PROTECT AUSTRALIA FROM DEADLY INVASIVE SPECIES

Election priorities for national environmental biosecurity 2019

invasive species council

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Publication details

Invasive Species Council (2018) Protect Australia from deadly invasive species: Election priorities for national environmental biosecurity 2019. Invasive Species Council. Fairfield, Victoria.

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About the Invasive Species Council

The Invasive Species Council was formed in 2002 to seek stronger laws, policies and programs to keep Australian biodiversity safe from invasive plants, animals, diseases and parasites. The goal is to establish a biosecurity system for Australia that prevents new invasive species and protects Australian species and ecological communities from existing invasive species. The Invasive Species Council is a not-forprofit charitable organisation funded almost entirely by donations from supporters and philanthropic organisations.

Cover photo: Red-eared slider turtles – native to the United States and rated as one of the world's worst invasive species – have been smuggled into Australia and released into the wild. They were eradicated from Queensland but have been largely ignored in several other states. This is symptomatic of the way environmental biosecurity priorities have been neglected. Photo: Jim the Photographer | Flickr | CC BY 2.0

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Australia needs stronger environmental biosecurity

Strengthening environmental biosecurity – stopping new species arriving and establishing and limiting the harm caused by the worst invasive species – must be a priority of the highest order to save Australian species.

That's because invasive species imperil more native species than any other type of threat (more than 80% of nationally threatened species).[2] And because new harmful invaders – like red fire ants and myrtle rust – keep arriving.

Although stopping and controlling invasive species is often difficult, past achievements show that with dedication and resources Australia can make great strides in keeping native species safe. We have, for example, eradicated several red fire ant populations as well as rats and cats from many islands, and beaten back terrible weeds through biocontrol or concerted removal (bitou bush, sea spurge and prickly pear, for example). So far, we've been able to keep out destructive new invaders such as the Asian black-spined toad, giant African snail and wattle rusts.

Australia has a lot of work to do to bring environmental biosecurity up to the standard of that for agriculture and human health – as emphasised in a 2017 national review of biosecurity[1] – and the next term of the federal government is the time to make great strides in filling the gaps.

In this document we outline initiatives needed to improve Australia's capacity to keep our natural environment safe from new and established invasive species.

A new import levy announced in the 2018 budget will generate most of the extra funding needed to achieve them, since funding environmental biosecurity was one of the main purposes of the levy. And a new role of Chief Environmental Biosecurity Officer (announced in June 2018) will help provide the institutional focus needed.

Environmental biosecurity priorities

1. Strengthen biosecurity institutions and capabilities

Boost standards of environmental biosecurity by reforming the institutions delivering biosecurity services and allocating a fair portion of new funding to the endeavour.

1.1 Establish a National Sustainability Commission (as proposed by the Places You Love Alliance) and transfer the role of the Chief Environmental Biosecurity Officer to this body.

1.2 Assign responsibility for risk prioritisation, contingency planning, research planning and administering the National Environmental Biosecurity Response Agreement to the Chief Environmental Biosecurity Officer within the Sustainability Commission.

1.3 Assign responsibility for listing key threatening processes, preparing and implementing threat abatement plans and foresighting to the Sustainability Commission.

1.4 Appoint a standalone minister for biosecurity and create a biosecurity department.

1.5 Allocate at least 40% of the new biosecurity import levy to environmental biosecurity measures (additional to existing spending).

2. Solve problems through research & innovation ($55M/5 years*)

Commission research to solve Australia's most important environmental biosecurity problems.

2.1 Develop and implement a 10-year environmental biosecurity research plan with costed priorities covering all categories of invasive species (including insect, fungi, weed and marine threats) and stages of invasion.

2.2 Assign responsibility for the research plan to the Chief Environmental Biosecurity Officer, coordinated through a new biosecurity hub under the National Environmental Science Program and delivered by the Centre for Invasive Species Solutions, CSIRO, universities and other research bodies.

2.3 Make the Centre for Invasive Species Solutions a permanent body that conducts research and innovation across all categories of invasive species and stages of invasion with a strong emphasis on environmental biosecurity.

2.4 Foster biosecurity innovation by dedicating at least 20% of research funding for long-term projects focused on difficult high-priority problems, including through the application of developing technologies.

2.5 Foster Australia's expert identification capabilities by dedicating at least 5% of biosecurity research funding to foundational taxonomic research, administered by the Australian Biological Resources Study.

