2025-26 Tasmanian State Budget Submission

Submission by the

Invasive Species Council

December 2024

About the Invasive Species Council

The Invasive Species Council is an independent donor-funded organisation that safeguards the Australian environment from invasive pests, weeds and diseases.

Formed in 2002, we have been at the forefront of efforts to strengthen biosecurity in Australia to better safeguard our land and seas from invasive species. We strive for a future in which invasive species are no longer a major cause of environmental decline and extinctions.

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Table of Contents

Executive Summary

Tasmania's unique environment, economy, and communities are under threat from invasive species. Invasive species, including feral deer, cats, pigs, goats, and weeds, impose substantial financial burdens, costing Tasmanians hundreds of millions of dollars annually through lost production, increased management costs, and higher insurance premiums, as well as causing incalculable damage to the environment and threatening Tasmania's unique biodiversity

Feral deer populations have surged to potentially over 100,000, costing the state as much as $100 million per year, and posing a major threat to agriculture, forestry, and tourism. Pet and feral cats kill wildlife and spread diseases that cost Australia $6 billion annually. Feral pigs on Flinders Island are destroying habitats and damaging agriculture, while feral goats pose similar threats, with over 160 herds identified in Tasmania since 1991. Weeds also present a significant issue, costing Tasmanian agriculture over $58 million a year.

Investing in early action, prevention, and targeted control of established invasive species are always the most cost-effective and damage-mitigating approaches to invasive species. Tasmania's island status offers a natural advantage, enabling more effective prevention, containment, and eradication efforts. However, to capitalise on this advantage requires sufficient and long term investment to knock down populations of established invasive species, prevent further spread, and eradicate where possible. Eradicating invasive species from islands is a winning strategy. Indigenous-led conservation programs are also essential, as they can deliver positive cultural and conservation outcomes.

A substantial increase in investment and a strategic approach to invasive species management is required to safeguard Tasmania’s environment, economy, and communities.

This submission outlines targeted projects and funding proposals for the next four years that will keep Tasmania's natural and cultural heritage and valuable industries safe from new and established invasives.

Budget Recommendations Summary

Abating threats from established and emerging invasive species	
1. Reduce the impacts of feral deer on the economy and environment	Scale up investment for feral deer control to at least $2.19 million per year
2. Invest in priority deer eradication programs	Invest in priority deer eradications, including Bruny and King Island, and the Tasman and Freycinet Peninsulas
3. Keeping the Tasmanian World Wilderness Heritage Area (TWWHA) deer-free	Commit a minimum of $150,000 per annum over the next four years to keep the TWWHA deer-free
4. Prevent negative impacts on the environment and agriculture from feral goats	Commit at least $300,000 to undertake a feral goat population estimate and then develop a management plan
5. Contain emerging invasive species	Establish an emerging pest response and management fund
6. Tackle noxious weeds and prevent the introduction of new weeds	Increase strategic weed management funding to $20 million over the next 4 years that includes a dedicated High-Risk Environmental Weed Eradication Fund
Protecting Tasmania's islands and First Nation's heritage	
7. Fund a dedicated island eradication and recovery program	Establish a dedicated Island Eradication and Recovery Fund of at least $10 million for the next four years
8. Support the eradication of feral cats on Lungtalanana and surrounding islands	Commit at least $1.7 million to eradicate feral cats from lungtalanana/Clarke Island and surrounding islands

9. Commit to the eradication of feral cats and deer from Bruny Island	Commit at least $10 million to eradicate feral cats and deer from Bruny Island
10. Commit to the eradication of feral pigs from Flinders Island	Commit at least $3.5 million to eradicate feral pigs from Flinders Island
11. Increase First Nations leadership and employment in invasive species management	Establish a dedicated fund for Indigenous-led conservation projects
Systemic reforms to improve invasive species management	
12. Increase investment in protecting Tasmania's environment	Double NRE Tasmania's budget from $255 million per annum across the next four years to at least $510 million per annum
13. Improve cat management and policy to protect wildlife and communities	Invest at least $3.6 million to implement the 2025-2029 Tasmanian Cat Management Plan and develop consistent state-wide cat containment policies
14. Prevent the establishment of new feral populations through improved livestock containment legislation and policy	Improve the management of livestock to prevent the establishment of new feral populations through legislative reforms and the development and enforcement of minimum fencing standards
15. Improved tools to manage invasive species	Increase investment into research and development to improve invasive species control tools
16. Support effective deer management by declaring deer a pest species	Remove the partly protected status of deer and declare them a pest species
17. Prevent new weedy plants from establishing	Prevent garden escapees from establishing invasive populations through the development of a permitted list approach to stop the sale of weedy plants

