships in action

Odonata

In 2018–19 we partnered with Odonata, a not-for-profit entity that creates, supports, nurtures and empowers businesses and entrepreneurs to move towards a more environmentally sustainable world.

We have on four initiatives – launching Wild Idea, building Wildlife Banks across NSW, developing a ‘Healthy Farms’ concept, and establishing philanthropic, corporate and landowner networking opportunities.

Odonata works collaboratively with SoS to identify key challenges within threatened species conservation and determine solutions, making this partnership the first of its kind in the NSW public sector.

Encouraging wild ideas from small businesses

Wild Idea is a business incubator which provides support to aspiring environmental entrepreneurs with a passion for innovation.

Established through our partnership with Odonata and the NAB Foundation, the 16-week program helped participants to grow their businesses from early ideas to launch stage. The program offered a powerful mix of immersive retreats, online learning, help with real-world research and one-on-one coaching and community support.

This partnership has helped small businesses to develop real solutions to grow, scale and secure investment in biodiversity and conservation, which is essential to the longevity of our program

Recognition of our innovation and technology

Following the successful testing of Digital Owl in 2017–18, SoS is working with Fujitsu to make the technology readily available as a surveying tool across the state, enabling greater accessibility to a cost-effective alternative to hiring a helicopter or spending a large amount of time on foot.

Since Digital Owl launched in July 2018, it has gone on to win five awards.

Building relationships to help save our species

In August 2018, SoS partnered to host the first Australian Women in Environment, Conservation and Sustainability Leadership Summit. The summit brought together corporate, universities and public sector organisations interested in sustainability and conservation.

Through the partnership, the SoS brand also received significant exposure:

- An SoS-curated panel discussion on ‘The future of environmental conservation and sustainability in Australia’, featured SoS Program Manager, Linda Bell, and Director of the Hunter Central Coast Division, Sharon Molloy.
- The SoS brand was featured across event promotional and marketing materials.
- The event was attended by a diverse mix of corporate organisations from industries such as energy, law, fast-moving consumer goods, technology, financial services and transport, as well as NGOs and government groups.

As a result of relationships formed during the summit, SoS Principal Partnerships Manager, Tania Reid, is now convening a network on LinkedIn of women working in conservation, who communicate and meet face-to-face regularly.

Case Study

Saving our Species and Australian Geographic: Getting more SoS stories into the public arena

Our partnership with the Australian Geographic Society (AGS) focused on promoting the SoS program to the publisher's highly-engaged, conservation-focused media network.

The partnership helped to raise awareness of SoS, its partners and projects through print and digital media coverage. *The Australian Geographic* magazine featured three SoS stories in 2018–19:

- The Bellinger River snapping turtle
- Top 10 unusual threatened Australian species
- How drones are being used to find threatened species.

The online campaigns for the stories led to close to 11,000 AGS website page views and were viewed by a Facebook audience of over 95,000 people. SoS stories have also appeared in the AGS e-newsletter with over 46,000 subscribers.

2018 Australian Geographic Society Awards

SoS was a sponsor for the Australian Geographic Society Awards category of 'Conservationist of the Year', providing an opportunity for attendees to gain a knowledge and understanding of SoS. The Duke and Duchess of Sussex attended the awards, resulting in international media coverage for both *Australian Geographic* and *Saving our Species* and increased traffic to the SoS website during the sponsorship campaign.

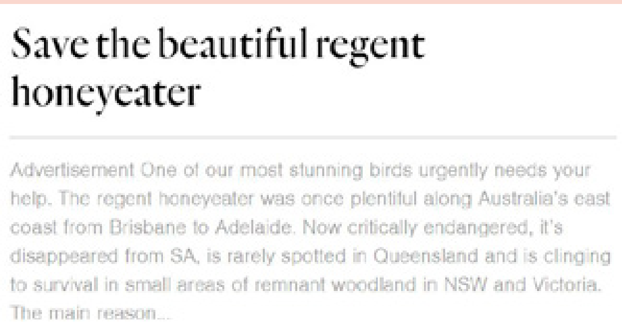
Fundraising

In-store campaigns with publicity across the AGS digital and print platforms raised awareness and funds for five species – grassland earless dragon, Bellinger River snapping turtle, long-nosed bandicoot, regent honeyeater and koala – raising $5000 in 2018.


