INVASIVE SPECIES

National priorities 2016

invasive species council

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Invasive Species Council, March 2016

The Invasive Species Council is a donor funded organisation that seeks to protect the environment from dangerous new weeds, feral animals and other pest invasions. Formed in 2002, it was the first environment group in the world to focus solely on invasive species.

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Cover photo by Alex Wild: Red imported fires ants are one of at least seven exotic 'tramp ant' species that have slipped through Australia's border security and threaten the Australian environment, economy and way of life.

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We need to learn from the past: keep invasive species out

Imagine having the opportunity to go back in time and stop the introduction of rabbits into Australia. How much damage could have been prevented? How many native animals would be in better shape? And how much money would have been saved by governments and private landowners?

Think also of carp, cane toads, prickly pears, fire encouraging gamba grass and waterway choking willows, and all the damage that could have been prevented to productive and wild lands if they had been kept out.

Overall, invasive animals and pathogens have contributed to the extinction of more than 40 Australian animals, and about three-quarters of nationally listed threatened species and ecological communities are imperilled by invasive species.

The State of the Environment Report 2011 warned that invasive species represent one of the most potent, persistent and widespread threats to Australian biodiversity.

Andrew Cox, Invasive Species Council CEO

"They have both a direct negative impact on species and communities through losses and extinctions, and an indirect impact on ecosystems and biodiversity through ecological changes brought by those losses and extinctions," it said.

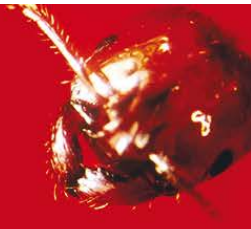
We can't change the past, but we have a moment to stop the introduction of new destructive and costly pests in front of us right now. Good biosecurity is not cheap, but it is much cheaper than the consequences.

Despite the lessons of the past, we have not heeded the message: new destructive pests arrive every year – myrtle rust, Asian honeybees, red imported fire ants, yellow crazy ants and smooth newts are some recent examples. At least 48 new potentially harmful species have been detected and established in the wild since 2000 because of failures in biosecurity.

A 2015 Senate inquiry found incursions of harmful invasive species are "a regular occurrence", while the Hawke review of the EPBC Act found that most states and territories are failing to prevent the deliberate movement of thousands of exotic plant species including many known weeds.

Turning this around will require a strategic and coordinated approach, underpinned by knowledge gained through innovative science and greater community involvement. Australia needs to give a much higher national priority to stopping invasive species arriving and quickly moving to eradicate any that do.

The Invasive Species Council has identified seven key areas where refocusing existing funding and targeting additional investment can deliver better outcomes, including large long-term cost savings, stemming biodiversity losses and enhancing agricultural productivity.



"... an environmentally and financially healthy agricultural sector is essential to an efficient and affordable food supply. However, similar effort is required for the natural environment, which provides Australians with unique biodiversity, community amenity and the basis of tourism and essential livestock-grazing systems throughout Australia."

• *National Farmers Federation submission to the 2015 Senate inquiry into environmental biosecurity*

1. Implement existing recommendations

Implement findings of the 2015 Senate inquiry into environmental biosecurity

The Australian Senate Environment and Communications Reference Committee has undertaken an in-depth inquiry into Australia's environmental biosecurity.

The inquiry addressed the adequacy of arrangements and Australia's preparedness to prevent the entry and establishment of invasive species likely to harm Australia's natural environment.

The inquiry received 91 submissions and held public hearings in Sydney, Canberra, Perth and Hobart in 2014.

The 2015 final cross-party report made 26 recommendations to strengthen prevention, surveillance and responsiveness to any new incursion.

Implementation of the inquiry recommendations is a vital first step urgently needed to improve Australia's environmental biosecurity.

Proposal: Implement all 26 recommendations of the Senate inquiry report to improve contingency planning, surveillance and responses for new invasive species that impact on the environment.