"Community and environmental biosecurity considerations should be comparable to human health and primary production, and national arrangements need to be explicitly developed to address environmental risks."

2017 independent review of Australia's biosecurity system[1]

Environmental biosecurity priorities

3. Border door-knockers: prevent new species invading Australia ($50M/5 years*)

Comprehensively identify biosecurity risks to the natural environment and take strong measures to stop harmful new species arriving and establishing in Australia.

3.1 Using best practice methods, systematically, comprehensively and continuously identify the highest priority biosecurity risks to Australia's natural environment across all biological groups, with all risk prioritisation databases to be made publicly available through the Atlas of Living Australia (or similar platform).

3.2 Support Australia's capacity for rapid identification of exotic species by allocating at least 5% of the new biosecurity import levy to maintaining validated reference collections for biosecurity risk groups in Australia's national biological collections (CSIRO, state and territory museums and herbaria).

3.3 Block high-risk invasion pathways and undertake contingency planning for all high-priority environmental biosecurity risks over a 10-year timeframe.

3.4 Improve detection of new incursions by developing a nationally coordinated 'biosecurity rangers' citizen science surveillance program.

3.5 Strengthen Australia's responses to new incursions by creating an ecological fit-for-purpose National Environmental Biosecurity Response Agreement, making sure environmental incursions are dealt with in a timely and precautionary way.

3.6 Establish a biosecurity e-trade taskforce to counter the growing threat of illegal imports of high risk plants and animals through online trading.

4. In-country risks: nip invasive species in the bud ($40M/5 years*)

Identify emerging or potential invasive species threats to the natural environment and take action to prevent them becoming serious threats.

4.1 Develop and implement a plan to address the biosecurity risks of exotic fishes, birds, reptiles and mammals kept as pets in Australia, including bans on high-risk species.

4.2 As a matter of urgency, adopt and fund the invasive ants biosecurity plan and myrtle rust action plan and fund the response plan for terrestrial snakes.

4.3 Conduct regular horizon scanning for early identification of potential invasive species risks or emerging threats.

4.4 Develop a national priority list for emerging invasive species (including weeds) – those that have high potential to cause harm to the environment but have limited spread and high potential for eradication or containment.

4.5 Use existing powers under the EPBC Act (section 301A) to regulate the interstate trade of invasive plants.

4.6 Provide matching funding for states and territories to eradicate or contain high priority emerging invasive species.

5. Established invaders: abate Australia's worst invasive threats ($80M/5 years*)

Systematically assess, list and abate the major threats to Australian species and ecological communities.

5.1 Commission a systematic expert identification of all key threatening processes (KTPs) and update Australia's existing KTP list accordingly.

5.2 Escalate action on major invasive threats by making threat abatement a high national priority and pursuing a strong intergovernmental commitment to develop and implement threat abatement plans for all high-priority threats.

5.3 Add a key threatening process trigger to Australia's environmental laws to require assessment of activities that are likely to exacerbate key threatening processes.

5.4 Use Australia's environmental laws and other means to facilitate abatement of major threats, particularly for threats that state or territory governments are failing to address such as feral horses in Kosciuszko National Park, feral deer and many high-risk weed species.

6. Protect islands from invaders ($5M/5 years*)

Protect Australia's islands from invasive species by strengthening biosecurity and prioritising efforts to control and eradicate established invasive species.

6.1 Establish a Federal/State/Territory Working Group on island biosecurity to develop and implement a national framework for managing biosecurity on Australia's islands with emphasis on the 100 high priority islands identified in 2009.

6.2 Audit existing measures to prevent, eradicate and control invasive species on islands, develop best practice approaches, and identify knowledge gaps for all 100 priority offshore islands.

*** Funding note:** We have costed these proposals at $230 million over five years, an average of $46 million a year. They do not represent the entirety of expenditure for environmental biosecurity, but are in addition to existing biosecurity activities and expenditure. They would mostly be funded from a proportion of the new biosecurity import levy, of which 40% (about $50 million a year) should be allocated to environmental biosecurity (see section 1 for the explanation). Some proposals are of benefit to agricultural and health biosecurity as well as environmental biosecurity (eg recommendation 3.2 for maintaining reference collections), so only a proportion of the funding would come from environmental biosecurity funding. The remaining 'environmental biosecurity' levy funds should be directed towards improving the environmental focus of other activities of the national biosecurity system.