Top 10 most unusual threatened Australian species

In honour of Threatened Species Day this year, we've searched for the most unusual Aussie species that are at risk of extinction.

By AG Staff • August 29, 2018 • Reading Time: 5 Minutes

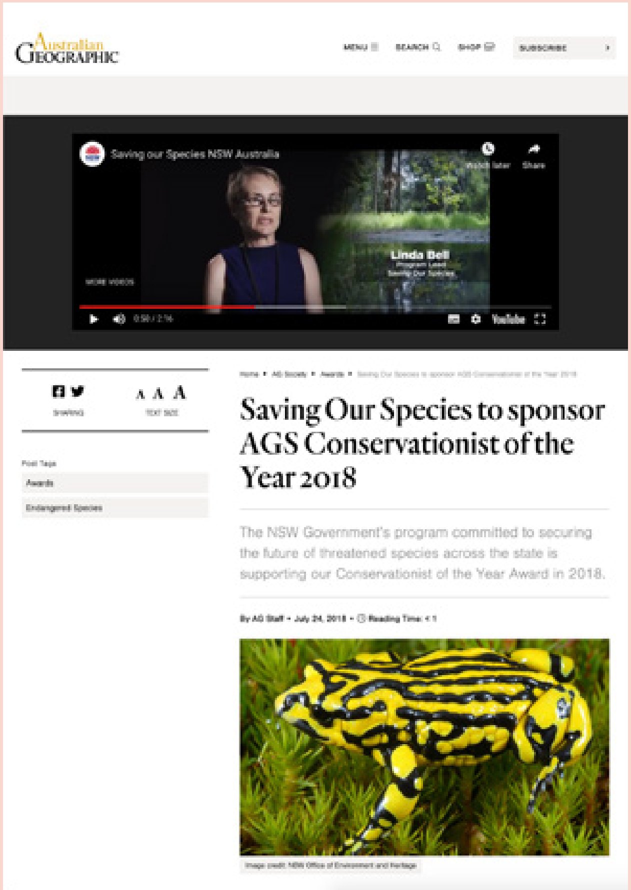

Save the beautiful regent honeyeater

Advertisement One of our most stunning birds urgently needs your help. The regent honeyeater was once plentiful along Australia's east coast from Brisbane to Adelaide. Now critically endangered, it's disappeared from SA, is rarely spotted in Queensland and is clinging to survival in small areas of remnant woodland in NSW and Victoria. The main reason...


Help save the threatened spotted-tailed quoll

The Australian Geographic Society raises funds for Australia's unique wildlife.

By Australian Geographic • February 26, 2019 • Reading Time: < 1



Conservation co-investment partnerships

SoS called for expressions of interest in 2017–18 from groups who could deliver large-scale conservation projects for SoS landscape species or threatened ecological communities. Each organisation brings their expertise, a cash contribution and networks of volunteers, with SoS contributing further funds. The projects are for three years.

We had a great response and invited the groups to submit their proposals for conservation projects targeting threatened ecological communities and landscape-managed species. By the end of 2018–19, we had signed agreements with six organisations under the co-investment scheme.

With their networks of volunteers, these organisations will deliver and jointly fund nine conservation projects across New South Wales. We will provide over $2.5 million in grants to them over three years and our co-investment partners have committed cash co-funding totalling nearly $2 million. This is on top of the substantial in-kind support they will be putting into their projects.

Our co-investment partners are carrying out a broad range of conservation projects:

- **Big Scrub Landcare** are restoring and facilitating the recovery of important remnants of endangered lowland subtropical rainforest in the Big Scrub region.
- **Bush Heritage Australia's** first co-invested project focuses on conserving endangered Coolibah–Black Box Woodland. The second extends and enhances habitat for threatened woodland bird species in the South West Slopes region of New South Wales.