Even the most highly valued parts of the Australian environment, such as the World Heritage Listed Wet Tropics Rainforests of Queensland, are poorly protected by Australia's biosecurity system due to the strong agricultural focus. Numerous incursions of yellow crazy ants through our ports place species like cassowaries at risk, as the ants kill and consume bird chicks. Photo: Dan Gordon, Flickr CC licence 2.0

2. Being better prepared

Improve institutional arrangements to prepare for new environmental biosecurity risks

Greater coordination and collaboration are essential to meet the challenges of environmental biosecurity.

Through industry-government partnerships such as Plant Health Australia and Animal Health Australia, this occurs to a much greater degree for agriculture than it does for the environment.

Similar arrangements are needed to bring together federal and state governments, community groups and relevant industries to identify priority risks and improve biosecurity preparedness for the environment. The Invasive Species Council has proposed a new body called Environment Health Australia to do this.

> *"For environmental pests there are many more stakeholders across government, industry and the community than is the case with commercial specific pests. ... Trust, goodwill and impartial decision making will be important and consideration needs to be given to establishing an independent body similar to Plant Health Australia to create the framework and coordination for partnerships to operate."*
>
> • **Plant Health Australia submission to the Beale Quarantine and biosecurity review 2008**

Proposal: Establish Environment Health Australia to take responsibility for preparing for new environmental biosecurity risks.

3. Invest in research

Invest in invasive species research to underpin more efficient future management

The most effective pest control methods today came from past research programs.

Traditional techniques such as those using toxins are often labour intensive, expensive, can cause collateral damage, and usually need to be constantly applied to keep pests at bay.

New technologies such as biocontrols and RNA interference offer very attractive benefits. They are species specific and eliminate off-target impacts. Biocontrol agents, such as rabbit viruses, can eradicate huge numbers of pests for relatively small costs. They can also self perpetuate and reach pests in hard to access areas.

Monitoring and research are also needed to improve traditional techniques.

Australia's capacity for public interest invasive species research has declined significantly due to the loss of the Weeds CRC (Co-operative Research Centre) and increasing reliance on industry funding. Funding for the Invasive Animals CRC lapses in 2017 and there are serious gaps in research for other invasive species.

An ongoing integrated invasive species research centre will restore Australia's ability to find efficient and innovative solutions to Australia's biosecurity challenges.

The centre could also drive the implementation of the National Environment and Community Biosecurity RD&E Strategy.

> *"... post Weeds CRC, Australian Government investment in a Commonwealth grants program followed by a RDC grants program were poor substitutes as they did not sustain the collaborative model. The result was increased duplication and competition, short-term projects that impeded achievement of strategic outcomes, and reduced success in leveraging industry and State government investments."*
>
> • **Virtue et al 2014 Coordinated weeds RD&E in Australia – despair or opportunity? 19th Australasian Weeds Conference**

Proposal: Establish an integrated invasive species research centre that builds on the successful Weed and Invasive Animal CRC models.

Photo: Lee, Flickr CC licence 2.0

Photo: Jessica Vandrick, Flickr CC licence 2.0

Photo: © NSW Government

4. Know what we are aiming for

As part of the national biodiversity strategy, set a strong invasive species target with a funded plan

Australia's environmental laws and policies are failing to properly address the growing impacts from invasive species.

Invasive species threats listed under federal environmental law mostly lack a strategic response and coordinated action on the ground. There are no agreed measures to define progress on reducing environmental impacts from invasive species.

Action on invasive species requires a national plan with meaningful targets. This is best implemented through a new national biodiversity strategy, better application of federal environmental law and new funding for implementation.

Essential elements of achieving the target include:

- Measures to protect declining mammals of northern Australia.
- Management of tramp ants, including the eradication of red imported fire ants from Queensland and yellow crazy ants from the Wet Tropics.
- Systematic listing and abatement of other key threatening processes relating to invasive species.

Proposal: Commit to a target of achieving a net reduction in the impacts of invasive species within five years. This requires a baseline assessment of condition, an assessment of the measures and long-term funding necessary to achieve the target and a costed plan.

