



**Inquiry into the 2026 summer fires across
Victoria**

**Legislative Council Environment and Planning
Committee**

Submission by the
Invasive Species Council

April 2026

Document details

Invasive Species Council. 2026. Inquiry into the 2026 summer fires across Victoria. Legislative Council Environment and Planning Committee.

About the Invasive Species Council

The Invasive Species Council was formed in 2002 to advocate for stronger laws, policies and programs to keep Australian biodiversity safe from weeds, feral animals, exotic pathogens and other invaders. It is a not-for-profit charitable organisation, funded predominantly by donations from supporters and philanthropic organisations.

Intellectual property rights

© Invasive Species Council 2026

Unless otherwise noted, copyright and any other intellectual property rights in this publication are owned by the Invasive Species Council.



All material in this publication is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. Creative Commons Attribution 4.0 International Licence is a standard form licence agreement that allows you to copy, redistribute, remix, transmit and adapt this publication provided you attribute the work, you do not use it commercially and you distribute your contribution under this creative commons licence. The licence terms are available from <https://creativecommons.org/licenses/by-nc-sa/4.0/>.

Inquiries

Invasive Species Council

Contact: Claire Bookless

Address: PO Box 818, Katoomba NSW 2780, Australia

ABN: 27 101 522 829

Web: invasives.org.au

Email: contact@invasives.org.au

Contents

Introduction	2
List of recommendations	3
Climate change, fire and invasive species: interconnected and compounding threats	4
Climate change and invasive species	4
Fires and invasive plants and diseases	5
Case study – Invasive grasses and fire	6
Fire and invasive animals	8
Case study – Deer, rabbits and fire	8
Case study – Cats, foxes and fire	11
Opportunities presented by fires	14
Case study – Victorian Government Bushfire Response and Recovery program	14
Case study – Kangaroo Island programs to eradicate feral pigs and cats	15
Biosecurity to build resilience to climate change and bushfire threats	17
Prevention	17
Early detection and rapid response	18
Suppression and control of established invasive species	18
Skilled workforce	18
Research	19

Introduction

The 2026 Victorian fires – which tragically claimed one life, burned over 400,000 hectares, and destroyed 900 buildings, including at least 250 homes – were driven by record heat and extreme fire conditions.¹ As this submission will demonstrate, the threat of catastrophic fire is being compounded by climate change and invasive species, which are making Australian fires increasingly dangerous to our communities, environment, and economy. The Invasive Species Council welcomes the opportunity to present this submission on these critical issues and to offer practical recommendations for addressing them.

Fires have been a constant feature of the Australian landscape, but their often positive ecological role is being fundamentally disrupted. The Invasive Species Council's submission outlines the real risks posed through the often synergistic threats of climate change, bushfires and invasive species: from buffel grass creating a dangerous 'grass-fire cycle' that fuels hotter, faster fires, to feral predators like cats and foxes capitalising on burnt landscapes to decimate vulnerable native wildlife. Ignoring these compounding threats will undermine Victoria's capacity for long-term ecological and community resilience.

Our submission responds to Terms of Reference 1, 2, 7 and 8 by focusing on three key questions:

- How do bushfires, invasive species, and climate change form reinforcing cycles of damage that magnify ecological damage and vulnerability?
- How do fire events present time-critical windows to implement landscape-scale control or eradication programs for key invasive species?
- Why is environmental biosecurity – across the full invasion curve – crucial to ensuring Victoria's environment is more resilient to future climate-driven disasters?

A [list of our recommendations](#) is provided below.

¹ Tahiry Rabehaja, Jacod Evans, Stuart Browning, [The Early January 2026 Victorian Grassfires and Bushfires: Briefing Note 529](#), 30 January 2026, Risk Frontiers, accessed on 3 March 2026. and Andy Ball, Benita Kolovos, Josh Nicholas, Mike Hohnen and Nick Evershed, [See how Victoria's bushfires spread: a visual guide to the scale of devastation](#), 16 January 2026, Guardian Australia.

List of recommendations

Recommendation 1: Declare buffel grass a noxious weed under the Victorian *Catchment and Land Protection Act 1994*, and develop an action plan to contain or, if feasible, eradicate it. Support the national nomination of buffel grass as a Weed of National Significance and a key threatening process under the EPBC Act, and the development of a national threat abatement plan.

Recommendation 2: List the ecosystem impacts associated with invasive flammable grasses as a potential threatening process under the Victorian *Flora and Fauna Guarantee Act 1988* and develop an action statement.

Recommendation 3: In accordance with the recommendation of the independent review of the *Wildlife Act 1975*, list feral deer as established pest animals under the *Catchment and Land Protection Act 1994*, and remove the 'protected wildlife' status under the *Wildlife Act 1975*.

Recommendation 4: Fully fund the implementation of the Victorian Deer Control Strategy, including the full eradication of deer within the region covered by the West Victorian Deer Control Plan.

Recommendation 5: To ensure the availability of future effective rabbit biocontrols, support the full funding of the Rabbit Biocontrol Pipeline Strategy 2024.

Recommendation 6: Plan and prepare to protect native animals from invasive predators following major fire events, including by:

- (a) intensive control in burnt areas where rare species are at risk
- (b) protection of unburnt refugia against predators
- (c) leaving in place burnt logs and other protective structures
- (d) installing artificial shelters to protect native animals from predators.

Recommendation 7: End the fox bounty program and target funding to more effective landscape scale fox control programs focussed on post-fire recovery of vulnerable native species.

Recommendation 8: Strengthen the emphasis on prevention in Victoria's biosecurity frameworks, including by supporting the implementation of a strong threat abatement plan for garden plants and appropriately regulating the sale of known and potential environmental weeds.

Recommendation 9: Strengthen Victoria's environmental biosecurity surveillance and response capacity, including by establishing a well-resourced environmental biosecurity fund, educating and resourcing land managers – including Traditional Owners – to surveil, report and manage environmental incursions early.

Recommendation 10: Move beyond fragmented, asset-based approaches to established invasive species and implement long-term, landscape-scale control programs targeting high-impact invasive species that drive fire risk and hinder post-disaster recovery.

Recommendation 11: Embed environmental biosecurity into disaster preparedness and recovery frameworks including bushfire, flood and storm preparedness, response and recovery planning.

Recommendation 12: Invest in applied research and climate-biosecurity risk modelling across the invasion curve, aimed at better mapping densities of key fire-relevant invasive species (e.g. deer, rabbits, foxes, cats and invasive grasses); identifying the links between invasive species, fuel dynamics and fire severity; and evaluation of the effectiveness of prevention, early intervention, and post-disaster management interventions.

Climate change, fire and invasive species: interconnected and compounding threats

Climate change, uncontrolled fires, and invasive species are interconnected environmental threats that can interact in ways that compound ecological damage and make ecosystems more vulnerable over time, potentially leading to ecosystem tipping points.² Their interaction can also significantly complicate management efforts and reduce the effectiveness of management or mitigation of threats individually.