- **Foundation for National Parks & Wildlife** are working with SoS on three projects: 'Trails for Tails', which joins forces with the Border Ranges Alliance to conserve the Albert's lyrebird and other threatened bird species; the Kanangra-Boyd to Wyangala Link (K2W) Conservation Partnership, which targets the squirrel glider; and Nectar-Lovers, which partners with Birdlife Australia to restore food sources and habitat for threatened nectar feeding birds in the South West Slopes region of New South Wales.
- **Greening Australia** are co-investing with SoS to restore and enhance the superb parrot's habitat in the Riverina region of south-west New South Wales.
- **Molonglo Conservation Group's** co-investment project aims to extend and maintain habitat for the pink-tailed worm lizard and conserve Box-Gum Woodland in southern New South Wales.
- **Nature Conservation Council's** project protects and maintains populations of large forest owls across the Richmond Clarence Lowlands.

Find out more about our conservation co-investment partnerships.

Big Scrub Landcare

Big Scrub Landcare – our first co-investment partner – is doing something to stop the extinction of more than 28 threatened animal species and 30 threatened plant species that are found in critically endangered lowland subtropical rainforest across the Big Scrub.

In partnership with SoS, Big Scrub Landcare is contributing over $500,000 of investment in the next four years to undertake rainforest restoration works to improve habitat and survival for these important threatened species.

Just a few of the threatened species at home in the Big Scrub include the giant barred frog, grey-headed flying-fox, Richmond birdwing butterfly, southern pink underwing moth and plants including coolamon, red lilly pilly and thorny pea.

When remaining Big Scrub rainforest remnants become degraded through weeds, habitat is also degraded for the plants and animals that depend on the rainforest.

Systematic weed control works are being implemented by professional bush regenerators using best-practice techniques. Detailed monitoring is being undertaken to evaluate the effectiveness of works in restoring rainforest and threatened species habitat.

Professional bush regenerators have been engaged to restore rainforest at 58 remnants with work at 25 remnants funded by SoS and the remainder of work funded by Big Scrub Landcare, private landholders and partners including the NSW Environmental Trust.

Working in partnership with the Environmental Trust

The SoS Partnership Grants Program is a NSW Environmental Trust grants program that encourages joint efforts by government, the community and industry to protect and conserve threatened plants and animals.

The Environmental Trust invested $10 million into the SoS program to deliver nine site and landscape-managed species projects to be implemented over 10 years, in addition to two projects targeting data-deficient flora and frogs.

The grants are designed to achieve long-term outcomes for threatened species in New South Wales, in line with the SoS objectives. Partnerships created under the grants program carry out management activities and monitoring for SoS conservation projects.

Outcomes

The Trust spent more than $1.3 million to support SoS Partnership Grants projects in 2018–19, including actions for 26 site-managed species, 12 landscape-managed species and 67 co-occurring threatened species.

Highlights from Round 1 and 2 projects in 2018–19 include:

- completion of the first of two PhD projects investigating threats and habitat requirements of the long-nosed potoroo, red-legged pademelon and black-striped wallaby in northern New South Wales
- high levels of breeding recruitment of spotted tree frogs detected at an assisted colonisation site and successful captive breeding of the yellow-spotted bell frog, resulting in trial releases into two wild sites
- over 150 Tumut grevillea plants were propagated and grown for planting next season. Translocated populations are continuing to grow well, with a 96% survival rate for this year's planting
- successful noisy miner control took place in the Lower Hunter for the first time. Breeding of regent honeyeaters in New South Wales was only detected in the Lower Hunter region
- successful propagation of the crimson spider orchid, sand-hill spider orchid and Oaklands diuris to green leaf stage has been undertaken to support the establishment of translocation sites
- 13 voluntary conservation agreements established to protect Bell's turtle habitat and 220 baby turtles which hatched in captivity were released into the wild.

Data-deficient Species Research Grants

The final Data-deficient Species Research Grant concluded this year and substantially improved understanding of three threatened frog species: *Philoria kundagungan* (mountain frog), *Litoria brevipalmata* (green-thighed frog) and *Litoria piperata* (peppered tree frog). The project produced recommended actions to improve management of these species.

SoS Contestable Grants Program

This $9 million grants program is funded by SoS ($6 million) and the Environmental Trust has contributed a further $3 million. To date, the total amount of investment for every project is more than $8.1 million.

