Rescue Australia

A proposal for an emergency wildlife rescue pilot program

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Overview

This is a proposal to establish Rescue Australia, a pilot program to be conducted by the Odonata Foundation in conjunction with Animal Services Australasia, to assess and respond to wildlife needs in the event of natural disasters, including bushfires, floods, droughts and communicable diseases.

Rescue Australia will provide a network of threatened species sanctuaries that experts will use to respond to any emergency immediately, safeguarding and caring for surviving wildlife and starting habitat restoration. It will also provide reliable, real-time data from governments and local authorities during and after a disaster.

The proposal includes:

- the physical infrastructure and governance, administrative and in-field capabilities to be able to respond to any emergency rapidly

- establishment and preparation for deployment of a skilled, experienced team of nine professionals, who will develop methodologies and train up to 45 staff at seven Odonata wildlife sanctuaries in Victoria, New South Wales and the Australian Capital Territory

- two in-field capability and animal care trucks to meet the full range of administrative, data gathering and veterinary needs

- three mobile vet trucks and related equipment

- eDNA testing to gather wildlife baseline data immediately post-disaster

- habitat pods to protect surviving wildlife from predators immediately post-disaster and to help vegetation recover

- real capability in the event of a natural disaster

- useful learnings for national and international emergency animal rescue

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Establishing capability, including animal care trucks

As its first step, Rescue Australia will put the physical infrastructure and governance, administrative and in-field capabilities in place to rapidly respond to any emergency.

The six participating Odonata sanctuaries are committed to making substantial in-kind infrastructure contributions, including predator-proof fencing, project offices, animal pavilions, vet clinics and animal hospitals. But not all sanctuaries have all these facilities. Rescue Australia will fill infrastructure gaps in this network to ensure they are available equally throughout the project area.

Rescue Australia will also commission three emergency animal rescue trucks to provide a full veterinary and project administrative capability on the ground.

These trucks will be modelled on the Animal Welfare League NSW's mobile vet service, designed and built by an Odonata staff member and Animal Services Australasia Director Mark Slater. The trucks will enable Rescue Australia to provide vet services, including burns treatment, surgery, pathology testing and analysis, recovery cages, humane euthanasia and medical waste disposal. They also provide administrative and other facilities for managing field activities, liaising with and providing information to governments and relevant stakeholders, conducting desktop PCR testing and processing eDNA samples.

Three trucks are proposed; it is not uncommon for two natural disasters, such as bushfires, to be occurring in Australia at the same time.

Seven disaster-ready wildlife sanctuaries in Victoria, Canberra and New South Wales

The pilot will train 45 staff of seven Odonata wildlife sanctuaries for emergency deployment while building expertise and capability to train staff at 50 sanctuaries within 10 years.

Staff at the sanctuaries — Mount Rothwell Biodiversity Interpretation Centre (Little River, Vic), Wildbark (Throsby, ACT), Widgewah Conservation Reserve (Avenel, Vic), Raptor Recovery Australia (Fitzroy Falls, NSW), Zambi Native Wildlife Sanctuary (Dural, NSW) and Boneo Park Equestrian Centre (Mornington Peninsula Vic), Banyula (Pillar Valley, NSW) — will be trained in:

- incident, emergency and disaster preparedness

- real-time reporting requirements during and immediately after disasters

- animal evacuation, transportation and translocation to safely move animals out of harm's way and minimise stress

- safe and effective use of firearms, according to licensing requirements

- initial post-disaster assessment, including species recognition and eDNA testing

- habitat pod deployment

- animal rehabilitation to ensure they are healthy and self-sufficient to return to the wild

- safe work practices, including emergency medical care of people.

Odonata is building a network of over 50 sites — sanctuaries and other facilities — engaged in predator-proof research and facilities, eDNA testing, wildlife corridors and habitat regeneration. Partners, including government departments, zoos, universities, catchment management authorities, community-based organisations and businesses to support these facilities.

Rescue Australia will promote the pilot program through this network, encouraging staff and volunteers to attend online webinars and training sessions. Some of these personnel would undoubtedly be available for post-disaster recovery activities.

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A skilled, experienced team for immediate deployment

In the immediate aftermath of a natural disaster, safeguarding and caring for surviving wildlife in distress is the greatest need.

Rescue Australia will assemble a team of professionals ready to deploy to any emergency around Australia involving native wildlife. The team will comprise:

- veterinarians to offer immediate care and pain relief

- animal handling specialists for the field capture of injured wildlife, euthanasia of severely injured animals, animal restraint and transport to recovery locations

- ecologists to identify and document animals and to supervise eDNA testing

This team will serve as the incident control team to advise government in real time about what is happening to native wildlife on the ground, what immediate responses are required and what the post-event recovery needs are.