Climate change and fire

Climate change is increasing Australia's fire risk by driving higher average temperatures, altering rainfall patterns, and intensifying the severity and duration of drought events.³ As climate change progresses, fire weather conditions – high temperatures, low humidity, and strong winds – are becoming more common.⁴ This increases both the likelihood of ignition and the intensity of fires once they start and has directly contributed to lengthening fire seasons.⁵

The catastrophic Black Summer bushfire season of 2019–2020 served as a stark demonstration of how the confluence of extreme heat and prolonged drought can create optimal conditions for the ignition and spread of catastrophic fires.⁶ The exceptionally warm winter and spring preceding the 2025-26 Victorian fire season, coupled with low rainfall and high temperatures, strongly suggest that this event was also shaped and exacerbated by similar climate-related factors.⁷

Climate-driven changes, including in fire frequency and intensity, are compounding existing land management challenges, such as invasive species. In turn, invasive species can benefit from changed climatic conditions and more frequent or extreme weather-related phenomena like fires and floods.

Climate change and invasive species

The National Climate Change Risk Assessment found that climate change is likely to increase threats posed by invasive plants, animals and diseases, by creating conditions – like higher temperature, rainfall and extreme events – that favour their dispersal, survival and reproduction.⁸

As global temperatures rise and precipitation patterns shift, species that were previously constrained by climatic barriers, whether by temperature extremes, seasonal aridity, or frost, may find those barriers removed or weakened. More frequent and severe disturbance events – including the kind of large-scale bushfires witnessed in 2026 – can open new ecological corridors and degrade the resilience of native ecological communities, creating conditions that favour the spread of invasive

² Williams K, Hunter B, Schmidt B, Woodward E & Cresswell I, 2021, Australia state of the environment 2021: land, independent report to the Australian Government Minister for the Environment, Commonwealth of Australia, Canberra, p 103. doi.org/10.26194/6EAM-6G50

³ CSIRO, [Australian climate trends](#), *Climate Change in Australia Climate information, projections, tools and data, 2020* (website), Australian Government, accessed on 10 March 2026.

⁴ Ibid.

⁵ Ibid.

⁶ JG Canadell, CP Meyer, GD Cook, et al, 2021, Multi-decadal increase of forest burned area in Australia is linked to climate change. *Nature Communications* 12: 6921. doi.org/10.1038/s41467-021-27225-4

⁷ Bureau of Meteorology, 2026, [Tuesday 3 March 2026 - Seasonal Climate Summary for Victoria](#), and [Thursday 5 February 2026 - Annual Climate Summary for Victoria](#), Commonwealth of Australia, accessed on 10 April 2026.

⁸ Australian Climate Service, 2025, [Australia's National Climate Risk Assessment Report \[21.2 MB\]](#), Australian Government.

species into new areas, including higher elevations and previously cooler southern landscapes. This is expected to facilitate range expansions and new incursions, with species not currently present in Australia potentially finding climatic conditions here increasingly suitable, particularly along the east coast and southeastern Australia.⁹ At the same time, established invasive species already present in Victoria and across Australia are also likely to shift in their distribution.¹⁰

The National Climate Change Risk Assessment also found that a warming climate may hamper efforts to combat these invasive threats, for example, by shortening invasive species' life cycles and reducing the effectiveness of herbicides and pesticides.¹¹

Invasive species can also exacerbate climate change through a range of mechanisms that reduce the capacity of ecosystems to capture and store carbon. On land, this includes the degradation of native vegetation through grazing, browsing and trampling pressure – which reduces above- and below-ground biomass, disrupts soil carbon cycling, and inhibits the regeneration of woody species – as well as direct greenhouse gas emissions from methane-producing herbivores and the increased frequency and severity of fire.¹²

Fires and invasive plants and diseases

Invasive plants are the most frequently occurring threat to vulnerable, endangered or critically endangered species, with over 600 of Australia's threatened plants and animals being imperiled by weeds.¹³ There are currently well over 1000 species of weeds established in Australia, with many more introduced species established in ecosystems and new weeds escaping from gardens, horticulture and agriculture each year.¹⁴ Plant diseases are also a major threat to Australia's biodiversity.

Fires can increase the impacts of weeds, for example, by enhancing their dispersal and abundance by stimulating germination of seeds, reducing or eliminating competition with native vegetation, or by altering ecosystems in ways that promote fire.¹⁵ This latter interaction is demonstrated by the worldwide phenomenon known as the 'grass–fire cycle', where invasive grasses transform native ecosystems by burning faster, hotter and more regularly than native forests, woodlands, shrublands and grasslands can tolerate.¹⁶ Victorian examples of invasive grasses exhibiting these characteristics

⁹ Ibid.

¹⁰ ID Cresswell, T Janke, EL Johnston, 2021, [Overview: Invasive species and range shifts](#). In: *Australia State of the environment 2021*, Australian Government Department of Agriculture, Water and the Environment, Canberra,

¹¹ Australian Climate Service, 2025.

¹² See for example, A Bengsen, and T Cox, 2014, [The role of rabbit and other invasive herbivore control in reducing Australia's greenhouse gas emissions](#) [PDF 1,953KB], PestSmart Toolkit publication, Invasive Animals Cooperative Research Centre; S Treby, SP Grover, 2023, Carbon emissions from Australian Sphagnum peatlands increase with feral horse (*Equus caballus*) presence, *J Environ Manage*, Dec 1;347:119034. doi.org/10.1016/j.jenvman.2023.119034

¹³ M Ward, J Carwardine, CJ Yong, JE Watson, J Silcock, GS Taylor, et al, 2021, A national-scale dataset for threats impacting Australia's imperiled flora and fauna, *Ecology and Evolution*.4; 11(17):11749-11761. doi.org/10.1002/ece3.7920

¹⁴ G Keighery, CR Gosper, S Barrett, D Coates and RO. Makinson, 2023, The compounding impacts of disease and weeds after the 2019–20 wildfires on Australian vascular plants and communities (book chapter) in *Australia's Megafires: Biodiversity Impacts and Lessons from 2019-2020*, L Rumpff, et al (eds), CSIRO Publishing, p 244. doi.org/10.1071/9781486316656.BK08085_ch18.

¹⁵ G Keighery, CR Gosper, S Barrett, D Coates and RO. Makinson, 2023, p 249.

¹⁶ Meta-analysis of published research has revealed that uncontrolled fire promotes the composition and performance of exotic plant species, while simultaneously reducing the performance of native flora (whereas

include *Phalaris aquatica*, serrated tussock,¹⁷ perennial veldt grass, African lovegrass, tall wheatgrass, and buffel grass – refer to the [case study on invasive grasses and fire below](#). Weedy shrubs and trees also known to grow rapidly, produce large amounts of dry biomass, and recover quickly after fire in Victoria include blackberry, gorse and sweet pittosporum.

Fire can also increase the risks posed by diseases – particularly *Phytophthora cinnamomi* (a soil-borne water mould that causes plant dieback) and myrtle rust (spread by water, wind and other vectors) – both by making plant tissues vulnerable to pathogens and creating post-fire conditions conducive to their spread, such as the broadscale dispersal of spores by wind and water. For example, following the 2019–20 Black Summer bushfires, researchers considered 186 native plant species highly susceptible to the compounding effects of disease.¹⁸

The essential human intervention following fires – including emergency response, suppression, and post-fire recovery operations – can also inadvertently become a vector for weeds and diseases. Some fire-fighting retardants can add nutrients to poor soils, making them more fertile for weeds.¹⁹ Heavy machinery, vehicles, and equipment used in firefighting and clean-up can transport seeds, fungal spores, and contaminated soil over long distances, introducing new weeds and pathogens such as *Phytophthora* into fragile, recently burnt ecosystems.²⁰ The importation of fodder from remote regions to feed stock after fires risks the introduction of new weeds. Without strict hygiene protocols (e.g. vehicle ‘wash down’ procedures) across all fire management and recovery activities, these efforts, designed to aid recovery, may risk establishing new, highly destructive invasions that undermine long-term environmental restoration.