The Environmental Trust is managing the program for SoS because of its expertise and systems for grant management. It invited applications for grants up to $350,000 to cover the first five years of 7.5-year projects, targeting threatened ecological communities and landscape-managed species, with the applicants committing to resource the remaining 2.5 years themselves.

Grants were awarded in one round of funding in February 2019 to 27 projects. Grant recipients include NGOs, universities, local councils and community groups. There are 26 Contestable Grant recipients, working on 22 species and 27 ecological communities.

The total money allocated for 2018–19, including cash and in-kind, was more than $1.1 million, which includes on-ground actions and monitoring, evaluation and reporting plans.

The Contestable Grants projects being delivered in 2019–20 range from restoring and protecting eucalyptus forests in the Blue Mountains to implementing conservation actions to protect and enhance glossy black-cockatoo habitat, with results to follow.

Case Study

Fish, frogs, flora and fresh flowing water — saving the yellow-spotted bell frog

Two years after the yellow-spotted bell frog was last seen in the wild, 750 were re-released at the end of 2018 following a successful breeding program under the Environmental Trust's SoS Partnership Grants Program, coordinated by Central Tablelands Local Land Services in partnership with the Taronga Conservation Society, SoS and South East Local Land Services.

Yellow-spotted bell frogs were commonly found throughout the Northern and Southern Tablelands until the arrival of the chytrid fungus, which is responsible for worldwide declines and disappearances of hundreds of amphibian species.

In fact, this beautiful and unique frog was thought to be extinct for 30 years before a tiny population was discovered in 2009 near Yass. Experts from Taronga and SoS collected a small number of juvenile frogs as an insurance population in case the wild population disappeared.

In collaboration with Taronga Conservation Society and SoS, South East Local Land Services are undertaking conservation management action onsite in Yass to protect the frog, including setting up exclusion cages for carp and promoting re-establishment of aquatic vegetation.

This SoS Partnership Grants project brings together Local Land Services, Taronga and SoS, who are working together to manage the captive breeding program, targeted surveys and on-ground management of the frog's habitat, helping to secure the species at the site and ensure the population's viability in the long term.

Working with the community to increase our impact

Communication and engagement are integral components of raising the profile of threatened species conservation and enhancing the impact of our program.

To ensure more people in New South Wales are aware of and care about threatened species conservation, we are telling stories about our native plants and animals and the need to conserve them, encouraging the community to join the movement.

Community engagement

Over the last 12 months, the focus for communications and engagement for SoS has been centred around:

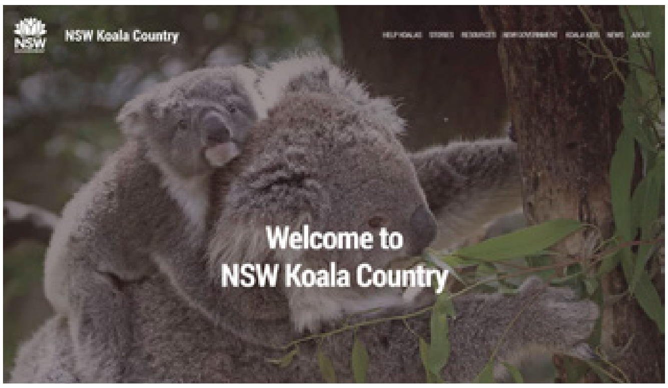
- getting out in the community to attend, run or support community events and field days. In 2018–19, SoS held nearly 450 community events in New South Wales, with around 38,000 people participating or attending
- sharing stories through local and mainstream media about the work being done to help save threatened species
- creating captivating content for both digital and social media
- encouraging the public to get involved in conservation through creative media such as art.

