

The independent review of Australia's federal environment laws (the Environment Protection and Biodiversity Conservation Act 1999, 'EPBC Act') by Dr Allan Hawke in 2009 provides the potential for substantial reforms on one of the top three threats to Australian biodiversity – invasive species. The final report can be downloaded from <http://www.environment.gov.au/epbc/review/publications/final-report.html>.

As recognised by Dr Hawke, existing regulations are highly deficient for addressing many current and future invasive species threats. For example, there are few restrictions on the planting of any one of hundreds of species that could escape and invade the habitat of threatened species or impact on other matters of national environmental significance.

Relevant recommendations include those for:

- the Council of Australian Governments to develop approaches to reduce risks associated with movement of potentially damaging exotic species between States and Territories;
- a focus on emerging threats to the environment with the development of foresighting capacity under the Act;
- better definition and greater flexibility in identification of key threatening processes and the development of threat abatement plans;
- integration of live import provisions into the proposed new biosecurity legislation as long as the environment is given equal priority to economic and social issues and the environment minister has certain powers under that legislation.

There are other recommendations as well that may improve regulation with respect to invasive species; for

example, recommendations to include 'ecosystems of national significance' as a 'matter of national environmental significance' under the Act, to establish an independent Environment Commission to advise the government and the development of national environmental accounts.

Here, we summarise the Hawke review's assessment of invasive species issues and make recommendations.

## What the Hawke review says about invasive species threats

In a section devoted to invasive species (in chapter 6), the review acknowledges the severity of the threat they pose (ss 6.31-32):

The Invasive Species Council states that:

Along with land clearing and climate change, invasive species are one of the three top threats to Australia's biodiversity and many matters of national environmental significance. But the EPBC Act does not provide an adequate framework to address their threats, particularly the threats of invasive species already in Australia.

Further, the Invasive Species Council suggests that the impacts of invasive species have been more severe in Australia than any other continent:

... And the worst for Australia is yet to come with most invasive species having occupied only a portion of their potential range, and interactions with climate change likely to considerably worsen their impacts.

The review notes that the several thousand plant species persisting as ornamentals or as naturalised populations in urban areas "represent a vast reservoir of potential future problems" and that their movement within Australia "is effectively unconstrained" (s. 6.39). State and Territory

responses to this problem are criticised as representing "a substantial failure of State and Territory based environmental regulation" (s. 6.43).

There is acknowledgement that the proposed federal biosecurity reforms arising from the Beale review will not address established exotic pests and that the EPBC Act has "limited ability" to deal with them or with emerging threats as a result of invasive species (s. 6.34).

The review acknowledges risks associated with imports of new variants of existing invasive species and hybrids – hybrids can be freely imported if they are five generations away from the original wild animal (s. 12.17):

The import of genetically distinct varieties of existing permitted species is a major source of pest and weed risk for Australia as new variants may have new features that significantly increase their pest risk or turn existing non pest species into invasive risks [quoting ISC].

The review finds that the definition of a Key Threatening Process (KTP) and criteria for listing are prescriptive and do not recognise the potential for threatening processes to impact on other matters protected under the Act (ss. 5.87-88). Most KTPs are invasive species.

In a section on potential adverse impacts of climate change adaptation, the review notes that some adaptation strategies for human settlements and activities could adversely affect biodiversity: "For example, adapting agricultural practices to a changing climate could involve the introduction of exotic or genetically modified species, which have the potential for significant adverse impacts on biodiversity" (s. 4.144). In considering climate change as an emerging threat the review cites a recent report (commissioned by the Natural Resources Management Ministerial Council) that outlines five principles for biodiver-

sity management in response to climate change, including that “there should be a focus on enhancing ecosystem resilience, including through ... implementing more effective control of invasive species...” (s. 6.19).

In sum, the review has recognised that substantial reforms are required to address invasive species threats.

## Movement of exotic species within Australia

Acknowledging that thousands of unregulated exotic plant species in Australia represent a large reservoir of potential threats, the review recommends that the Council of Australian Governments develop new arrangements to manage the movement of non-native species that may threaten biodiversity. To remedy the current inadequacy of State and Territory laws, they suggest that “development of national protocols ... for assessing resident, potentially damaging exotic species, and for designing and implementing criteria to manage their movement within Australia, may be a useful first step...” (s. 6.43).