Case study – Invasive grasses and fire

Invasive grasses – many introduced for agriculture – are a significant threat to Victoria’s biodiversity and agriculture, particularly within native grasslands and woodlands. They are often highly competitive, drought-tolerant, and difficult to manage once established. Critically, these grasses can drastically alter fire regimes, creating a dangerous, positive-feedback loop: uncontrolled fires promote exotic species dominance, while the resulting biomass from these grasses creates conditions for more intense and frequent fires, actively suppressing native flora recovery.

Buffel grass – native to Africa and west-Asia – is a high-biomass, long-lived grass now expanding across Australia including into north west Victoria. It is highly tolerant to drought, fire, and grazing.²¹ Its ability to grow rapidly (buffel grass can grow to pre-fire levels within a year), produce copious dry fuel, and recover quickly following the hotter, faster fires it fuels, can create a cycle in

controlled or ‘prescribed’ burning does not produce this effect): C Alba, H Skálová, KF McGregor, C D'Antonio & P Pyšek, 2015, Native and exotic plant species respond differently to wildfire and prescribed fire as revealed by meta-analysis, *Journal of Vegetation Science*, 26(1): 102–113. doi.org/10.1111/jvs.12212; Ibid.

¹⁷ Infestations of serrated tussock can pose particularly dangerous fire hazards, with burn intensities up to seven times greater than native grasslands: Agriculture Victoria, [Serrated Tussock](#), accessed on 10 March 2026.

¹⁸G Keighery, CR Gosper, S Barrett, D Coates and RO. Makinson, 2023, p 245.

¹⁹ Ibid, p 249.

²⁰ Ibid, p 251.

²¹ For the Victorian distribution of buffel grass see VicFlora website at <https://vicflora.rbg.vic.gov.au/flora/taxon/b196a347-3c4a-473e-819e-a06f4d344f2e>

which frequent or intense fires further its dominance and disadvantage native plants.²² The spread of buffel grass into arid ecosystems in central Australia, including in the World Heritage-listed Uluru-Kata Tjuta National Park, is causing substantial ecological and cultural harm.²³ Buffel grass contributed to the deadly fires that engulfed the Hawaiian island of Maui in 2023 killing 97 people, and a blaze that escaped containment in Tjoritja/West MacDonnell National Park and threatened homes in Alice Springs.²⁴ It is also acknowledged as a threat to Victorian biodiversity – including the endangered Mallee emu-wren and heath skink.²⁵

The competitive advantage of buffel grass is amplified by a changing climate. The historical cold-weather limitation on buffel grass's spread is diminishing,²⁶ while increasing CO₂ levels will promote its growth.²⁷ This combination is predicted to result in the further expansion of buffel grass and increase its threat to Victoria – including in areas supporting significant ecological communities like the endangered Mallee Bird Community of the Murray Darling Depression Bioregion.²⁸

Unlike other common invasive grasses found in Victoria that exhibit similar, fire promoting characteristics, buffel grass is in the early stage of invasion. It was first detected near Ouyen in 2014.²⁹ Infestations are small, confined mostly to roadsides and are currently manageable.³⁰ Victoria now has a vital opportunity to prevent the spread of buffel grass before eradication or containment become too costly. Despite recognition as an environmental weed in Victoria and its listing as a weed in a number of Victorian management strategies and plans, buffel grass is not a declared noxious weed under the Victorian *Catchment and Land Protection Act 1994*. This may contribute to a lack of awareness of this weed as an ecosystem 'transformer', complacency around its management – land managers often lack basic identification skills – and the current lack of key control options in Victoria (e.g. Flupropanate is not currently registered for use in Victoria).

²² C Schlesinger, S White and S Muldoon, 2013, Spatial pattern and severity of fire in areas with and without buffel grass (*Cenchrus ciliaris*) and effects on native vegetation in central Australia, *Austral Ecology*, 38: 831-840. [doi:10.1111/aec.12039](https://doi.org/10.1111/aec.12039)

²³ Indigenous Desert Alliance, 2025, Nationally significant weed nomination for Buffel Grass, unpublished.

²⁴ Tyne Logan, [Invasive buffel grass that helped fuel deadly Maui fires also threatening Australia](#), 19 September 2023, Australian Broadcasting Corporation, accessed on 13 March 2026.

²⁵ Department of Energy, Environment and Climate Action, Action Statement Mallee Emu-wren, and Action Statement Heath Skink, undated, Victorian Government, accessed at <https://www.environment.vic.gov.au/conserving-threatened-species/action-statements> on 7 April 2026.

²⁶ VM Marshall, MM Lewis, B Ostendorf, 2012, Buffel grass (*Cenchrus ciliaris*) as an invader and threat to biodiversity in arid environments: A review, *Journal of Arid Environments*, 78: 1-12. <https://doi.org/10.1016/j.jaridenv.2011.11.005>

²⁷ RK Bhatt, MJ Baig, HS Tiwari, 2007, Growth, biomass production, and assimilatory characters in *Cenchrus ciliaris* L. under elevated CO₂ condition. *Photosynthetica* 45, 296e298.

²⁸ Threatened Species Scientific Committee, 2021, Approved Conservation Advice for the Mallee Bird Community of the Murray Darling Depression Bioregion, Department of Agriculture water and Environment, Australian Government.

²⁹ Department of Environment Land Water and Planning, 2021 Early Invader Weeds Update: Weeds at the Early Stage of Invasion (WESI) Project newsletter, May 2021, accessed at https://www.environment.vic.gov.au/_data/assets/pdf_file/0023/524417/Early-Invader-Update_Feature-weed-resources_22_Autumn2021.pdf on 13 March 2026.

³⁰ VicFlora, [Cenchrus ciliaris L. Buffel Grass](#) (website), Royal Botanic Gardens of Victoria, accessed on 13 March 2026.

Buffel grass has been nominated as a Weed of National Significance, and is currently being assessed as a key threatening process under the *Environment Protection and Biodiversity Act 1999* with a decision due by April 2027. While national recognition of this weed is essential to elevate the profile of this critical ecological threat, in the meantime, the Victorian government needs to act decisively and commit resources to containment, or eradication where feasible, before buffel grass becomes an entrenched, unmanageable fire risk across the state.

Recommendation 1: Declare buffel grass a noxious weed under the Victorian *Catchment and Land Protection Act 1994*, and develop an action plan to contain or, if feasible, eradicate it. Support the national nomination of buffel grass as a Weed of National Significance and a key threatening process under the EPBC Act, and the development of a national threat abatement plan.

Recommendation 2: List the ecosystem impacts associated with invasive flammable grasses as a potential threatening process under the Victorian *Flora and Fauna Guarantee Act 1988* and develop an action statement.