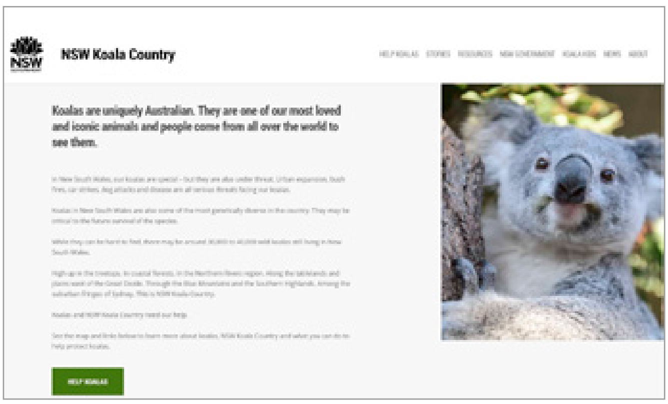
New resources we've produced

We've published 18 reports, guides and fact sheets and made these available on the SoS website. This includes education resources and packages for our schools and general community. We've also made updates to our webpages and launched new websites.

Some of the new resources include:

- NSW Koala Country website, providing a digital home for all things koala conservation
- Let's find out about NSW threatened animals: An Australian Curriculum education resource for years 1–6
- SoS fact sheets
- Saving the southern bell frog: An education resource for Years 3 to 6.





Case Study

Art of Threatened Species

The Art of Threatened Species program is seeking to engage the community with threatened species in a new way, through the eyes and creativity of artists across New South Wales.

Hosted by Orana Arts Inc. and supported by Create NSW, the Art of Threatened Species project is bringing together a collective of artists currently focusing on threatened species that SoS aims to secure in the wild.

All artists have been greatly supported while developing their artworks, with advice, information, ideas, time in the field and accommodation from our threatened species officers, NPWS rangers and numerous other science and environment professionals.

The program culminated in a three-month exhibition, which opened in November 2019, to engage new audiences and increase community awareness of threatened species and ecological communities in New South Wales and the SoS program.

Volunteers are integral to the success of our program

SoS continues to offer a growing number of opportunities for the public to volunteer on projects to assist threatened species. In 2018–19, SoS had at least 100 program-specific volunteers and at least 100 registered as working on NPWS projects that focus on SoS species.

These range from species-specific projects such as the glossy black-cockatoo survey in western New South Wales, the orange hawkweed eradication program in the Snowy Mountains, to the dozens of habitat restoration projects across the state, focusing on shorebirds at the Five Islands Nature Reserve, fairy penguins in Sydney Harbour, and threatened plants in the Blue Mountains. Existing and new projects can be found on the VIP – Volunteer Information Portal.

Sharing stories

Traditional media remain an important part of SoS communications, particularly sharing stories in regional and local media – print, online, radio and TV. In 2018–19 there was a focus on telling more stories about the threatened plants and animals in your 'backyard' to inspire the community to learn about the species in their region. In 2018–19, nearly 200 media stories were published, including stories profiling at least 80 different threatened species.

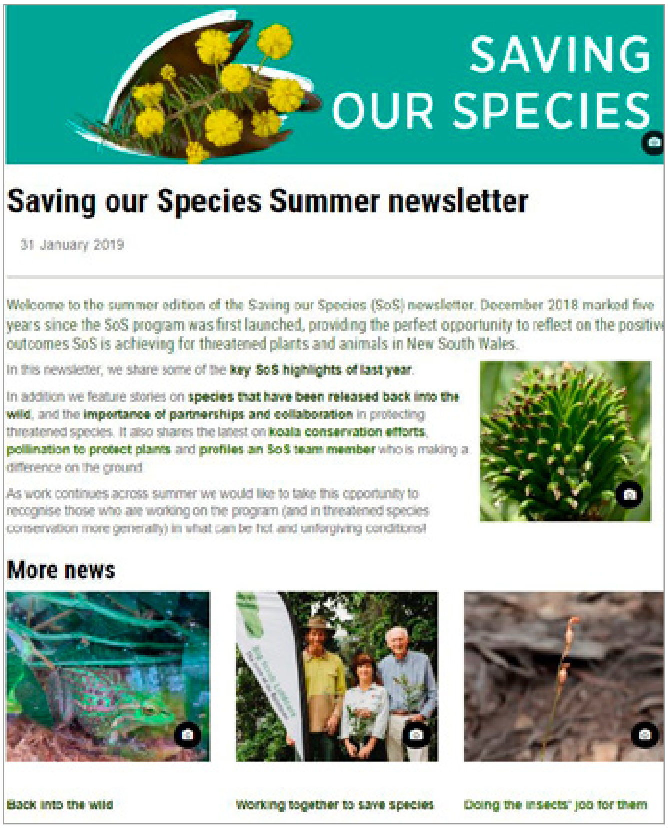
The SoS newsletter continues to be a great platform to share the latest news, conservation projects and updates from the program, as well as telling the stories of our staff, volunteers and partners who are so committed to the threatened species cause. There were four issues of the SoS newsletter in 2018–19, distributed to just over 2000 subscribers – an increase of about 40% from 2017–18. Our average open rate of 40%, compared to an industry standard of 23%, indicates that SoS subscribers are highly-engaged with the stories we share.