1. Strengthen biosecurity institutions and capabilities

Boost standards of environmental biosecurity by reforming the institutions delivering biosecurity services and allocating a fair portion of new funding to the endeavour.

1.1 Establish a National Sustainability Commission (as proposed by the Places You Love Alliance) and transfer the role of the Chief Environmental Biosecurity Officer to this body.

1.2 Assign responsibility for risk prioritisation, contingency planning, research planning and administering the National Environmental Biosecurity Response Agreement to the Chief Environmental Biosecurity Officer within the Sustainability Commission.

1.3 Assign responsibility for listing key threatening processes, preparing and implementing threat abatement plans and foresighting to the proposed Sustainability Commission.

1.4 Appoint a standalone minister for biosecurity and create a biosecurity department.

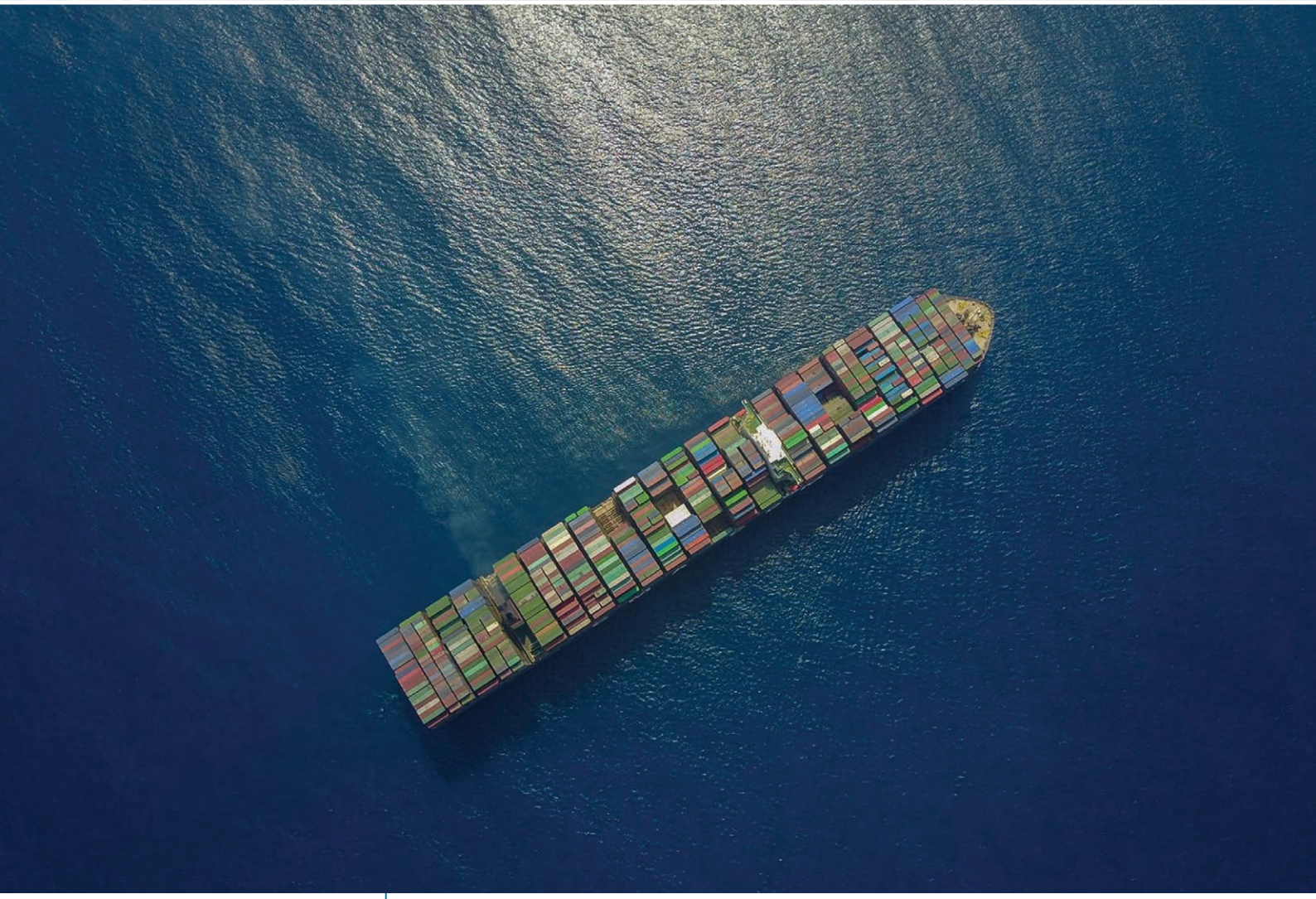
1.5 Allocate at least 40% of the new biosecurity import levy to environmental biosecurity measures (additional to existing spending).