Fire and invasive animals

Invasive animals such as feral cats, foxes, deer, rabbits, rodents and introduced fish, and invertebrates such as the European honey bee, already threaten an enormous number of Australia's native species through herbivory, predation, and competition. The impacts of such invasive species can be significantly amplified after a fire and even cause mortality exceeding the fire event itself.³¹

Introduced herbivores affect the widest range of native species following fires by damaging plants through consumption and trampling, fouling waterways and impacting both terrestrial and aquatic animals – refer to the [case study on deer, rabbits and fire](#). While fires can reduce habitat cover for native animals, exposing those animals that initially survived the fires to greater pressure from invasive predators that are drawn into hunt in recently burned areas – refer to the [case study on cats, foxes and fire](#). The impacts of invasive animals on fire-affected landscapes can be long-lasting, especially if introduced species are allowed to expand into new areas following fires.

Case study – Deer, rabbits and fire

Hard hooved feral animals (ungulates) like deer, and other invasive herbivores, such as rabbits, can significantly increase fire hazards and impede recovery. Of the 92 ecosystems highly impacted by the 2019–20 Australian bushfires, 11 were considered highly exposed (>50% distribution) to introduced herbivores post-fire, with deer and rabbits found to be the most pervasive invasive herbivores following those fires.³²

The feral deer population in Victoria is estimated to be about 1 million, comprising several species: chital, fallow, hog, red, rusa, and sambar deer.³³ Deer currently cause enormous ecological damage

³¹ SM Legge, DH Duncan, DM Forsyth, K Giljohann, K Hogendoorn, R Hohnen, B Hradsky, M Lintermans, [How introduced animals compound the effects of fire on native plants and animals](#) [PDF 1,734KB] in *Australia's Megafires: Biodiversity Impacts and Lessons from 2019–2020*, L Rumpff et al (Eds.), 2023, CSIRO Publishing at p 227.

³² Ibid, p 229.

³³ These numbers are rough estimates and the current numbers are contested due to a lack of detailed population surveys: National Feral Deer Action Plan, [National Feral Deer Action Plan 2023-2028](#), 2023, Government of South Australia.

with more than 30 threatened species (including the critically endangered leadbeater's possum and Grampians globe-pea) and 13 threatened ecological communities (including Grassy Eucalypt Woodland of the Victorian Volcanic Plain, and Littoral Rainforest and Coastal Vine Thickets of Eastern Australia) highly impacted by deer – with many more likely to be identified by future investigations.³⁴ Deer are projected to cost Victorians up to \$2.2 billion over the next 30 years.³⁵

Feral deer can benefit from fires by spreading to new, previously inaccessible areas opened up by fire, and by preferring areas during crucial recovery stages (between 16 months and 4 years after a fire).³⁶ The presence of deer in areas recovering from fire can lead to significant ecological, social, and economic impacts. Deer can cause extensive damage by eating remaining unburnt vegetation and new green shoots, competing with native herbivores and livestock, and impeding the recovery of native flora and pasture.³⁷ They pollute waterways by wallowing and eroding stream banks – degrading water quality vital to recovering ecosystems, communities and agriculture.³⁸ Deer also compact fragile soils exposed during fires and contribute to erosion, and spread weeds through seeds carried on their fur or in their droppings and other diseases and pathogens (like *Phytophthora*).³⁹

Feral rabbits are another major invasive herbivore that have also been shown to have an outsized impact following fires. Hundreds of millions of rabbits inhabit 70% of the continent, including in Victoria where they first established.⁴⁰ Feral rabbits may have contributed to the extinction of several small, arid-land mammals and negatively affect over 322 Commonwealth-listed threatened species through competition and land degradation.⁴¹ They cause immense damage to both ecosystems and agricultural production each year through herbivory – ringbarking trees and shrubs, eating seeds and seedlings, competing with native herbivores – with their burrows and digging causing soil erosion and habitat destruction. Their impact often increases after a fire, when food is scarce and they eat whatever they can. In fact, fires can favour the proliferation of rabbits.⁴² Unlike many native species, rabbits can avoid fires in their burrows. When they emerge – largely in the absence of or reduced numbers of natural predators – they eat what little food remains and can breed rapidly. This subsequent spike in rabbit numbers compounds ecological stresses, as their intensive grazing further denudes the regrowing landscape and selectively eliminates the most palatable native species, thereby permanently altering the composition of the post-fire recovering

³⁴ Department for Primary Industries and Regions South Australia, 2023, [National Feral Deer Action Plan 2023–2028](#) [9.5MB], Government of South Australia, pp 35-36.

³⁵ Frontier Economics, [Counting the doe: an analysis of the economic, social & environmental cost of feral deer in Victoria: A report for the Invasive Species Council](#), 10 June 2022.

³⁶ Department for Primary Industries and Regions South Australia, 2023, p 9; DJ Heaton, MT McHenry, JB Kirkpatrick, 2022, The Fire and Fodder Reversal Phenomenon: Vertebrate Herbivore Activity in Burned and Unburned Tasmanian Ecosystems. *Fire*, 5(4): 111. <https://doi.org/10.3390/fire5040111>, and ED McCarthy, CE Grueber, TM Newsome, 2025, Invasive Deer Demonstrate Species-Specific Niche Habitat Selection in the Australian Alps, *Ecological Management & Restoration*, 26(e70017):1-15. <https://doi.org/10.1111/emr.700171>

³⁷ Department of Environment Land Water and Planning, [Victorian Deer Control Strategy](#) [PDF 5 MB] 2020, Victorian Government at p 10.

³⁸ *Ibid*, p 14.

³⁹ Department for Primary Industries and Regions South Australia, 2023, p 9; and Invasive Species Council, [Key Threatening Process Nomination for Herbivory and environmental degradation caused by feral deer](#), 2011.

⁴⁰ Invasive Species Council, [Meet the Invaders: Rabbits](#), 2025.

⁴¹ *Ibid*.

⁴² See, for example, DJ Wimbush, & RI Forrester, 1988, Effects of Rabbit Grazing and Fire on a Subalpine Environment. II. Tree Vegetation. *Australian Journal of Botany*, 36(3):287–298.

flora. Longer term, feral rabbits can support the transition of native ecosystems to weedy species, which has implications for future fire hazards.⁴³

Management of feral deer in Victoria, including in the crucial post-fire window, is constrained by regulatory and budgetary impediments. Unlike rabbits, which are recognised as an invasive pest in Victoria,⁴⁴ all 6 deer species are ‘protected wildlife’ in Victoria in recognition of their ‘aesthetics’ and value as a game hunting resource.⁴⁵ This protected status sits in direct contradiction to the well-documented ecological damage caused by deer. For example, sambar deer are listed as a Potentially Threatening Process under Victoria’s *Flora and Fauna Guarantee Act 1988* due to their severe impact on biodiversity. It also flies in the face of recommendations of an independent expert panel which in 2021 recommended the Victorian Government remove the protected status of deer and list them as pest animals.⁴⁶ The retention of protected status imposes an unnecessary regulatory burden on deer control programs, creating red tape that slows or restricts management responses at precisely the time they are most needed. It also erodes the social licence for control efforts by sending a contradictory message about the status of deer as a damaging invasive species rather than a wildlife resource deserving of protection.