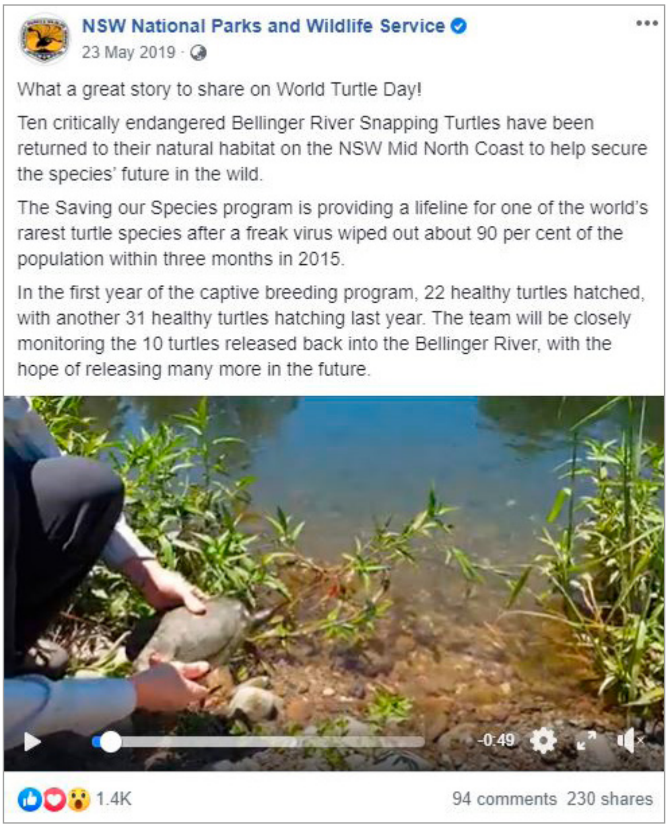
Creating captivating content

SoS is committed to developing and sharing innovative and creative content that gets more people talking about and participating in threatened species conservation and the SoS program.

Social media and the SoS website are important channels through which we can achieve this. SoS continues to share content (videos and images) across the NSW Environment and Heritage Instagram and Twitter, and through NPWS social channels. In 2018–19, 153 posts were shared on Instagram and nearly 350 posts on Twitter by SoS and the public using #SavingourSpecies.

Website traffic monitoring also began in April 2019, allowing the team to use analytics to improve the functionality and content of the website to retain and increase users in the future.





Case Study

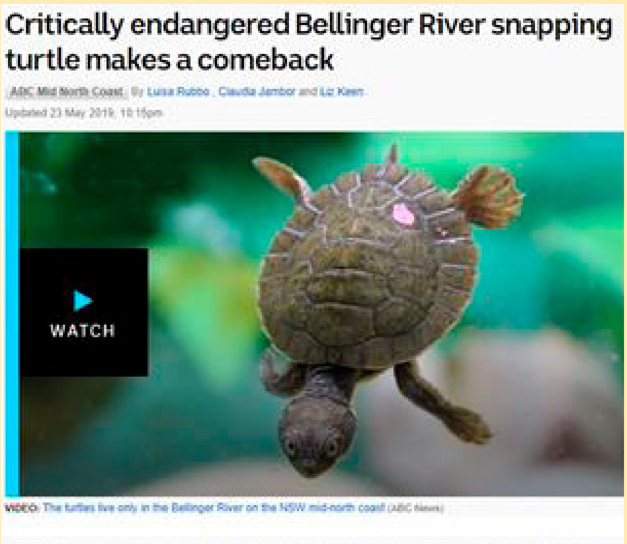
Bellinger River snapping turtle goes global for World Turtle Day!