Invasive Species in Tasmania

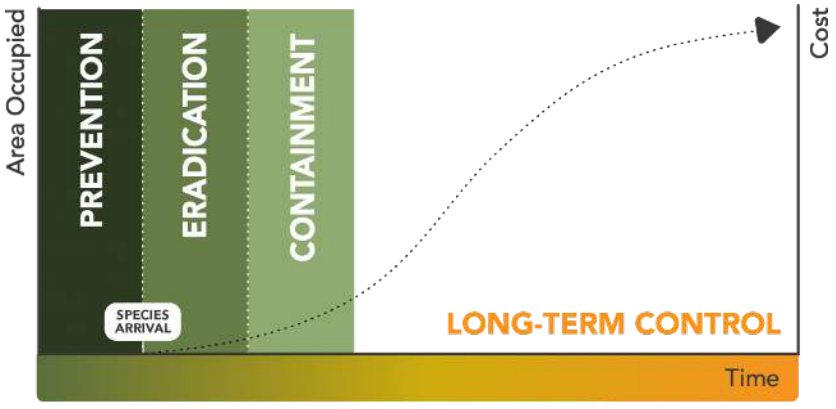
Tasmania is a remarkable island state with native animals and plants found nowhere else on earth, some of the most spectacular protected areas in Australia, and highly valued agriculture, forestry, and tourism sectors. But the future health of our state's environment, agriculture, and economy is under threat from highly damaging invasive species.

Invasive species ranging from feral deer and cats to serrated tussock and gorse place a massive burden on primary production, prevent natural regeneration of bushland, and are an increasing threat to human lives on the road. Invasive species are estimated to cost Tasmanians hundreds of millions of dollars annually in lost agricultural and timber production, increased costs of management and mitigation, and increased insurance premiums.

Invasive species also have an incalculable cost to Tasmania's environment. Having evolved in isolation from the rest of the world, Tasmania's unique native species are highly susceptible to the impact of invasive animals, weeds, and pathogens that can kill, outcompete, or overwhelm native wildlife and ecosystems.

The good news is that, as an island, Tasmania has a natural advantage. The isolation of islands allows for more effective prevention, containment, and eradication efforts compared to mainland areas. Many of Tasmania's invasive species incursions are still early enough that effective containment and even eradication remain achievable. In particular, Tasmania has over 50 offshore islands where permanent eradication of invasive animals is possible, affordable, and would spark an ecological transformation.

It is well established that investing early in invasive species management is critical to preventing irreversible ecological, economic, and community harm. Costs and challenges escalate dramatically as invasions progress (see invasion curve below). In the early stages of an incursion, targeted interventions can achieve eradication or containment at a relatively low cost. However, as the species spreads and becomes more established, eradication becomes impossible and management shifts to ongoing control, which is substantially more expensive and generally less effective.



Invasion Curve from Invasive Species Centre

By leveraging its natural advantage and investing in early intervention, Tasmania can protect its environment, economy, and community from invasive species.

This submission outlines targeted projects and funding proposals for the next four years that will keep Tasmania's natural and cultural heritage and valuable industries safe from new and established invasives.

Budget recommendations: opportunities for success in invasive species management

Abating threats from established and emerging invasive species

1. Reduce the impacts of feral deer on the economy and environment

Feral deer in Tasmania have rapidly increased to over 100,000, spreading across 27% of the state and posing significant threats to the environment, agriculture, forestry, and tourism. With an annual growth rate of 11.5%, deer numbers could exceed 1 million and cover half the state within 30 years without intervention. Deer have expanded beyond their traditional range, including the Tasmanian Wilderness World Heritage Area and national parks, with satellite populations emerging from farm escapes and intentional releases (Cunningham et al., 2022).

Feral deer are impacting some of Tasmania's main sources of revenue: agriculture, forestry, and tourism, with estimated annual costs up to $100 million (Invasive Species Council, 2021), including $10-80 million in agricultural losses, increased restoration expenses, and risks of livestock diseases. Deer-related vehicle crashes add further economic and safety concerns, while environmental degradation undermines Tasmania's pristine brand, essential for its $2 billion tourism industry. Without effective control, Tasmania risks significant ecological, economic, and reputational damage.

With well-resourced regional plans, coordination and ongoing support for the full range of control methods across all land tenures, the impact of feral deer on the environment, farming and human safety can be reduced and key threatened species and sensitive environments protected. Many of Tasmania's satellite deer populations can still be feasibly and cost-effectively eradicated with significant benefits for industry, conservation, and public safety and amenities. This includes those on the Tasman and Freycinet Peninsulas, on Bruny and King Islands, around Hobart, Launceston, and in the northwest.

The Invasive Species Council estimates that eradicating satellite populations of deer and reducing the core population to densities likely to minimise their negative impacts will cost at least $2.19 million per annum. Given the national significance of some of the areas impacted by feral deer, including Bruny Island (a priority area under the Threatened Species Action Plan), there are opportunities to seek matched federal funding for these programs.

$2.19 million annual cost is only 2% of the estimated $100 million annual cost of feral deer to the community and economy. Investing now in effective control is extremely prudent –

it will save many more millions of dollars that will be needed if feral deer numbers are allowed to continue to grow, plus save the millions of dollars such high numbers of feral deer will cost the Tasmanian community. The South Australian government has calculated that implementing their $14 million feral deer eradication program will have a net benefit of $517.8 million to the economy over a 10-year period and for every dollar of investment under the eradication program, $2.70 is returned to the South Australian community.

Recommendation 1

Scale up investment for feral deer control to at least $2.19 million per year

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2. Invest in priority deer eradication programs

The South Australian government has calculated that a 60-65% reduction in the first 2 years followed by 8 years of consistent removal of 38-55% will eradicate deer from South Australia in a 10-year timeframe. Similar reduction targets will be needed to eradicate Tasmania's satellite deer populations. This requires not only an upfront financial investment but also a commitment to long-term support to see eradication complete.