Efforts to implement the [Victorian Deer Control Strategy](#) are also hampered by the serious lack of dedicated funding. The Victorian Government has allocated only \$9 million over the next 4 years to pest animal management – an amount that must be shared across programs targeting foxes, feral pigs, goats and rabbits, leaving little meaningful capacity to implement the Deer Control Strategy. This stands in stark contrast to the previous dedicated 4-year funding commitment of over \$18 million for deer control, which was budgeted to 2025. While funding may be directed to deer control under other budget allocations, there is a lack of clarity about how much is being spent and where. Full, dedicated and transparent funding for the Strategy is essential if Victoria is to mount an effective, coordinated response to the growing deer problem – particularly in the context of post-fire recovery, when timely and sustained management intervention is critical.

More also needs to be done to address the rapidly increasing populations of rabbits in Victoria. Biocontrol remains one of the most effective tools available for managing rabbits at a landscape scale, offering a cost-efficient means of suppressing populations across large and often inaccessible areas where conventional control methods are impractical. However, the effectiveness of current biocontrol agents is waning. RHDV1, including the K5 strain released nationally in 2017, has delivered measurable population reductions, but like all biocontrol agents, its impact diminishes over time as rabbit populations develop immunity and resistance.

⁴³ Department of Environment and Energy, 2016, [Background document: Threat abatement plan for competition and land degradation by rabbits](#), Australian Government, at p 9.

⁴⁴ Rabbits (feral or wild) are declared as established pest animals in the state of Victoria under the *Catchment and Land Protection Act 1994*.

⁴⁵ Deer (Chital, Fallow, Hog, Red, Rusa, Sambar, Sika, SikaRed hybrids and Wapiti) are considered ‘protected wildlife’ in Victoria under the *Wildlife Act 1975*. While they are non-native, established species they are classified as ‘game’ to regulate hunting, rather than being treated as pests under the *Catchment and Land Protection Act 1994*: see Game Management Authority, [Game Deer Species](#) (website), Victoria State Government, accessed on 13 March 2026.

⁴⁶ D Peterson, J Brockington, J Hellstrom, J Pascoe, 2021, [Expert Advisory Panel's Review of the Wildlife Act 1975 Consultation Summary Report](#) {PDF 11.78 MB}, 19 October 2021, Department of Environment, Land, Water and Planning, State of Victoria at p

Experience with previous rabbit biocontrol agents demonstrates that new strains or novel agents need to be introduced approximately every 10 to 15 years to maintain meaningful population suppression. Yet federal funding for rabbit biocontrol research lapsed in 2022 and the [Rabbit Biocontrol Pipeline Strategy 2024](#) – a nationally coordinated strategy providing the research and innovation pathway necessary to identify, develop and deploy the next generation of rabbit biocontrol agents – is not fully funded. Without sustained investment in this pipeline, Australia risks a significant and damaging gap in its biocontrol capability at precisely the time when rabbit populations are resurging and the pressure on fire-affected landscapes is most acute.

While rabbit biocontrol is important to mitigating the biodiversity impacts of rabbits at a landscape scale, it is not a silver bullet. Durable reductions in rabbit populations requires biocontrol to be integrated within a coordinated program of complementary control measures, such as warren ripping and fumigation, coordinated baiting programs and habitat management. The timing and sequencing of these interventions matters greatly – both to maximise their effectiveness and to ensure that control activities are conducted humanely.

Recommendation 3: In accordance with the recommendation of the independent review of the *Wildlife Act 1975*, list feral deer as established pest animals under the *Catchment and Land Protection Act 1994*, and remove the ‘protected wildlife’ status under the *Wildlife Act 1975*.

Recommendation 4: Fully fund the implementation of the Victorian Deer Control Strategy, including the full eradication of deer within the region covered by the West Victorian Deer Control Plan.

Recommendation 5: To ensure the availability of future effective rabbit biocontrols, support the full funding of the Rabbit Biocontrol Pipeline Strategy 2024.

Case study – Cats, foxes and fire

While feral cats and red foxes are widely recognised threats to Australia's native fauna – killing over half a billion mammals a year and having contributed to the extinction of at least 31 native mammals,⁴⁷ it is less known that inappropriate fire regimes amplify the ecological threats posed by these invasive predators.⁴⁸ When fire – especially an intense, uncontrolled fire – reduces understory vegetation, it creates open landscapes where native prey are left exposed. This lack of cover allows both feral cats and red foxes to detect and successfully hunt native prey more easily, amplifying the ecological impacts of the fire.

Research has shown that both cats and foxes are most likely to show increased activity and density in recently burnt areas shortly after a fire.⁴⁹ In fire-affected landscapes, a reduction in the understory vegetation can lead to a fivefold rise in introduced predators and a doubling of their

⁴⁷ JCZ Woinarski, SM Legge et al, 2026, Investigating the Causes of an Extinction Catastrophe: Controlling Introduced Predators Remains Essential for Conserving Australia's Mammals, *BioScience*, biaf204, doi.org/10.1093/biosci/biaf204

⁴⁸ BA Hradsky, 2020, Conserving Australia's threatened native mammals in predator-invaded, fire-prone landscapes, *Wildlife Research*, 47(1):1–15. doi.org/10.1071/WR19027

⁴⁹ TS Doherty, DJ Watchorn, V Miritis, AJL Pestell, WL Geary, 2023, Cats, foxes and fire: quantitative review reveals that invasive predator activity is most likely to increase shortly after fire, *Fire Ecology*, 19(1):22. doi.org/10.1186/s42408-023-00183-6

relative prey consumption.⁵⁰ The increased activity for both cats and foxes is most intense immediately after a fire and drops significantly after a few months post-fire.⁵¹

Research in Northern Australia further suggests that intense fires combined with grazing by large introduced herbivores create conditions that favour cats, likely by improving their hunting success in the newly open landscape.⁵²

Post-fire management interventions for predators like foxes and cats, typically involving landscape-scale baiting, are often most effective immediately after a fire coinciding with when native prey animals are most vulnerable.⁵³ Management of predator responses are context-specific and must consider interactions between predators (e.g. where fox control inadvertently leads to an increase in feral cat populations) and other invasive herbivores (e.g. where predator control allows rabbit populations to increase, causing habitat damage). For this reason, management strategies must be timely and customised to the unique characteristics of the ecosystem and the fire event.⁵⁴ Ensuring unburnt refuges, or providing artificial shelters or habitats that provide some protection and cover, can also help native animals to persist post-fire, but this is not feasible over large scales, meaning it may only be directed at the most vulnerable populations.⁵⁵ More broadly, ongoing and effective control of feral foxes and cats and other threats in areas of high ecological importance, including through the use of innovative baiting programs which target invasive species while reducing impacts on native wildlife – such as through the use of novel toxin delivery mechanisms – will help to ensure that the species in those areas are more resilient to future fires.