Because the costs of failure are so high, biosecurity is a demanding responsibility requiring the highest levels of expertise and standards of administration. Yet, as emphasised by a major review of biosecurity in 2017, environmental biosecurity has been neglected and requires substantially greater focus and funding.[1] Otherwise, invasive species threats to the environment will become even more dire.

Much greater involvement of the environment department is needed – a point also made in the 2017 independent review of the national biosecurity system.[1] This can best be achieved by assigning several environmental biosecurity functions to the Sustainability Commission recommended by the Places You Love Alliance[4] and transferring the role of Chief Environmental Biosecurity Officer to that body.

The 2007 Beale review's recommendation for an independent biosecurity authority and expert biosecurity commission remains as relevant as ever.[5] But given the current lack of political interest in this option, we propose instead a standalone minister and department for biosecurity. This can help ensure that environmental biosecurity is accorded equivalent status to agricultural biosecurity and remove conflicts of interest between trade promotion and biosecurity responsibilities, a problem recognised by the Beale review.[5]

As recommended by the 2017 review of biosecurity, the federal government proposes to impose a biosecurity import levy to raise funds for the most underfunded parts of biosecurity. Environmental biosecurity was one of four priority areas nominated in the review. Given the extent of work needed and the fact that the other three priorities – monitoring and surveillance, research and innovation, and communications and awareness – also include environmental priorities, at least 40% of the levy should be allocated to environmental biosecurity. This would amount to about $50 million a year, which will cover most proposals in this document.



This is how most new intruders in Australia arrive – on ships bearing containers of imported goods. That's why a new levy is being imposed on each container brought into Australia, to support underfunded parts of biosecurity such as environmental biosecurity. Australia's containerised trade is forecast to rise more than 150% over the next two decades.

"The national biosecurity system has, in large part, evolved around the agriculture and trade sectors, with funding mechanisms naturally developed along similar lines. Environmental biosecurity was achieved more as a by-product of those systems than as a core objective. But that has changed, with an increasing expectation that environmental biosecurity should be on an equal footing with animal and plant biosecurity."

2017 independent review of Australia's biosecurity system [1]

2. Solve problems through research and innovation

Commission research to solve Australia's most important environmental biosecurity problems.

2.1 Develop and implement a 10-year environmental biosecurity research plan with costed priorities covering all categories of invasive species (including invertebrate, fungi, weed and marine threats) and stages of invasion.

2.2 Assign responsibility for the research plan to the Chief Environmental Biosecurity Officer, coordinated through a new biosecurity hub under the National Environmental Science Program and delivered by the Centre for Invasive Species Solutions, CSIRO, universities and other research bodies.

2.3 Make the Centre for Invasive Species Solutions a permanent body that conducts research and innovation across all categories of invasive species and stages of invasion with a strong emphasis on environmental biosecurity.

2.4 Foster biosecurity innovation by dedicating at least 20% of research funding for long-term projects focused on difficult high-priority problems, including through the application of developing technologies.

2.5 Foster Australia's expert identification capabilities by dedicating at least 5% of biosecurity research funding to foundational taxonomic research, administered by the Australian Biological Resources Study.

Recommended funding:
$55 million over 5 years*

Australia needs a big research effort in environmental biosecurity. The challenges are immense – we don't yet know what the biggest new risks are and how to stop them getting here, and we're losing ground against many weeds, diseases and invasive animals because we lack effective control methods.

But history shows we can overcome big problems through research and innovation – we used to lead 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) and promising new methods for controlling the likes of cats, carp and deer are in the pipeline.

Australia has a research strategy – the *National Environment and Community Biosecurity Research, Development and Extension Strategy 2016-19* – but it lacks a coordinator and implementation plan and will soon be out of date. To be serious, we need an action plan with costed priorities and someone to take responsibility for it.

Innovation is needed to deal with the most difficult problems, and to foster this we need to provide long-term grants for promising ideas without a guarantee of success. A proportion of research funding – we suggest at least 20% – should be dedicated to cracking the biggest conundrums of environmental biosecurity.