To achieve eradication within a 10-year timeframe, a reduction target of 60-65% of the feral deer population per year is required for the first two years of the program (Figure 5).

This is required to counter the natural rate of increase of feral deer populations (about 34% per year for fallow deer).

After the first two years, between 38-55% population cull targets per year are required to achieve eradication by 2033.

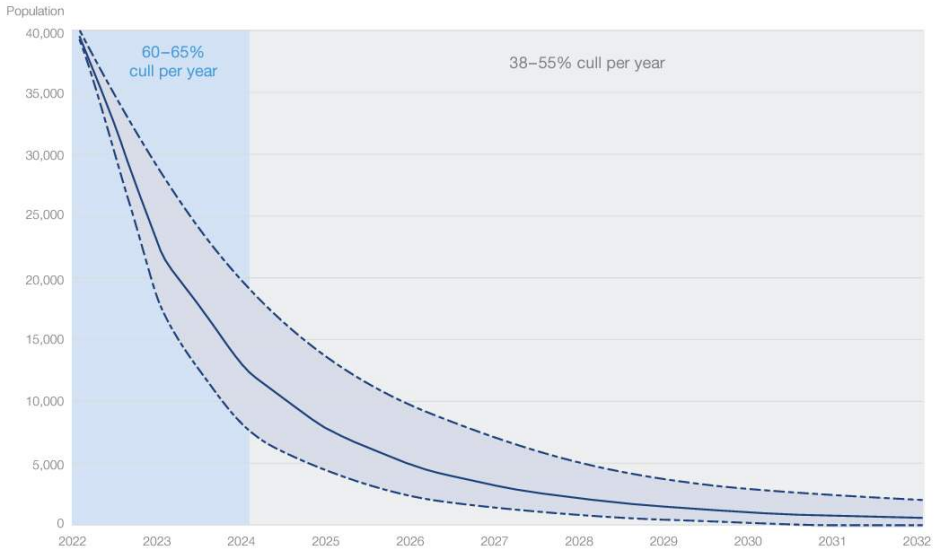

Figure 5: Population modelling of feral deer in South Australia under the fully funded eradication scenario, indicating the required 60-65% population cull required in the first two years (red shading) of the program. Source: Feral Deer Control Economic Analysis, BDO EconSearch 2023.

Eradicating feral deer from places such as Bruny and King Island and the Tasman and Freycinet Peninsulas are easy wins for the state. These deer populations are relatively small and isolated, which are ideal conditions for eradication. There is already a high level of community awareness and support for deer control in these regions. Additionally, Bruny Island is one of three priority areas in Tasmania identified under the Threatened Species Action Plan and thus there are additional mechanisms for federal funding.

There has already been significant progress in laying the foundations for successful deer control on Bruny Island and the Tasman Peninsula. To leverage this progress, long-term commitment of support is needed to see the eradication program to completion.

Recommendation 2

Invest in priority deer eradications, including Bruny and King Island, and the Tasman and Freycinet Peninsulas

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3. Keeping the Tasmanian World Wilderness Heritage Area (TWWHA) deer-free

The Walls of Jerusalem aerial shooting program was highly successful in removing deer from the Tasmanian World Wilderness Heritage Area (TWWHA). To capitalise on the investment and success of this program, work must now turn towards reducing the densities of deer in the surrounding areas, including the Central Plateau Conservation Area, to keep the TWWHA deer-free. Failure to continue deer control efforts now will result in deer reinvading and reestablishing, thereby wasting the efforts and successes of the aerial control program.

Given the high density of deer in the surrounding areas, deer control work will need to be ongoing. At a minimum, $150,000 per annum should be allocated to continuing the aerial culling program in the TWWHA to ensure the area remains free of feal deer.

Recommendation 3

Commit a minimum of $150,000 per annum over the next four years to keep the TWWHA deer-free

4. Prevent negative impacts on the environment and agriculture from feral goats

While feral goats are not a widespread issue yet, there is a risk that the population could reach a certain threshold and then explode across the state, as has occurred with feral deer in Tasmania (see Cunningham et al., 2022). Control measures that occur prior to this point will be far more cost-effective and likely to succeed.

In Tasmania, more than 160 herds of feral goats have been identified by the Department of Natural Resources and Environment since 1991. Feral goats have been recorded in various areas, including the Tasmanian Wilderness World Heritage Area (TWWHA) and on Bruny Island.

There appear to be no current estimates of the number and distribution of feral goats in Tasmania. As a critical initial step, the state government should conduct an aerial population survey of the feral goat population and subsequently develop an updated management plan.

Recommendation 4

Commit to at least $300,000 to undertake a feral goat population estimate and then develop a management plan

5. Contain emerging invasive species

There are several emerging invasive animal populations around the state that are a cause of concern. This includes (but is certainly not limited to) rainbow lorikeets, India myna, mallards, and a range of aquatic species. For example, rainbow lorikeets aggressively compete with native bird species for food and nesting sites, hybridise with native Musk lorikeets, and damage fruit crops. There are small but established populations across the state, including greater Hobart, Launceston, Devonport and Burnie, and anecdotal evidence suggests their range and impacts are expanding.