As advocated by ISC, the review considers there may be value in using s.301A of the EPBC to regulate movement and use of invasive species listed as ‘controlled’ species (s. 6.43). The provisions of s.301A, which have never been used, allow for the government “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” (s. 6.40). The review acknowledges concerns about implementation costs, but says that “in light of the environmental impacts and production losses due to weeds and other invasive species, it is expected that any reforms should engender a high return on the investment” (s. 6.41). The provisions could also “enable more effective interventions for some of the invasive species that are listed as KTPs” (s. 6.42).

**ISC Recommendation 1:** Adopt Hawke recommendation 23(1): the Council of Australian Governments (COAG) develop criteria and management protocols for the movement of potentially damaging exotic species between States and Territories, working towards a list of ‘controlled’ species for which cost effective risk mitigation measures may be implemented.

### Summary of justifications:

- This recommendation provides the potential to address one of the most serious of threats to biodiversity – the deliberate and unregulated spread of many invasive species, particularly non-native plants.
- This process could provide a tool for mitigating key threatening processes, for example escaped garden plants and five invasive pasture grasses, as well as other invasive threats that qualify for listing as key threatening processes.

Dr Hawke notes that to remedy the current inadequacy of State and Territory laws, “development of national protocols ... for assessing resident, potentially damaging exotic species, and for designing and implementing criteria to manage their movement within Australia, may be a useful first step...”. The review considers there may be value in using s.301A of the EPBC to regulate movement and use of invasive species listed as ‘controlled’ species (s. 6.43).

ISC recommends that the Council of Australian Governments support use of s301A of the EPBC Act to list and regulate invasive species threatening or potentially threatening matters of national environmental significance. As well as invasive species identified in existing processes as of national significance – eg. those listed as key threatening processes, identified in conservation advices for listed species and ecological communities and weeds of

national significance – there should be a process by which the public can nominate species for listing as controlled species with assessment by an expert committee.

**ISC Recommendation 2:** COAG support use of s301A of the EPBC Act to list and regulate ‘controlled’ exotic species threatening to biodiversity, including a public nomination process.

### Justifications:

- Use of s301A would provide a national capacity for regulating nationally significant threats, to supplement deficient and inconsistent state and territory approaches to invasive species regulation.
- The listing and regulation of threatening species would provide a complementary approach to the declaration of threatened species and ecological communities, significantly strengthening the tools by which to protect biodiversity.

The Federal Government could use existing powers under s301A to start listing ‘controlled’ species that have been identified as nationally significant invasive species. This would include species listed as key threatening processes, weeds of national significance and pest animals identified by the Vertebrate Pests Committee. This would be a relatively non-controversial subset of the species that warrant listing under s301A. This move would activate a mechanism to address the Hawke recommendation 23(1), and provide capacity to respond to key threatening processes for which a regulatory response is necessary.

**ISC Recommendation 3:** As a preliminary step, use s301A to regulate invasive species already identified as of national significance.

### Justifications:

- Section 301A of the EPBC Act provides an existing

legal capacity to list and regulate already identified nationally significant invasive species, which does not require COAG agreement.

- Use of s301A in the limited way proposed could improve the efficiency of existing processes for restricting the deliberate spread of invasive species, which rely on each state and territory to individually declare species – a process that can take years. It could facilitate meaningful action on some key threatening processes – such as escaped garden plants – that would otherwise rely on states and territories to take individual action.
- Use of s301A prior to the proposed COAG process would demonstrate the government's willingness to take leadership and demonstrate a commitment for reform that may promote a better outcome from the proposed COAG process.

The only way to comprehensively limit the unsafe spread of exotic species within Australia – the problem identified in the Hawke review – is to use permitted lists (white lists) to define which species can be legally sold within a defined region (eg. a state) and limit new introductions to those species assessed as low risk. This is the system currently in place for the national border and in Western Australia for plants, and in states and territories for most vertebrate species. The proposed COAG process provides the opportunity for governments to agree to adopt a permitted list approach for all non-native species in a coordinated way. This would provide the basis implementing all governments' agreement to prioritise prevention of new biological invasions.