Taxonomic capacity in Australia has declined by 20% during the past decade, which undermines our ability to respond rapidly to existing or new threats. We need to maintain Australia's taxonomic (identification) expertise from the zoological, microbial and botanical communities.

* This figure does not include the funding needed for recommendation 2.3 (which is broader than environmental biosecurity), although part of the funding for recommendation 2.1 would be relevant. Funding for recommendation 2.5 should also come from budgets for research on agricultural and health biosecurity.

Research is foundational to effective biosecurity, yet Australia's first strategy for environmental biosecurity research (2016 to 2019) has languished without funding or an implementing body.

"There is no overarching plan or funding mechanism to focus strategic investment in biosecurity R&I at the national system level (including for animal, plant and environmental)."

2017 independent review of Australia's biosecurity system [1]

3. Border door-knockers: Prevent new species invading Australia

Comprehensively identify biosecurity risks to the natural environment and take strong measures to stop harmful new species arriving and establishing in Australia.

3.1 Using best practice methods, systematically, comprehensively and continuously identify the highest priority biosecurity risks to Australia's natural environment across all biological groups, with all risk prioritisation databases to be made publicly available through the Atlas of Living Australia (or similar platform).

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3.5 Strengthen Australia's responses to new incursions by creating an ecological fit-for-purpose National Environmental Biosecurity Response Agreement (NEBRA), making sure environmental incursions are dealt with in a timely and precautionary way.

3.6 Establish a biosecurity e-trade taskforce to counter the growing threat of illegal imports of high risk plants and animals through online trading.

The yellow crazy ant – one of Australia's worst environmental threats, contributing to an ecological meltdown on Christmas Island – has established in many different locations in Australia, implying it hasn't been a high enough priority for prevention. Photo: David Wilson

Recommended funding:
$50 million over 5 years*

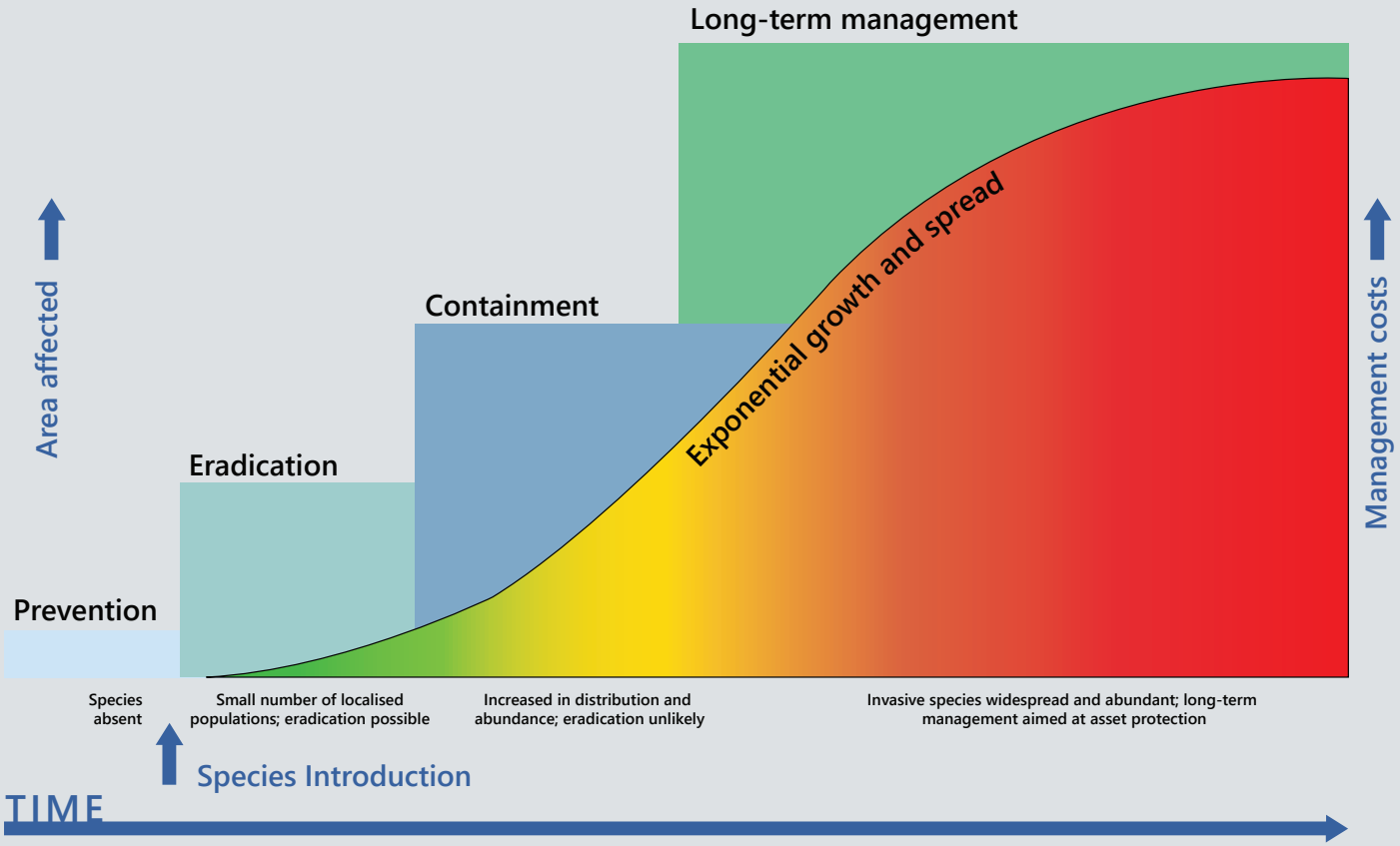
An essential starting point for biosecurity is to identify all the harmful pests and diseases that Australia should keep out of the country. But this has not yet been done for the natural environment. In 2017 the Invasive Species Council and Monash University (supported by philanthropic funding) embarked on a project to identify priority insect risks using comprehensive, systematic, repeatable methods.[6] This world's best practice approach should be applied across all biological groups.