While many of these species are not yet at a level where there are significant impacts on the environment, industries, and communities, this is the point at which action is most cost-effective and most likely to be successful.

Establishing a dedicated fund for emerging invasive species management is a critical investment in Tasmania's biosecurity and environmental sustainability. Earlier intervention is significantly more cost-effective and proactive measures, such as rapid response programs and early eradication efforts, reduce the long-term financial burden on the state

by preventing the extensive ecological, agricultural, and economic damage caused by invasive species. Without dedicated funding, delays in responding to emerging threats could result in irreversible impacts and exponentially higher costs in the future.

Recommendation 5

Establish an emerging pest response and management fund

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6. Tackle noxious weeds and prevent the introduction of new weeds

To reflect the seriousness of the weed issue for Tasmania's environment and agriculture, funding should rapidly scale up the level of funding for weed management across the state and apply it based on systematic threat prioritisation to achieve the best environmental outcomes. Furthermore, Tasmania needs a dedicated fund that can be rapidly deployed by agencies to remove environmental weed threats that only occur in small areas, including sleeper invasives which have the potential to expand into large new areas. This would prevent new weeds from gaining a foothold and avoid huge costs for taxpayers in future.

Recommendation 5

Increase strategic weed management funding to $20 million over the next 4 years that includes a dedicated High Risk Environmental Weed Eradication Fund

Protecting Tasmania's islands and First Nation's heritage

7. Fund a dedicated island eradication and recovery program

Islands are special places for biodiversity. However, island species are also highly susceptible to extinction from invasive species. Having evolved with fewer competitors, predators and parasites than species on continents, they often have poor defences against invaders. Although islands, excluding Tasmania, comprise less than 0.5% of Australia's land area, island species have accounted for almost a quarter of Australia's extinctions (Woinarski et al. 2018).

Investing in island eradications is a prudent strategy. Islands offer unique opportunities for conservation as they are relatively contained ecosystems, making it feasible to completely eradicate invasive species such as feral cats, rodents, and weeds. Removing invasive species from islands can prevent extinctions, restore habitats, and support the recovery of threatened and endemic species.

Island eradications are highly cost-effective. Once completed, the need for recurrent control is minimised, delivering lasting benefits with reduced long-term costs.

Island eradications also align with Tasmania's international commitments to biodiversity conservation and can attract external funding, expertise, and tourism opportunities, enhancing the state's reputation as a leader in environmental stewardship.

The eradication of invasive species from islands is a well-established success story around Australia, including:

- Feral cats, rabbits, and rodents from Macquarie Island, Tasmania
- Feral cats from Tasman Island, Tasmania
- Feral goats and deer from Kangaroo Island, South Australia
- Rats and 80% of weeds (6 species) removed from Lord Howe Island, NSW
- Feral cats from Serrurier, Hermite, Faure and Rottnest Islands, Western Australia

Additionally, feral pigs are on track to be eradicated from Kangaroo Island by 2025..

Tasmania has over 300 offshore islands; 56 of these have introduced and/or invasive animals present, as well as countless weeds (Terauds 2005). This includes:

- Feral cats and deer on Bruny Island
- Feral deer on King Island
- Feral pigs on Flinders Island

- Feral cats on lungtalanana/Clarke Island plus neighbouring islands
- Feral cats on Maria Island
- Feral cats and deer on the Tasman Peninsula

These island eradications will have far-reaching ecological, economic, and cultural benefits and place Tasmania as a global leader in conservation and invasive species management.

Recommendation 7

Establish a dedicated Island Eradication and Recovery Fund of at least $10 million for the next four years

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8. Support the eradication of feral cats on Lungtalanana/Clarke Island and surrounding islands

The Tasmanian Aboriginal Centre's Cultural restoration project on Lungtalanana/Clarke Island aims to remove ~80 feral cats to protect bird populations, including breeding migratory birds, and to allow for the reintroduction of culturally important and conservation significant mammals. This project has been estimated at $1.7 million, making it one of the most cost-effective feral cat eradication opportunities in the country. Additionally, neighbouring islands Badger, Babel, and Mount Chappell, also have established feral cat populations. These islands are small and uninhabited, thus ideal for cat eradication. These islands also have very high conservation value for numerous bird species, with the largest muttonbird rookery in the world on Babel Island (Skira et al. 1996). Muttonbirds are a priority species in Tasmania's bird flu preparedness plan and eradication of feral cats from these islands will improve the resilience of these populations in the face of the devastating impacts of bird flu.

Recommendation 8

Invest at least $1.7 million to eradicate feral cats from lungtalanana/Clarke Island and surrounding islands

9. Commit to the eradication of feral cats and deer from Bruny Island

Given the outstanding conservation and tourism value of Bruny Island, eradicating feral cats and deer on Bruny Island will have significant economic and environmental benefits. As a priority area in the Commonwealth's Threatened Species Action Plan, programs have already had federal support and there are clear pathways to seek further support in matched federal funding.

The cat management project on Bruny Island has had great success, including increasing cat by-law compliance by approximately 50% and dramatically reducing the population of feral and stray cats on North Bruny. A commitment of long term funding is critical to capitalise on the success to date to achieve cat eradication on the island and continue to increase responsible cat ownership.