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5. Reduce the spread

Regulate the movement of pest plants between state and territories to minimise spread to new areas

The 2009 Hawke review of the EPBC Act stated that movement of established and potentially damaging exotic species between states and territories represented a substantial failure of state and territory based environmental regulation. Weedy plants are a standout example of this failure.

The review recommended that this be remedied in cooperation with states and territories. Additionally, it noted the EPBC act has unused powers to address this.

> *"The provisions of s.301A [of the EPBC ACT].... allow the Commonwealth to make a list of non native species that could threaten biodiversity and implement plans to reduce, eliminate or prevent the impacts of species that appear on this list..."*
>
> **• Hawke, 2009, Independent review of the Environment Protection and Biodiversity Conservation Act 1999**

Proposal: Urge states and territories through COAG to amend their laws to limit the movement of potentially damaging exotic species. If they do not agree within one year, regulate plant movement consistent with their invasion risks using existing provisions of the EPBC Act.

Neem is a serious weed in Northern Australia, aggressively taking over bushland and productive land alike. It is now a declared weed only in the Northern Territory, leaving Queensland and Western Australia vulnerable to further spread by the sale and transport of neem seeds. Photo: Forest and Kim Star, Flickr CC licence 2.0

6. Biosecurity above novelty pets

Reduce risks to the environment from exotic pets

The collection and trade of exotic pets are major pathways for new invasive species that escape into the bush. Common species collected and traded include aquarium fish, pet birds, mammals, reptiles such as snakes and lizards and amphibians.

The Senate environmental biosecurity inquiry report highlighted the need to strengthen current regulations governing private aviculture imports; identify both legal and illegal pathways by which exotic birds are entering the country; work to better regulate or close these pathways; and work with relevant state and territory agencies to develop a national database of seized exotic wildlife.

> *"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."*
>
> **• Final report of the 2015 Senate inquiry into environmental biosecurity**

Proposal: Develop and implement a national plan to reduce the risk from the legal and illegal keeping of exotic fish, birds, mammals, reptiles and amphibians.

Indian ringnecks can legally be kept, bred and sold despite the ongoing threat of accidental and deliberate releases to the wild. State and national risk assessments have indicated that Indian ringnecks pose an extreme threat to Australia as our environment is highly suitable to them. If established they are predicted to become a pest of agriculture, the environment and public amenity.

Photo: Michael Plawner, Flickr CC licence 2.0

7. Protect offshore islands

Stop new pests reaching islands and eradicate existing pests on priority islands

Islands play a vital role in the conservation of Australia's native plants and animals. Around one-third of Australia's threatened animal species call islands home and many island species are found nowhere else on Earth.

In some cases, islands are the last refuge for species extinct on the Australian mainland. For marine turtles and seabirds, islands are essential to their existence.

Unfortunately Australia's islands are highly vulnerable to invasive species. Islands have been disproportionately impacted by invasive species such as rats, tramp ants and cats, and have suffered many native species extinctions as a result.

Despite the huge impacts that invasive species can have on islands, they offer the advantage that eradications can be far more feasible than on the mainland, with reinvasion being unlikely.

Islands need to be protected by rigorous biosecurity systems to prevent new pests arriving.

The 2015 Senate inquiry into environmental biosecurity recommended that the Commonwealth Government work with state and territory governments to establish a national framework for managing biosecurity on Australia's islands.

"Australia lacks a national, comprehensive plan of action for island biosecurity."

• Nias, R. et. al. 2010. Island arks: the need for an Australian national island biosecurity initiative. Ecological Management and Restoration 11(3)

Proposal: Support high impact island eradications and implement a national island biosecurity initiative to prevent new incursions.

Invasive rats and mice have been responsible for the extinction of five bird species on Lord Howe Island. Eradicating the rodents would help save remaining birds like the endemic Lord Howe Island White-eye.

Photos: Lord Howe Island, Robert Whyte; Lord Howe Island White-eye, Eric de Leeuw – Flickr CC licence 2.0