Realising the full potential of predator management in the post-fire context depends, in part, on having the right regulatory and policy settings in place. Victoria has made a number of meaningful advances for the management of cats in recent years. In July 2018, the Victorian Government declared feral cats an established pest on public land under the *Catchment and Land Protection Act 1994*, enabling more practical application of existing control tools such as confinement traps and shooting, and paving the way for the use of emerging tools – including poison baits and grooming traps – as they became available. The subsequent registration of the Curiosity feral cat baits for use in Victoria in 2020 provided land managers with a tool potentially capable of landscape-scale feral cat control for the first time. A further significant regulatory milestone was reached in November 2025, when the Felixer cartridge system was permitted for use in Victoria for the first time. While these regulatory advances were meaningful, operational constraints persist for feral cat management – particularly regarding spatial deployment – and further effort will be required to more readily deploy available effective, and humane tools in post-fire environments.⁵⁶

⁵⁰ BA Hradsky, C Mildwaters, EG Ritchie, F Christie, J Di Stefan, 2017, Responses of invasive predators and native prey to a prescribed forest fire, *Journal of Mammalogy*, 98(3): 835–847.

⁵¹ TS Doherty et al, 2023; BA Hradsky, 2020.

⁵² HW McGregor, S Legge, ME Jones, CN Johnson, 2014, Landscape Management of Fire and Grazing Regimes Alters the Fine-Scale Habitat Utilisation by Feral Cats. *PLoS ONE* 9(10): e109097. [doi:10.1371/journal.pone.0109097](https://doi.org/10.1371/journal.pone.0109097)

⁵³ BA Hradsky, 2020.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ A Robley, LP Woodford, T Schneider, D Purdey, L White, J Cally, P Moloney, J Thomson, 2022, [Bushfire Biodiversity Response and Recovery Theme 4 Phase 2—assessing factors affecting the use of feral cat control tools](#), Arthur Rylah Institute for Environmental Research Technical Report Series No. 348. DEECA, Victoria

The Victorian government has resumed its fox bounty program, with payments of \$14 per fox scalp currently funded to 30 June 2026. In the context of post-fire fox management, where a rapid, coordinated and landscape-scale response is essential to protect vulnerable native species during their recovery, the fox bounty program represents a significant misallocation of public resources.

Bounty schemes are ineffective in suppressing or containing feral foxes. Bounty schemes worldwide targeting widespread invasive animals typically reduce target animal numbers by only 2 to 10%⁵⁷ – far below the 65% threshold required for fox population suppression.⁵⁸ A formal evaluation of a previous fox bounty trial undertaken by the Victorian government found that it reduced the fox population by only 4%, with populations quickly rebounding.⁵⁹ Beyond their ineffectiveness, bounty schemes carry perverse incentives that could be particularly damaging in a post-fire context: hunters have been observed reducing effort during breeding seasons to protect future fox populations,⁶⁰ while the availability of bounty payments can impede the adoption of more effective control methods such as coordinated baiting and aerial shooting.⁶¹

The funds currently allocated to the current Victorian fox bounty program would be far better directed towards the kind of planned, coordinated and evidence-based predator management programs – including landscape-scale baiting timed to coincide with the post-fire vulnerability window – that have been demonstrated to deliver meaningful reductions in fox populations and measurable benefits for native species recovery.

Recommendation 6: Plan and prepare to protect native animals from invasive predators following major fire events, including by:

- (a) intensive control in burnt areas where rare species are at risk
- (b) protection of unburnt refugia against predators
- (c) leaving in place burnt logs and other protective structures
- (d) installing artificial shelters to protect native animals from predators.

Recommendation 7: End the fox bounty program and target funding to more effective landscape scale fox control programs focussed on post-fire recovery of vulnerable native species.

This section has explained how the often synergistic effects of climate change, bushfires, and invasive species present a profound and complex challenge to Victoria. The combined impact of these threats is often non-linear and results in a magnitude of damage to the state's natural ecosystems, human communities, and vital economic sectors that is far greater than the sum of the individual threats considered in isolation. Recognising and seeking to better understand these compounding threats is essential, but it is equally important to understand the opportunities that can present with fire events, which we outline in the following section.

⁵⁷ Hassall and Associates, 1998, Economic evaluation of the role of bounties in vertebrate pest management. Report to the Bureau of Resource Sciences, Canberra, Australia.

⁵⁸ Hone J, Duncan RP, Forsyth DM, 2010, Estimates of maximum annual population growth rates (rm) of mammals and their application in wildlife management. *Journal of Applied Ecology*. 47: 507–514; Hone J, 1999, On rate of increase (r): patterns of variation in Australian mammals and the implications for wildlife management, *Journal of Applied Ecology*, 36: 709–718

⁵⁹ Fairbridge D, Marks C. Evaluation of the 2002-03 Victorian fox bounty trial. Vertebrate Pest Research Unit, Victorian Government Department of Primary Industries.

⁶⁰ Ibid.

⁶¹ Hassall and Associates, 1998.

Opportunities presented by fires

Although uncontrolled fires can have immense ecological, social and economic impacts, often compounded by impacts of invasive species, they can also present a unique opportunity to respond to and control invaders.

By temporarily reducing invasive species' populations, reducing cover and allowing greater access for control methods, fires can assist land managers significantly suppress invasive species in affected areas. For example, the immediate post-fire period offers a limited window to manage weeds by depleting their soil seed bank, through the application of controls like herbicides and biological controls. Post-fire periods can also present an excellent opportunity to undertake landscape-scale control of feral animals such as deer, pigs, cats and foxes, by taking advantage of the lack of cover – which is particularly useful for aerial control – and reduced feral populations. Such interventions can have profound ecological benefits, both by allowing native species to better recover from the fires and by potentially ensuring that what does recover is more resilient to future fires.

Responses to the devastating 2019-2020 Black Summer fires outlined in the [Victorian case study](#) and the [Kangaroo Island case study](#) below demonstrate how, with sufficient planning, funding and community involvement, fires can pave the way for the control – even eradication – of destructive invasive species and help nature to recover.

Case study – Victorian Government Bushfire Response and Recovery program

Victoria's response to the 2019–20 bushfires – which burnt approximately 1.5 million hectares across the state and impacted at least 50% of the habitat for 244 species of plants and animals, including 215 rare or threatened species – provides a valuable reference point for how post-fire recovery programs can and should address the threat of invasive species. Recognising the scale of the ecological emergency, the Victorian Government committed \$54.5 million to the Bushfire Biodiversity Response and Recovery (BBRR) program, supported by a further \$15 million from the Australian Government's bushfire recovery package for wildlife and their habitat.⁶² Crucially, invasive species management was embedded as a central pillar of this response. Of the total Victorian Government investment, \$25 million was allocated to the theme of 'Intensified and sustained management of threats', addressing the challenge posed by invasive species in fire-affected landscapes, complemented by a further \$6.2 million from the Australian Government's Regional Fund for Wildlife and Habitat Bushfire Recovery.⁶³

A key feature of the post-fire response was the recognition that the open conditions created by fire presented a time-critical opportunity to bring invasive animal populations under control before they could expand and impede ecosystem recovery. Aerial shooting operations were deployed from June 2020, targeting deer, feral goats, feral pigs, feral cattle and red foxes in high biodiversity-value, fire-affected areas across North East Victoria and East Gippsland.⁶⁴ The open canopy, loss of understorey, and congregation of animals around scarce resources created by the

⁶² Department of Energy Environment and Climate Action (DEECA), [Victoria's bushfire emergency: Biodiversity response and recovery](#), Victorian Government, accessed on 14 April 2026.