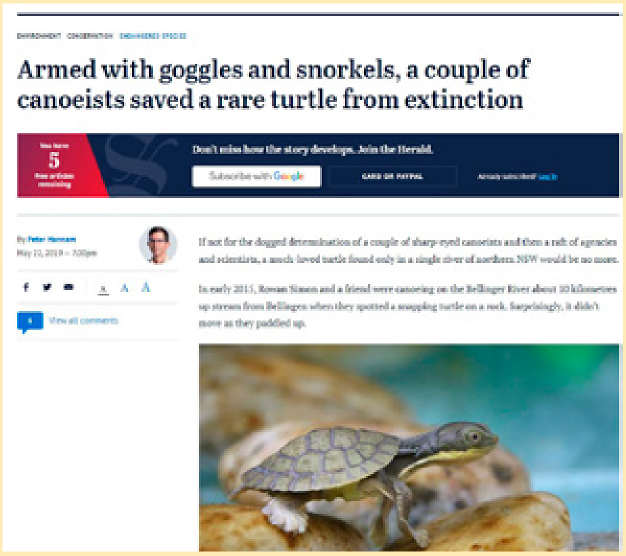
In 2015, a freak virus wiped out 90% of the Bellinger River snapping turtle population.

SoS gave the turtle a lifeline, collecting about 20 virus-free turtles from the river for a captive breeding program at Taronga Zoo. Following a successful breeding program, 10 of the captive-bred turtles were returned to their natural habitat in 2018; a big step forward in securing the future of this threatened animal.

To share this SoS success story, the NSW Environment Minister announced the story of the snapping turtles being returned to the wild on World Turtle Day, marked annually on 23 May.

This achievement, combined with the snapping turtle being one of the rarest turtles in the world, captured the hearts of Australia, the media and the world. Over 50 articles about the turtle were generated around World Turtle Day including an interview on the BBC – you can watch our global turtle here.





Looking ahead to 2019–20: Multiplying investment to secure a future for our species

With the program now more than three years into its $100 million investment, we are doing everything within our power to help secure a future for our threatened plants and animals in the wild.

Some of the key focus areas for the year ahead include:

- delivering more conservation actions on the ground to save more threatened species
- working in partnership with the NSW community to increase and multiply investment beyond the NSW Government's investment for 2019–20
- continuing to reintroduce locally extinct mammals in New South Wales, including the bridled nail-tail wallaby
- ongoing program development and evaluation, including SoS public exhibition and consultation with experts
- conducting more research and analysis into how we can adapt to accommodate the impact of prolonged drought and extreme bushfires
- continuing to integrate technology, data and analytics into the program, to more efficiently and effectively implement projects
- increasing opportunities for the public to learn about threatened species and make a difference, including through digital and traditional media
- communicating with a broader audience to cultivate greater public awareness of and passion for our program.

Photos

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Page 6: Drone hawkweed detection (Rob Matthews/HeliSurveys);
Page 7: A captive-bred animal from Taronga Zoo released into the Bellinger River. This animal was recaptured to monitor its health using radio tracking. At just under two years old, this turtle travelled approximately 8 km upstream of where it was released. This work was carried out under a scientific licence and with the approval of the DPIE Animal Ethics Committee (Shane Ruming/DPIE); Glossy black-cockatoo, *Calyptorhynchus lathami* (Charles Dove/DPIE); Plains-wanderer *Pedionomus torquatus*, female critically endangered bird. Critically endangered species (David Parker/DPIE); Koala, *Phascolarctos cinereus* (Dan Lunney/DPIE);
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Find out more:

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Environment, Energy and Science
Department of Planning, Industry and Environment
4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150
Locked Bag 5022, Parramatta NSW 2124
Phone: +61 2 9995 5000 (switchboard)
Phone: 1300 361 967 (Environment, Energy and Science 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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