The Mudgee fires response

A Rescue Australia team was deployed as part of the incident response during the Mudgee, NSW fires in March 2023. Much of the burning area was in a national park, inaccessible by vehicle or on foot, so the team deployed in helicopters. Using topographic maps, the team tracked where animals were moving to and from as the fire front spread, so it could provide responses where animals most needed them and gather intelligence vital for accessing the fire ground as quickly as possible when the immediate threat had passed.

The Lismore floods response

A Rescue Australia team was also deployed during the March 2022 Lismore floods. As with the Mudgee fires and as is common in natural disasters, much of the flooded area was inaccessible. The team deployed in helicopters to track fleeing animals, map the terrain for food drops and get to animals that needed veterinary help or euthanasia. The team fed information in real-time back to government agencies that urgently needed to update the media and the public and manage biosecurity issues and food resources from other states, all of which have different policies about quarantine and the use of herbicides.

The Tidbinbilla fires response

A Rescue Australia team was deployed as part of the Black Summer fires of 2019-20 to the Australian Capitol Territory to Tidbinbilla Nature Reserve. Not only was the reserve under eminent threat, a community of the extremely rare brush tailed rock wallaby were in the direct line of the fires path. This genetically distinct group of only 40 animals surviving in the wild were airlifted by Australian Defence Force Hercules aircraft from Orroral Valley as the fires come frighteningly close. These wallabies were evacuated to Odonata's Mount Rothwell Biodiversity Interpretation Centre, well out of harms way. After seven months this group were returned to their native home of Tidbinbilla as a group of 80 animals through the care of Rescue Australia genetic and scientific care teams.

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eDNA testing for wildlife presence confirmation

An early, essential action post-disaster is to determine accurate an wildlife headcount as a baseline for recovery efforts.

Environmental DNA (eDNA) testing — sampling for traces of the genetic material animal shed as they move through their environment — enables us to locate wildlife and assess their numbers for a fraction of the effort and cost of traditional methods and with greater accuracy. Immediate eDNA testing of a disaster-affected area provides a map of what species remain and their numbers.

Initially, Rescue Australia will eDNA-test selected areas close to sanctuaries and in other areas most likely to be affected by disaster, based on historical data. It will establish and refine the eDNA-testing methodology so it is ready to deploy in the event of a disaster, and it will update its maps of these areas every six months to keep the data up-to-date. Rescue Australia will estimate the likely impacts of natural disasters on wildlife populations and prepare contingency plans addressing recovery, transport, veterinary supplies, food and staff preparedness requirements for up to three areas. This will ensure the team is well-prepared for deployment to a disaster area.

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Habitat pods for protection against predators and vegetation recovery

We've all seen images of scorched habitats and injured wildlife left vulnerable in a landscape devoid of cover. We don't see the feral animals, most importantly foxes and cats, drawn to firegrounds because they sense they can pick off the survivors, which have greatly improved chances of survival if they have somewhere to hide.

Habitat pods are biodegradable cardboard shelters deployed to provide emergency shelter for ground-dwelling wildlife during the critical post-fire period. They offer essential protection, just as bird boxes, bat boxes and tree hollows provide shelter for animals that live in trees. Wildlife only need emergency shelter for a short time — the post-disaster period when predators are about — before their regular habitat has had a chance to regenerate. The pods biodegrade away in about 12 months, which is about how long it takes for most habitats to regrow a dense understory. As they degrade, the pods provide habitat for invertebrates and small reptiles. They finally become thick mulch, attracting invertebrates and creating a food source for bandicoots and other insectivorous mammals. Eventually, helped by adding native seeds to the pods, vegetation grows over and into the cardboard mulch, providing habitat in denuded landscapes and helping the vegetation recover.

Research shows that after a fire, it is animals that survive and persist in situ that drive the recovery of wildlife populations. Without them, the local population may never recover; with them, recovery will be quicker and more complete.

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Real capability in the event of a natural disaster

Rescue Australia is, in the first instance, about establishing a capability for deployment in the event of a natural disaster. However, the Rescue Australia team will be capable of being deployed to a natural disaster after a six-month establishment phase to test the equipment and methodologies developed up to that time. In the event of a disaster:

- Rescue Australia will have already been monitoring the situation and will have most likely been liaising with the department about the need to respond

- the mobile vet truck(s) will be finally prepped for deployment, including the preparation of all medical equipment and supplies and firearms

- the team and appropriately trained sanctuary staff will be rapidly deployed, ideally getting moving within three hours

- on arrival, the team will be briefed by relevant local agencies about the situation and the availability of relevant resources

- the team leader will stay in the field for the duration of the response to coordinate services and liaise with the department and relevant other agencies

- other team members will stay in the field for as long as required, with appropriate rotations

Useful learnings for national and international emergency animal rescue

Rescue Australia intends to document its policies, procedures and processes to create a comprehensive, peer-reviewed body of evidence and guidance about field responses to natural disasters for native wildlife. It will build on this body of knowledge with time and incorporate new learnings from each response into it. The output will be primarily a training curriculum, similar to how knowledge is now distributed about how fires create their own weather systems, and other online, printed and audiovisual resources.