⁶³ DEECA, [Managing invasive species after fire](#), Victorian Government, accessed on 14 April 2026.

⁶⁴ DSL Ramsey, 2022, [Efficacy of aerial control of invasive animals: Results from the Bushfire Biodiversity Response and Recovery program](#) [PDF 1,943 KB], Arthur Rylah Institute for Environmental Research Technical Report Series No. 352, DEECA, Victoria.

fires provided a time-critical and valuable opportunity to significantly reduce the abundance and density of introduced animals immediately post-fire. This was complemented by on-ground shooting, baiting, trapping, weed control and the construction of exclusion fencing. In fire-affected rainforest areas alone, introduced large herbivore control and weed control was carried out across more than 6,500 hectares, with deer exclusion fencing erected to protect critically important ecosystems.⁶⁵

The BBRR program demonstrated that a well-resourced and coordinated post-fire invasive species response can meaningfully support biodiversity recovery. Importantly, the intent at the conclusion of the BBRR program was that aerial shooting would transition from a bushfire recovery activity into an ongoing deer management capability delivered through programs such as the Victorian Deer Control Program, ensuring that localised reductions in deer numbers were maintained and that long-lasting biodiversity outcomes could be achieved.⁶⁶ That transition has not been realised. As outlined above, dedicated funding for the Victorian Deer Control Program has lapsed, the aerial shooting capacity built and refined through the BBRR program has not been sustained, and Victoria now enters the post-2026 fire recovery period without the funded deer management infrastructure that experience has shown is essential.

Case study – Kangaroo Island programs to eradicate feral pigs and cats

Kangaroo Island, located off South Australia's coast, is a renowned biodiversity hotspot and a critical refuge for numerous plants and animals, many of which are endemic to the island. It is listed as one of the Australian government's 20 priority places under its Threatened Species Action Plan. The summer of 2019–2020 saw the largest recorded bushfires, burning almost half of the island (or 211,474 ha). Given their unprecedented scale, the fires presented an unusual opportunity to control and potentially eradicate, some of the most destructive invasive species found on the island: feral pig and feral cats.

The Kangaroo Island fire had reduced the population of feral pigs, concentrated on the western half of the island, to an estimated 500 individuals, down from 5,400 pigs.⁶⁷ Up to that point, as well as killing wildlife and destroying habitats, the pigs were causing extensive agricultural damage – killing and eating lambs, destroying crops and fences – costing the local economy up to \$1 million a year.⁶⁸ The Australian and South Australian governments initially allocated \$2.66 million over 3 years to the pig eradication project. The project used a variety of controls including ground-based shooting, baiting with sodium nitrite, trapping, and thermal-assisted aerial culling. Ultimately, almost 900 pigs were removed, with no further detections since November 2022.⁶⁹ The

⁶⁵ DEECA, [Supporting rainforest recovery after fires](#), Victorian Government, accessed on 14 April 2026.

⁶⁶ DEECA, [Managing invasive species after fire](#), Victorian Government, accessed on 14 April 2026.

⁶⁷ PW Hamnett, F Saltr , B Page, M Tarran, M Korcz, K Fielder, L Andrews, and CJA Bradshaw, 2024, Stochastic Population Models to Identify Optimal and Cost-Effective Harvest Strategies for Feral Pig Eradication, *Ecosphere*, 15(12): e70082. doi.org/10.1002/ecs2.70082

⁶⁸ Department of Primary Industries and Regions, [Kangaroo Island Feral Pig Eradication Action Plan](#) [PDF 1,754 KB], 21 December 2020, Government of South Australia accessed on 12 March 2026.

⁶⁹ PW Hamnett et al 2024; and Department of Primary Industries and Regions, [Feral Pig Eradication Program on KI](#), 29 March 2025, Government of South Australia accessed on 12 March 2026.

island is currently being monitored to determine whether the eradication has succeeded, while it is being used as a model for effective feral pig eradication projects around the world.

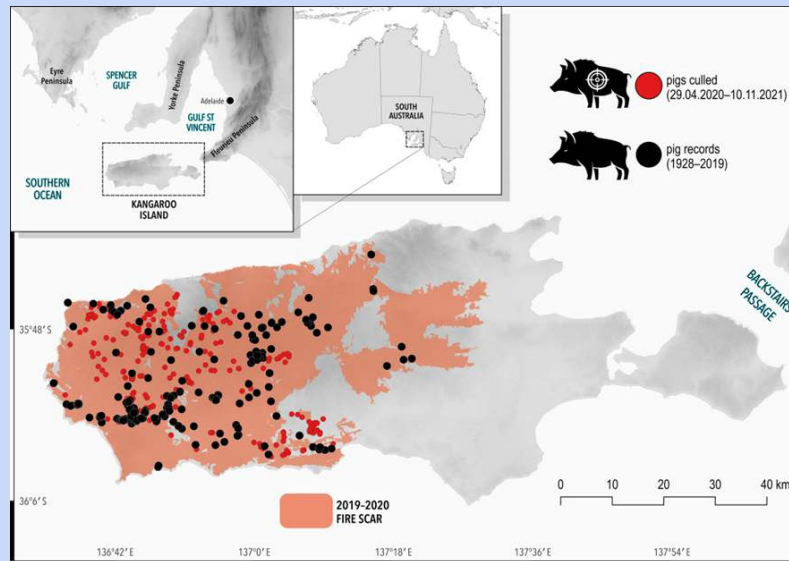


Figure 1: Kangaroo Island, showing its location relative to the Australian mainland. The orange area indicates the extent of the 2019–2020 bushfires. Black dots indicate the location of pig records 1928–2019 (ALA.org, 2024), and red dots indicate the location of pig culling events recorded after the 2019–2020 bushfires.

Source: W Hamnett et al 2024, Stochastic Population Models to Identify Optimal and Cost-Effective Harvest Strategies for Feral Pig Eradication, *Ecosphere*, 15(12): e70082. doi.org/10.1002/ecs2.70082

The Australian and South Australian governments’ commitments to the ambition of eradicating feral cats from Kangaroo Island predated the fires. But efforts to control and eradicate cats were substantially increased following the Black Summer fires given the scale of the wildlife and habitat lost, and the extreme vulnerability of remaining wildlife – such as the endemic and endangered Kangaroo Island dunnart, which had lost up to 95% of its pre-fire habitat – to predation by cats.⁷⁰

Control efforts included the rapid establishment of a 365 ha predator-free refuge in unburnt patches of forest in the western side of the island by the Australian Wildlife Conservancy, Kangaroo Island Land for Wildlife and local landholders, the Doube family, and continuous baiting and trapping of feral cats in surrounding bushland.⁷¹ There were also renewed efforts to eradicate feral cats from other unburnt areas of the island – with a focus on the Dudley Peninsula on the eastern side of the island.