Australia also needs to ensure that these taxa are represented in the National Wildlife Collections (CSIRO) and the state and territory natural history museums and herbaria, and that taxonomic capability for rapid identification of these taxa exists nationally. The infrastructure housing these collections and the support for maintaining taxonomists is declining across every jurisdiction in Australia.

The next step is to reduce the risk that high priority risk species will enter Australia, by modifying import approvals and conditions to apply what is known as Australia's 'appropriate level of protection' – aimed at reducing biosecurity risks 'to a very low level'.

Australia also needs to be well prepared to respond to new incursions of potentially harmful species, by preparing contingency plans for high priority risks. We should aim to have contingency plans for at least 50 high-priority risks (taxa and taxa-groups) within 5 years and all high-priority risks within 10 years. Current examples include the national invasive ants plan, myrtle rust action plan and acacia biosecurity plan (in preparation) and the terrestrial snake response plan (complete but unfunded).

The other essential element of



"Incursions of exotic organisms harmful to Australia's environment and social amenity are a regular occurrence … but national environmental pest and disease risks are yet to be systematically identified, prioritised and planned for."

2017 independent review of Australia's biosecurity system [1]

preparedness is surveillance. Eradication is usually only feasible if new incursions can be detected quickly before they establish and spread. Our best surveillance resource is people who take an interest in the plants and animals around them. That is how the majority of new arrivals that make it past quarantine are detected. To more effectively tap into that resource we need a concerted focus on engaging citizen science projects with the rollout of easy-to-use apps and projects to educate, train and motivate people to search for unwanted new species.

If a new species such as black spined toad or tawny crazy ant does make it past quarantine, we need a rapid response to eradicate that species if and while it is still feasible. That requires reforming the NEBRA to remove time-consuming impediments to eradication, deal sensibly with uncertainty and more closely involve environmental experts and decision-makers.

One growing pathway for the entry of invasive species into Australia is illegal online trading. It is easy for people to order seeds of a prohibited plant from an overseas supplier or even a prohibited animal through an online forum. A taskforce is needed to assess the scope of the problem and develop and implement strategies to combat it.

* Although we have included 100% of the funding for recommendation 3.2 here, funding for recommendation 3.2 would not exclusively assist environmental biosecurity.

4. In-country risks: Nip invasive species in the bud

Identify emerging or potential invasive species threats to the natural environment and take action to prevent them becoming serious threats.

4.1 Develop and implement a plan to address the biosecurity risks of exotic fishes, birds, reptiles and mammals kept as pets in Australia, including bans on high-risk species.