Following the successes of the cat program on Bruny, there is already a high level of community awareness and support for invasive species management, lending a strong foundation for the deer eradication program. There has already been significant progress in initiating the deer eradication program on Bruny. To leverage this progress, long-term commitment of support is needed to see the eradication program to completion.

Recommendation 9

Commit at least $10 million to eradicate feral cats and deer from Bruny Island

10. Commit to the eradication of feral pigs from Flinders Island

Feral pigs on Flinders are currently being managed through a Commonwealth funding project aimed at reducing the impact of feral pigs on high-value agricultural and environmental assets on Flinders Island using baiting, trapping, and ground shooting. The funding for the project is coming to an end. With further financial commitment, the state government can leverage the success and learnings from the last three years of the project to ramp up activities and aim for the eradication of feral pigs from the island. This would have significant and lasting economic benefits for the Flinders Island agricultural sector and community, as well as significant environmental benefits.

Feral pigs are on track to be fully eradicated from Kangaroo Island following a $7 million investment by both the state and Commonwealth governments. Learnings from this program indicate that the most cost-effective approach to eradicating feral pigs is to maximise the removal rate in the first year, aiming for at least 80% removal, and sustain this high removal rate for the next three consecutive years. To achieve these removal rates will require the use of a suit of tools, including aerial shooting, ground shooting, trapping, and baiting.

With commitment, the success on Kangaroo Island can be replicated on Flinders Island, a smaller area with a high level of community support for pig control. Eradication of feral pigs would be a massive win for Tasmanians with significant benefits to agriculture, the environment, and local communities on the island.

Recommendation 10

Commit at least $3.5 million to eradicate feral pigs from Flinders Island

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11. Increase First Nations leadership and employment in invasive species management

The impact of invasive species on Tasmania's environment is a direct threat to First Nations' cultural heritage and connection to Country. Invasive animals, plants, and pathogens lead to the destruction of sacred sites, the loss of native wildlife, and the extinction of Indigenous totem species. They reduce the availability of native food sources, prevent the regeneration of degraded landscapes, and alter the local ecosystems. These losses can have deep and long-lasting impacts on First Nations communities' culture and connection to Country.

Australia's Indigenous people have a deep knowledge and understanding of the management of Country and a strong desire to be more involved. The role of First Nations people, knowledge, and culture is central to our conservation challenges and providing opportunities for leadership, employment, and knowledge sharing is vital.

Providing direct funding to Indigenous-led conservation programs in Tasmania will not only deliver outstanding conservation outcomes but also important cultural outcomes for the Tasmanian Aboriginal community.

Recommendation 11

Establish a dedicated fund for Indigenous-led conservation projects

Systemic reforms to improve invasive species management

12. Increase investment in protecting Tasmania's environment

Tasmania is renowned for its pristine wilderness and has extraordinary natural assets. These natural assets underpin the state's economy. Not only does Tasmanian's wilderness attract tourists from around the world, contributing billions of dollars annually to the economy and supporting thousands of jobs in ecotourism and hospitality, Tasmania's other leading industries like agriculture, aquaculture, and forestry rely on healthy, functioning ecosystems.

Despite the importance of the environment to the major industries in Tasmania, the investment into protecting these critical natural assets is paltry. Only about 3% of Tasmania's state budget is allocated to NRE Tasmania, the agency responsible for managing the state's natural resources, environment, and primary industries.

Doubling the proportion of the budget that goes to managing and protecting Tasmania's natural assets will enhance the state's ability to address critical environmental and biosecurity challenges that will have long-lasting benefits for the major industries in Tasmania and the Tasmanian people.

Recommendation 12

Double NRE Tasmania's budget from $255 million per annum across the next four years to at least $510 million per annum

13. Improve cat management and policy to protect wildlife and communities

Feral and roaming pet cats in Australia are a major threat to biodiversity, responsible for the extinction of at least 27 native species and endangering 50 species in Tasmania, including 15 threatened species. Roaming pet cats alone kill an estimated 241 million native animals annually, with most Australian pet owners (70%) allowing their cats to roam freely, often over large areas (Legge et al., 2022a). Cats also spread diseases, such as toxoplasmosis, which affects wildlife, livestock, and humans, costing Australia $6 billion annually (Legge et al., 2022b). Tasmania has one of the world's highest toxoplasmosis rates, with significant impacts on human health and agriculture (Fancourt & Jackson,

2014). Managing feral cats is costly, with local governments spending $76 million annually on control measures like trapping and baiting, but progress is hindered by inconsistent legislation, limited population data, and a lack of effective broadscale management tools.

Managing feral cats, especially in open landscapes, is very challenging. In comparison, improving pet cat management is far more straightforward and feasible and will yield significant benefits for wildlife, livestock, and human health. Supporting initiatives that increase cat containment (e.g. subsidiaries to build cat runs) and desexing coupled with ramping up education programs for communities, like the TassieCat project, can lead to notable benefits for the community and environment.