In 2020, a predator-proof fence was erected to separate the peninsula from the remainder of the Island, and an intensive network of traps, AI-enabled cameras, baiting stations and thermal-assisted shooting programs was instituted by the Kangaroo Island Landscape Management Board in a bid to create the largest human-inhabited feral cat free area anywhere in

⁷⁰ Research conducted on feral cats post -fire showed they were predated on the endangered dunnart as well as a variety of other threatened species: P Hodgens, H Groffen, R O’Handley. et al, 2022, Cat predation of Kangaroo Island dunnarts in aftermath of bushfire. *Sci Rep*, 12:7272. <https://doi.org/10.1038/s41598-022-11383-6>

⁷¹ Jess Teideman, [Conservation success on Kangaroo Island](#), Wildlife Matters, 2 May 2025, Australian Wildlife Conservancy, accessed on 12 March 2026.

the world.⁷² Covering 38,400 ha, the program has already removed more than 1,700 feral cats from the landscape (with a 67% decline in relative abundance in 2024 alone). It is aiming to reduce the remaining feral cat population by more than 95% over the next 12 months, subject to sufficient funding.⁷³

While research on the outcomes of the Kangaroo Island pig and cat control and eradication projects is yet to be published, these projects demonstrate the potential of empowering local communities and landscape managers to act quickly to protect remaining unburnt habitat from predators: such efforts can mean the difference between survival and extinction for threatened species like the Kangaroo Island dunnart.

As can be seen by these examples of conservation actions taken following the Black Summer fires, fires do not only cause abrupt and intense biodiversity losses, but from the ashes emerge real opportunities to suppress invasive species in ways that are not otherwise possible. Ensuring such opportunities are grasped is crucial to recovery. In the following section, we explain how good environmental biosecurity – across the entire invasion curve – is also essential to building the resilience of ecosystems and communities to the compounding threats of fires and climate change.

Biosecurity to build resilience to climate change and bushfire threats

Preventing and effectively managing invasive species is central to building ecological and community resilience to disasters fuelled by climate change, including bushfires and floods. To support this resilience, environmental biosecurity needs to be strengthened in Victoria right across the invasion curve, embedded in disaster preparedness and recovery frameworks, and properly supported by a skilled workforce and applied research.

Prevention

Victoria has important biosecurity prevention foundations in place, including a risk-based legislative framework and formal weed and pest classifications. However, these settings are undermined by gaps in pathway management and weak controls on the sale and movement of known invasive species: it remains possible to legally purchase and distribute plants that pose clear environmental risks, creating a continual pipeline of new incursions. This is inconsistent with a best-practice biosecurity system and places avoidable pressure on fire-prone landscapes. Preventing new invasive species – and limiting the spread of those already present – is the most cost-effective action available, yet it is not being fully realised. Opportunities exist to strengthen prevention of new environmental invasives and particularly weeds – by, for example, supporting a strong, national threat abatement plan for escaped garden plants and by appropriately regulating the sale of known environmental weeds.

⁷² The Landscape Boards South Australia, [Dudley Peninsula Feral Cat Eradication Program](#), 2026, accessed on 12 March 2026.

⁷³ Ibid; Kangaroo Island Landscape Board, [Summary Report: Evidence towards Australia's largest feral cat free island safe haven: Completion of the Dudley Peninsula feral cat eradication program](#) [PDF 2.4 MB].

Early detection and rapid response

Victoria has also invested in early detection and rapid response programs – such as the Weeds at the Early Stage of Invasion (WESI) program, targeting weed species in the early stages of invasion. These are good initiatives, but they are not operating at the scale required to keep pace with growing biosecurity risks. Too often, species move beyond eradication thresholds before effective action is taken, locking in long-term management costs and impacts. Post-disaster environments further expose this weakness: after bushfires, floods or storms, invasive species frequently establish and spread before coordinated responses are mobilised. Without stronger post-fire/disturbance surveillance, clear lines of responsibility and accountability and sustained resourcing for on-ground monitoring and reporting, early intervention opportunities will continue to be missed.

Suppression and control of established invasive species

Management of established invasive species remains the weakest point in Victoria's biosecurity system. The current reliance on shared responsibility and asset-based approaches has not delivered landscape-scale control, with many high-impact species continuing to expand in range and abundance. This includes invasive grasses that intensify fire regimes and large herbivores, such as deer, that prevent post-fire recovery. In some instances, such as for deer and foxes, government policies are hindering effective management, delaying action on species known to cause significant ecological harm in post-fire landscapes. As outlined above, post-bushfire recovery presents a critical window to suppress invasive species and support native regeneration, yet this opportunity is often under-resourced or short-lived – as demonstrated by the failure to continue effective deer management started in the BBRR program. A step change is clearly required – moving from fragmented, reactive control efforts to coordinated, long-term programs that reduce invasive species impacts across entire landscapes. Environmental biosecurity must be embedded in disaster recovery frameworks, backed by long-term investment, clear targets, and integration with land and fire management.

Skilled workforce

Victoria's biosecurity system depends fundamentally on the people who deliver it – and that foundation is being actively undermined. The Victorian Government has cut approximately 350 positions in DEECA and 100 roles in Parks Victoria. This represents the loss of experienced field staff, biosecurity and ecological experts with critical institutional knowledge – losses that may take years to recover from. Land managers and community members are already reporting impacts on invasive species control programs.

Victoria's draft Biosecurity Strategy Implementation Plan relies heavily on a 'shared responsibility' model, and encourages 'a shift from government-led action to collective action led by industry, community, and government stakeholders and Traditional Owner partners'.⁷⁴ Shared responsibility can be a genuine strength when properly resourced and supported – but without adequate government investment in expertise, coordination and comprehensive invasives management programs on public lands, it risks the government offloading its obligations and leaving communities and landholders to shoulder a burden that exceeds their capacity, while invasive species continue to establish and spread.

⁷⁴ Agriculture Victoria, 2025, Draft Biosecurity Implementation plan, November 2025, accessed at: <https://engage.vic.gov.au/victorian-biosecurity-strategy-consultation> on 17 April 2026.

Research

Strengthening environmental biosecurity to address the compounding threats of climate change and disasters like bushfires across the invasion curve also requires a stronger evidence base to guide investment and prioritisation. While there is a growing understanding of the links between invasive species, fire regimes and post-disaster ecosystem recovery, significant gaps remain in predicting how these relationships will evolve under future climate conditions and increasing levels of disturbance. Targeted applied research is needed to better identify emerging risks, improve early warning systems, and ensure that prevention, response and long-term management efforts are directed where they will have the greatest impact.

Recommendation 8: Strengthen the emphasis on prevention in Victoria’s biosecurity frameworks, including by supporting the implementation of a strong threat abatement plan for garden plants and appropriately regulating the sale of known and potential environmental weeds.

Recommendation 9: Strengthen Victoria’s environmental biosecurity surveillance and response capacity, including by establishing a well-resourced environmental biosecurity fund, educating and resourcing land managers – including Traditional Owners – to surveil, report and manage environmental incursions early.

Recommendation 10: Move beyond fragmented, asset-based approaches to established invasive species and implement long-term, landscape-scale control programs targeting high-impact invasive species that drive fire risk and hinder post-disaster recovery.

Recommendation 11: Embed environmental biosecurity into disaster preparedness and recovery frameworks including bushfire, flood and storm preparedness, response and recovery planning.

Recommendation 12: Invest in applied research and climate-biosecurity risk modelling across the invasion curve, aimed at better mapping densities of key fire-relevant invasive species (e.g. deer, rabbits, foxes, cats and invasive grasses); identifying the links between invasive species, fuel dynamics and fire severity; and evaluation of the effectiveness of prevention, early intervention, and post-disaster management interventions.