4.2 As a matter of urgency, adopt and fund the invasive ants biosecurity plan and fund the myrtle rust action plan and the response plan for terrestrial snakes.

4.3 Conduct regular horizon scanning for early identification of potential invasive species risks or emerging threats.

4.4 Develop a national priority list for emerging invasive species (including weeds) – those that have high potential to cause harm to the environment but have limited spread and high potential for eradication or containment.

4.5 Use existing powers under the EPBC Act (section 301A) to regulate the interstate trade of invasive plants.

4.6 Provide matching funding for states and territories to eradicate or contain high priority emerging invasive species such as yellow crazy ants and Koster's curse in Queensland and smooth newts in Victoria.

Recommended funding:
$40 million over 5 years

Biosecurity should be prioritised over people's desires for novelty pets that could become invasive or spread disease to native species. We need a national plan to identify and address these risks of exotic pets, which include both permitted and prohibited species. DNA pedigree information for species claimed to be captive-bred should be mandatory. Smooth newts in Melbourne, Jack Dempsey cichlids in New South Wales and Indian ringneck parakeets in Western Australia are examples of high-risk species that have escaped or been illegally released.

Because most states and territories take a laissez-faire approach to exotic species – allowing in all except those that are expressly banned – there is a high risk of new threats emerging due to new industries or uses based on an exotic species already in the country. For example, many biofuel crop proposals are based on highly weedy species such as giant reed. Horizon scanning would be a wise investment, allowing early identification of such risks and sufficient lead time to address them before new uses become entrenched.

The likes of rabbits, foxes and lantana are too widespread or numerous to eradicate or contain, but we should be seizing such opportunities with invaders such as smooth newts, yellow crazy ants, gamba grass and feral deer that are not yet widespread. It is far more effective and much less expensive to stop them before they become entrenched and widespread. National plans, research and resources are needed to make this happen.

The 2009 Hawke review of the EPBC Act found that the poorly regulated trade of potential invasive species within Australia represented a substantial failure of state and territory laws.[8] This can be partly remedied through use of existing powers under the EPBC Act (section 301A) to regulate interstate trade of non-indigenous plants, consistent with their invasion risks.

Smooth newts – native to Europe – were illegally released into a Melbourne stream and are likely to spread across much of southern Australia unless they can be eradicated. Authorities have so far refused to fund an eradication attempt. The newt represents a completely new order of animals in Australia and allowing it to stay represents a giant ecological experiment with potentially serious consequences for aquatic wildlife. The smooth newt is a prolific breeder and generalist carnivore.

Photo: John Beniston | CC BY-SA 3.0 Attribution

"The committee received concerning evidence regarding the rate at which live animals, particularly birds, are entering Australia and either escaping or being deliberately released into the wild. These animals appear to be entering Australia by both legal and illegal means."

2015 Senate inquiry into environmental biosecurity [7]

5. Established invaders: Abate Australia's worst invasive threats

Systematically assess, list and abate the major threats impacting Australian species and ecological communities.

5.1 Commission a systematic expert identification of all key threatening processes (KTPs) and update Australia's existing KTP list accordingly.

5.2 Escalate action on major invasive threats by making threat abatement a high national priority and pursuing a strong intergovernmental commitment to develop and implement threat abatement plans for all high-priority threats.

5.3 Add a key threatening process trigger to Australia's environmental laws to require assessment of activities that are likely to exacerbate key threatening processes.

5.4 Use Australia's environmental laws and other means to facilitate abatement of major threats, particularly for threats that state or territory governments are failing to address such as feral horses in Kosciuszko National Park, feral deer and many high-risk weed species.

Recommended funding:
$80 million over 5 years

Australia should accord high priority to abating key threatening processes because relatively few threats cause most biodiversity declines, and finding enduring solutions is more effective and less expensive over the long term than trying to save threatened species one by one. This would also help the myriad of declining species not listed as threatened, often due to a lack of data.[10]

A study by the Invasive Species Council[9] has found that:

- Many leading threats to Australian biodiversity are either not listed as KTPs or are moribund listings that lack an abatement plan.
- KTP nominations assessed over the past decade have taken from three to seven years to accept or reject, and one still under assessment is more than 10 years old.
- No recent KTP nominations have been assessed.
- Almost a third of listed KTPs have no abatement plan (including KTPs for which the threat level is rising) and fewer than a third of KTPs have an up-to-date plan.
- Invasive species make up two-thirds of the 21 listed KTPs, but there are no abatement plans for the majority of major invasive species threats.
- Moderate to good progress on threat abatement has been reported for less than 40% of KTPs.