While responsible cat ownership is a shared obligation, state leadership is critical for success. This includes a well-resourced state-level plan and consistent legislation and regulations across the state. While desexing is currently mandated in Tasmania and local councils can create 24/7 curfews for pet cats, these tools are not being used effectively. Tasmania has the lowest percentage of local councils with some form of restriction on cat movement in Australia (Legge et. al., 2022b). Consistent state-wide rules regarding cat containment are critical for the adoption and effective use of these measures.

The new Tasmanian Cat Management Plan for 2024-2029 is currently being developed, providing an opportunity to implement stronger, consistent state-wide cat policies and pledge funding to implement the new plan.

Recommendation 13

Invest at least $3.6 million to implement the 2025-2029 Tasmanian Cat Management Plan and develop consistent state-wide cat containment policies

14. Prevent the establishment of new feral populations through improved livestock containment legislation and policy

Intentionally released or escaped livestock are a major source of invasive feral populations, including in Tasmania. For example, nearly half of the feral deer distribution in Tasmania is from deer farm escapes or releases (Cunningham et al. 2022). Similarly, feral goat herds have arisen across the state from domestic goats that escaped, were abandoned, or deliberately released, with over 160 herds identified since 1991 (NRE). While there are not yet established populations of feral pigs or cattle in Tasmania, there are several populations of roaming farmed pigs, as well as at least one of roaming cattle that threatened to establish feral populations (ABC, 2024). Once established, these populations will be extremely difficult, if not impossible, to eradicate and will impose significant ongoing costs to management on top of costs incurred by the agricultural sector.

The best way to manage invasive species is to prevent them from establishing in the first place. There are several simple reforms that could help to prevent future feral populations. Firstly, developing and enforcing minimum fencing standards for livestock will minimise escapees establishing feral populations. Tasmania currently only has minimum fencing standards for deer farms but other species such as goats and pigs are also high-risk species. Mandatory identification and tracking is another mechanism by which farm escapees can be minimised. legislation was currently introduced for mandatory sheep tagging. Expanding this to other livestock like pigs and goats can help to enforce containment and discourage irresponsible livestock management.

Further legislative changes have been proposed to allow for a more effective and practical approach to controlling unmanaged populations of farmed animals such as pigs and goats. Amendments to the Law of Animals Act 1962 could be made that would allow earlier interventions by governments and adjoining landowners to prevent such roaming populations of farmed animals from becoming feral, thereby reducing potential control and eradication costs. For example, given the existing and incoming requirements for mandatory livestock identification, provisions could be made that any unmarked pigs, goats or sheep found at large can be destroyed.

Recommendation 14

Improve the management of livestock to prevent the establishment of new feral populations through legislative reforms and the development and enforcement of minimum fencing standards

15. Improved tools to manage invasive species

History shows that Australia can overcome big problems through research and innovation, evidenced by the fact Australia once led the world in biological control – epitomised by the moth that beat back prickly pear and the viruses that keep rabbits from eating the land bare.

Current control of some of Tasmania's most problematic invasive species, including rabbits, deer, cats, and weeds, are limited due to a lack of effective control tools. For example, trapping and shooting is not an effective method for reducing cat populations, especially at a landscape scale. Additionally, rabbits in Tasmania are largely managed through biological controls, specifically calicivirus. However, there is an ongoing Australia-wide shortage of calicivirus, making procuring this virus challenging and has resulted in no control in 2024.

Long-term research funding to support an expanded research focus on cross-cutting innovation in biocontrols, gene drive technology, robotics, and artificial intelligence (AI) surveillance, detection and data analytics and the application of new technologies for environmental priorities should be a high priority that will enable much more cost-effective biosecurity in future.

Recommendation 15

Increase investment into research and development to improve invasive species control tools

16. Support effective deer management by declaring deer a pest species

Feral deer are protected in Tasmania as a game resource under the Wildlife (General) Regulations 2010. Tasmania and Victoria remain the last two states in Australia that continue to treat feral deer as a hunting resource instead of managing them as an invasive species.

One of the recommendations in the 2025 Tasmanian State of Environment report was the removal of this partly protected status since effective management across the state will be difficult, if not impossible, to achieve with the ongoing partly protected status. Since feral deer are not a declared pest species, there are no obligations for landowners to manage deer, meaning the efforts of those landowners attempting to manage deer are rendered futile if their neighbours refuse to participate in management efforts as well.

Rather than supporting better deer management, the partly protected status hinders management, presents excess administrative hurdles for landowners as well as freeing up costs associated with the administration of the permit system. Anecdotally, due to the

administrative and practical burdens of applying for permits, many landowners are culling deer without applying for permits to prevent the immediate and substantial impacts they are observing on their property. This renders the permitting system pointless and also yields inaccurate reported take values.

Recommendation 16

Remove the partly protected status of deer and declare them a pest species

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17. Prevent new weedy plants from establishing

The majority of weeds in Tasmania are escaped garden plant varieties and a large proportion of these are still available for sale in Tasmania and online (e.g. garden plants such as Agapanthus species). Preventing the ongoing sale of weedy plants through wholesale and retail nurseries would go a long way towards stopping new weed outbreaks, thus avoiding significant environmental, industry, and taxpayer costs.