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The budget

Funding requirement

As the budget below shows, Rescue Australia requires funding for:

- sanctuary infrastructure to ensure each pilot project sanctuary has a predator-proof fence, project office, animal pavilion, vet clinic and animal hospital: each sanctuary already has some or all of this infrastructure, so the budget includes different amounts for different sanctuaries

- develop and deliver training curriculum, including an online training portal app that will collect information from the field as the basis of the training modules

- legal services to ensure the pilot project is established and rights and obligations with sanctuaries, governments and other relevant agencies understood and respected; and other governance and administration expenses

- infield infrastructure, including the two animal care trucks and field-specific vehicles, purpose-built to ensure incident control capabilities during an emergency as well as animal ambulance and transportation capability

- pilot project staffing, including for a project coordinator, biodiversity lead, domestic animal lead, response lead, chief vet and veterinary team and communications manager

- miscellaneous project costs, including monitoring and research, travel and events

The budget is based on a decreasing funding requirement year-on-year, so by the fourth year, there are other revenue streams and private landholder contributions to scale the project up to 50 sanctuaries.

More granular budget detail can be provided on request.

Item	Year 1	Year 2	Year 3
Sanctuary infrastructure			
Wildbark	$ 500,000	$250,000	
Raptor Recovery Australia	$1,000,000		
Zambi Native Wildlife Sanctuary		$250,000	
Mount Rothwell Biodiversity Interpretation Centre	$1,000,000		
Boneo Park Equestrian Centre		$250,000	
Training			
Online training portal app	$ 50,000	$ 50,000	$ 50,000
Curriculum	$250,000	$100,000	$ 50,000
Sanctuary landholder training time	$150,000	$150,000	$150,000
Standby crew training time	$ 50,000	$ 50,000	$ 50,000
Governance and administration			
Legal services	$100,000	$100,000	$100,000
Other governance and admin	$100,000	$100,000	$100,000
Infield infrastructure			
Truck	$1,000,000	$500,000	$500,000
Vehicles	$ 200,000	$100,000	$100,000
Field consumables	$ 250,000	$150,000	$100,000
Staffing			
Rescue Australia coordinator	$170,000	$170,000	$170,000
Biodiversity lead	$120,000	$120,000	$120,000
Domestic animal lead	$120,000	$120,000	$120,000
Response lead	$120,000	$120,000	$120,000
Chief vet	$200,000	$200,000	$200,000
Senior vets x 2	$300,000	$300,000	$300,000
Communications manager	$120,000	$120,000	$120,000
Miscellaneous			
Monitoring and research	$100,000	$100,000	$100,000
Travel	$ 50,000	$ 50,000	$ 50,000
Events	$ 30,000	$ 30,000	$ 30,000
Subtotals	*$5,980,000*	*$3,380,000*	*$2,530,000*
Required funding total			$11,890,000

In-kind contributions

Including the initial six participating sanctuaries of Odonata, both Animal Services Australasia and Odonata have made substantial in-kind contributions ensuring the project is successfully established and ultimately expands to 50 sanctuaries. These contributions include the value of the sanctuary's land, the use of its existing infrastructure, its training capability, its staff and miscellaneous other contributions. SG Fleet, a major fleet management and leasing company, has also committed to an in-kind contribution. The table below shows the in-kind commitments.

In-kind Contributions	$
Odonata	$150,000
Animal Services Australasia	$50,000
Wildbark	$6,000,000
Raptor Recovery Australia	$2,000,000
Zambi Native Wildlife Sanctuary	$4,000,000
Mount Rothwell Biodiversity Interpretation Centre	$1,000,000
Boneo Park Equestrian Centre	$30,000,000
SG Fleet	$500,000
In-kind contributions total	$43,700,000

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About Odonata Foundation

Odonata is a not-for-profit entity supporting biodiversity impact solutions. We create, support, nurture and empower businesses and entrepreneurs to move towards a more environmentally sustainable world.

Since 2016, Odonata has catalysed over $63 million that has protected over 49,000 ha of habitat, engaged with seven First Nations groups and worked with hundreds of businesses, farms, entrepreneurs and citizen scientists.

About Animal Services Australasia

Animal Services Australasia actively engages with government, industry, corporate and community clients, providing consultations to enhance animal welfare provision. Through our actions, we strive to improve animal well-being and protection and foster a compassionate society. Our diverse activities include providing relief and recovery support to industries and communities impacted by emergencies and disasters, preparedness measures, prevention strategies, mitigation efforts, advisory roles, advocacy efforts, educational initiatives and community outreach.

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