The need for national leadership on threat abatement is clear in cases such as feral horses and deer, where some states are taking actions that exacerbate rather than abate threats. Federal pressure is needed, for example, to persuade the NSW government to protect Kosciuszko National Park from feral horses rather than protect the horses.

Nonetheless, as shown by the few cases in which good abatement progress is being made – for longline fishing and red fire ants, for example – major threats are surmountable. As recommended in section 2, responsibility for KTPs and TAPs should be assigned to the proposed National Sustainability Commission. New funding sources such as levies and taxes should be considered to provide long-term base funding for implementing TAPs. These and other essential reforms are outlined in a discussion paper by the Invasive Species Council.[9]

National parks are vital for saving threatened species, but species will still disappear unless we get much better at controlling major invasive threats. Here, in Kosciuszko National Park, the NSW government has recently legislated to protect feral horses trashing the park rather than control them to protect the park's fragile ecosystems and unique endangered species such as corroboree frogs.

Photo: Sunset from Mt Kosciuszko, Mike Edmondson

"We cannot save species and ecological communities without abating the major causes of decline."

Invasive Species Council (2018) [9]

6. Protect islands from invaders

Protect Australia's islands from invasive species by strengthening biosecurity and prioritising efforts to control and eradicate established invasive species.

6.1 Establish a federal, state and territory working group on island biosecurity to develop and implement a national framework for managing biosecurity on Australia's islands with emphasis on the 100 high priority islands identified in 2009.

6.2 Audit existing measures to prevent, eradicate and control invasive species on islands, develop best practice approaches, and identify knowledge gaps for all 100 priority offshore islands.

Recommended funding:
$5 million over 5 years

Islands are special places for biodiversity, their isolation often giving rise to a highly endemic biota. But when that isolation is breached by introduced species, the endemic island species are often highly susceptible to decline. Having evolved with fewer competitors, predators and parasites than species on continents, they typically have poor defences against invaders. At least 20 unique animal species or sub-species have driven to extinction by the arrival of invasive rodents on Australian islands, accounting for more than half of Australia's 23 bird extinctions as well as two mammal extinctions.[12]

Conversely, islands often offer sanctuary from invasive species – seven Australian mammals extinct on the mainland due to cats and foxes are now confined to islands.[13] Islands often also offer excellent opportunities to recover threatened species because of the potential to eradicate invasive species.

In 2009, 100 priority offshore islands were identified where invasive vertebrates are a significant threat to species, ecosystems and other environmental values.[14] The eradication of invasive mammals (cats, rabbits, rodents) from Macquarie Island, completed in 2014, stands as one of the most globally significant island conservation projects ever completed. Populations of eight threatened bird species have either stabilised or recovered sufficiently to down-list their conservation status. Similar conservation outcomes can be expected from island eradication efforts currently in progress around Australia.

In 2015 the Senate inquiry into environmental biosecurity recommended the federal government work with states and territories to establish a national framework for managing biosecurity on Australia's islands.[7]

As with islands elsewhere, the isolation of the Norfolk Island group has given rise to a highly endemic flora and fauna, whose species are highly susceptible to decline when that isolation is breached by humans and human-introduced species. Fifty-eight Norfolk species, most found nowhere else, are listed as threatened and mostly imperilled by invasive species. Much stronger biosecurity is needed to save these species from existing and future invaders.

Photo: © Danny Hayes

"Islands ... comprise only 5.3% of global land area yet are hotspots of biodiversity. Islands are also epicentres of biodiversity loss. They host 61% of known extinctions and 37% of critically endangered species."

Spatz et al. (2017) [11]

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Myrtle rust is a deadly new disease of Australia's largest plant family, the Myrtaceae. Although this South American pathogen arrived only a few years ago, it is already pushing several plants towards extinction. Scrub myrtle (shown here), a once common species, has been so badly hit by myrtle rust that it has been provisionally listed in NSW as critically endangered. Unless we can substantially bolster Australia's biosecurity system, deadly invaders will continue to arrive. Australia's unique natural heritage is at stake.

Photo: © Tim Low

"Invasive species have been the major cause of animal extinctions in Australia and currently imperil more nationally threatened species than any other type of threat."

Invasive Species Council (2018) [9]