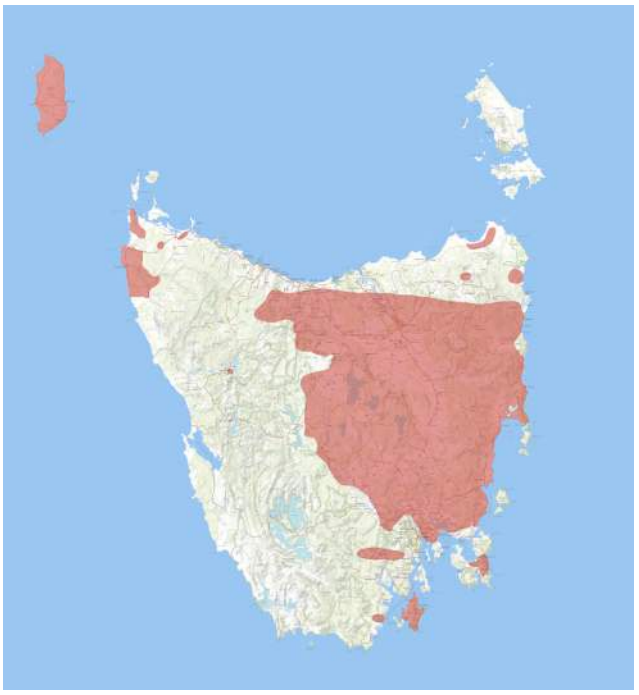
Recommendation 17

Prevent garden escapees from establishing invasive populations through the development of a permitted list approach to stop the sale of weedy plants

Appendix 1: Economic Impacts of Invasive Species in Tasmania

Feral Deer

Feral deer in Tasmania have been increasing in numbers and distribution at an alarming rate, with the current population likely exceeding 100,000 (Invasive Species Council 2021) and covering 27% of the State (Cunningham et al., 2022). This ever-expanding population now threatens Tasmania's unique and outstanding natural and cultural values along with highly valued agriculture and forestry. Based on the estimated 11.5% annual growth rate, deer numbers will exceed 1 million and inhabit half the state within 30 years without significant intervention.



Deer have expanded beyond their 'traditional' range in the Midlands, including into the Tasmanian Wilderness World Heritage Area and several national parks. Several other satellite deer populations have established outside the 'traditional' deer range as a result of deer farm escapes and intentional releases (Cunningham et al., 2022). These include populations on the Tasman Peninsula, Bruny Island, Freycinet National Park, near Temma, and south of Hobart.

The annual cost to the community from the impacts of feral deer in Tasmania could already be as high as $100 million (Invasive Species Council, 2021). Feral deer have negative impacts on some of Tasmania's main sources of income: agriculture, forestry, and tourism.

Feral deer are costing the agricultural sector an estimated $10-80 million per year in terms of crop and infrastructure damage (Donaghy, 2020). The cost to agriculture will be much higher should livestock diseases such as foot and mouth disease reach Tasmania.

Feral deer are dramatically increasing the costs of restoration in the Midlands and will undermine the ability of Tasmania to attract investment in carbon offset schemes. Plantings in the midlands cost as much as five times more in regions with feral deer versus those without (Burgess, 2016). This means Tasmania will likely miss out on opportunities associated with the green carbon economy, which is expected to 'boom' over the next decade, including substantial offset funding and jobs.

Feral deer are a major risk and cost on Tasmania's roadways, resulting in further costs to the economy resulting from deer-related vehicle crashes. Between 2013 and 2021, 68 deer-vehicle collisions were recorded, with more being recorded elsewhere or unrecorded (DSG, 2021). The RACT reports that deer typically cause twice the damage of other animals. In the recent economic analysis of the impacts of feral deer in Victoria, the highest cost to

the economy over the next 30 years was associated with deer-related vehicle accidents. Tasmania will also see increasing costs in the future without significant control of deer near major roads, such as the West Tamar Highway.

Deer are also damaging to Tasmania's brand and reputation and threaten our future as a premier tourist destination. Tourism contributes over $2 billion to the Tasmanian economy (Australian Trade and Investment Commission, 2020). Tasmania's brand identity as a pristine land and sea environment and rich cultural heritage is continually cited as a reason for visiting Tasmania [6]. Feral deer are established in several national parks and wilderness areas, degrading natural ecosystems and detracting from this pristine wilderness image. In other states, it has been estimated that the use of national and state parks for recreation will be dampened by 1% due to degradation from the growing feral deer populations (Frontier Economics, 2022).

Feral cats

Feral and roaming pet cats are a significant issue in Australia, posing substantial threats to biodiversity and incurring significant economic costs. As a highly successful introduced predator, feral cats have helped push at least 27 native Australian species into extinction in the past 200 years and now imperil at least 50 Tasmanian species including 15 threatened species. Feral, stray, and roaming pet cats are widespread in the state, including in urban and outer-urban areas where they hunt and kill native wildlife in nearby bushland and backyards.

Pet cats that are allowed to roam freely outside kill an estimated 241 million native Australian animals every year - an average of 186 animals killed each year per roaming pet cat (Legge et al., 2020a). Most cat owners (70%) in Australia allow their cats to roam freely all or part of the day, with pet cats roaming over as much as 30 hectares around their home base (Legge et al., 2020a).

Feral, stray, and roaming pet cats also spread diseases that infect wildlife, livestock, and humans. Cat-borne diseases are estimated to cost Australia an estimated $6 billion annually (Legge et al., 2020b). For example, toxoplasmosis kills native animals and can cause abortions in sheep and goats. It can also be transmitted to humans and affects the eyes and brain as well as cause miscarriages. Tasmania has one of the highest rates of toxoplasmosis in the world, with over 80% of feral cats in Tasmania carrying the infection and a 50–62% infection rate in humans, compared with only 23–35% on the mainland (Fancourt & Jackson, 2014). Toxoplasmosis is estimated to cost the state up to $1.7 million a year (NRE 2017).

The cost of managing feral cats poses a financial strain on communities, with local governments across Australia alone spending $76 million per year on trapping, baiting, shooting, and other control measures implemented to mitigate the impact of feral cats on wildlife and agricultural production (Nou et al., 2021). Many of these programs have had limited effectiveness on reducing the impacts of cats due to current limitations in cat management, including inadequate and inconsistent legislation and enforcement of cat management, a lack of reliable population data, and a lack of broadscale control tools (Denny & Dickman, 2010).

Feral pigs

Feral pigs cause extensive habitat destruction through soil rooting, leading to vegetation loss, soil erosion, and water contamination. They prey on native species and spread invasive weeds. In agricultural contexts, feral pigs destroy crops, damage infrastructure, and prey on newborn livestock, causing financial losses to farmers. They are also vectors for serious diseases, African Swine Fever and Foot-and-Mouth Disease, which could devastate Tasmania's agricultural market.

While Tasmania is fortunate to not yet have established populations of feral pigs on mainland Tasmanian, there are feral pigs on Flinders Island. These pigs are found in the Strzelecki National Park area and throughout the wetlands along the east. Two of these wetlands are listed on the Register of the National Estate and as international Ramsar sites.

The Flinders Island feral pig population threatens at least 30 native plant and animal species (NRE). They cause damage to the environment through wallowing, rooting for food and selective feeding. They compete with native animals for food and destroy habitat. Feral pigs are also a major agricultural pest. They compete with livestock, destroy crops and fencing, foul water sources and transmit disease.

Feral pig's rapid reproduction (up to 85% under good conditions) and ability to spread make population control challenging without coordinated and well-funded efforts (Choquenot et al., 1996). Eradication from mainland areas is virtually impossible, however, island eradications are possible, as demonstrated by the recently successful Kangaroo island pig eradication (Hamnett et al., 2024).

Feral pigs on Flinders Island are managed under the Feral Pig Management Plan Flinders Island 2002, which states that it is not feasible to eradicate pigs from the Strezlecki National Park due to the terrain and resources available. The success of the Kangaroo Island eradication, which is three times that size of Flinders, indicates that with sufficient and strategic investment, feral pigs can indeed be eradicated from Flinders with significant benefits to the island 's agriculture and environment.

Feral goats

Feral goats can be extremely destructive to native vegetation as they browse a wide variety of native plants, including blackwood, drooping she-oak, native cherry, coffee berry, round-leaf riceflower, rough dogwood and forest germander. They also damage newly-established forestry plantations and can prevent forest regeneration. Trampling by goats can lead to soil erosion and fouling of waterways. Feral goats also outcompete other browsing livestock for food and shelter and act as vectors for parasites and diseases. Feral goats have been estimated to cause losses to livestock farming of $25 million per year nationally, not including their impact on the environment or pasture degradation (Maas, 1998).

In Tasmania, more than 160 herds of feral goats have been identified by the Department of Natural Resources and Environment since 1991. Feral goats have been recorded in

various areas, including the Tasmanian Wilderness World Heritage Area (TWWHA) and on Bruny Island. Some of these herds are causing public safety issues (ABC, 2024).

Weeds

Weeds are one of the most serious threats to endangered native plants and animals in Tasmania and the most expensive natural resource management problem for farmers. They smother and outcompete native plants, degrade habitat, remove food sources for native animals, and alter waterways and fire regimes. Weeds cost Tasmania more than $58 million a year (McLeod, 2018).

With at least 886 plants naturalised in the state, Tasmania has the highest number of introduced plants per hectare of all Australian states and territories. Key problematic weeds include blackberry, which forms dense thickets that outcompete native vegetation; gorse, a highly invasive shrub that increases fire risk; and boneseed, which displaces coastal and forest vegetation while altering fire regimes. Willows spread aggressively along waterways, impacting water flow and aquatic ecosystems, while pasture weeds like Chilean needle grass degrade grazing land and harm livestock.

The recent emergence of several invasive weed species in Tasmania poses further threats to the state. There have been several recent incursions, such as spurge laurel (*Daphne laureola*) and Chilean mayten (*Maytenus boaria*), both of which are aggressive colonisers of wet forest habitats. Many of these emerging weeds are currently limited in distribution, presenting a crucial opportunity for eradication. For example, Chilean mayten (*Maytenus boaria*) has only been identified in a single naturalised population in remnant forest at Elizabeth Town (TMAG, 2024). This limited range, combined with the aggressive colonising nature of this species, makes it a prime target for eradication efforts.

Strategic investment in early detection, rapid response, and long-term management is essential to mitigate the ecological and economic impacts of invasive weeds, protecting Tasmania's natural and agricultural assets.

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