**ISC Recommendation 4:** The Federal Government promote and lead a coordinated nation-wide adoption of a permitted-list approach to exotic species.

## Justifications:

- A white list approach to regulation of exotic species is the only realistic way to prevent unsafe introduction and spread of invasive species.
- A white list approach is already being used in Australia, and has proven functionality.
- A while list approach (used to complement existing black list approaches) is highly cost-effective and has a high benefit: cost ratio.
- A white-list approach would provide for the capacity to assess the introduction of native plant species beyond their natural range. Native weeds are a serious and growing environmental threat.

## Emerging invasive species threats

The review finds that the EPBC Act does not provide the tools to address emerging threats: "Emerging issues are difficult to manage from a regulatory perspective as traditional regulation tends to be a reactive and somewhat inflexible instrument" (Part 1, para 172). In submissions ISC advocated the need for strategic assessments of emerging industries and products such as weedy biofuels as the basis for developing policy to prevent threats.

To address emerging threats, the review advocates the development of 'foresighting' capacity in the Act: "Foresighting is the process of gathering and interpreting information to identify emerging threats and determine what might be done to mitigate them" (Part 1, para 173).

Three of the four emerging issues identified as examples of issues "currently challenging to address" have invasive species elements (para 174):

- Climate change adaptation

- Invasive and exotic species, including hybrids
- Genetically modified organisms.

The review recommends that the Act require mandatory 'outlook' reports that identify emerging threats and provide policy options to address them, so as to drive management focus to the highest priority threats. It flags the potential value of assessing cumulative impacts of genetically modified organisms and other emerging technologies by broad strategic assessments (s. 6.52).

**Recommendation 5:** Adopt Hawke recommendations 23(2-3): The Act be amended to require periodic preparation of mandatory 'outlook' reports that identify emerging threats to the environment and provide policy options to address emerging environmental issues; and

The Australian Government establish a Unit or Taskforce devoted to foresighting to identify and guide management responses to emerging threats

## Justifications:

- The proposed foresighting capacity would provide information and guidance for addressing threats before they emerge and become entrenched and difficult to address.
- The reports could inform programs across government and reduce the likelihood of governments funding programs and R&D that exacerbate environmental threats.

## Key threatening processes and threat abatement plans

Most of the federally listed key threatening processes (KTPs) are invasive species. The review finds that the current approach to listing KTPs and developing threat abatement plans is prescriptive and lacks flexibility. It also

fails to recognise the potential for threatening processes to impact on various matters of national environmental significance protected under the Act other than threatened species. They also “do not lend themselves well to the strategic identification or prioritisation of threats or their management” (s. 5.86).

The review proposes that KTPs be better defined with greater flexibility and that requirements for nomination of a KTP be simplified to allow easier use and greater public participation. It is proposed that criteria be expanded to include threats to other matters of national environmental significance, that nominations should be prioritised, and that KTPs should provide the framework for strategic approaches to the identification and management of emerging threats. The proposed foresighting team could prioritise existing and emerging KTPs: “This approach would allow the early identification of a broader range of threats at a range of scales and allow for the development and implementation of management strategies, either through TAPs, recovery planning and/or as part of regional planning approaches” (s. 5.92).

**Recommendation 6:** Adopt Hawke recommendations 19 & 20: That the Act be amended to:

- better define key threatening processes (KTPs)
- allow greater flexibility in the criteria for eligibility for listing a KTP
- allow strategic identification of KTPs at a range of scales
- provide for greater flexibility in the development and implementation of Threat Abatement Plans and allow transition to regional planning approaches and strategic threat management.

## Biosecurity and live imports

The review provided advice in May 2009 to the federal environment minister (upon request) that the biosecurity provisions in the EPBC Act (live imports regulated under Part 13A) should be integrated into the proposed new federal Biosecurity Act “subject to ensuring that environmental outcomes are not compromised”. This advice is provided in Appendix 6 of the final report.

The review recognises the potential benefits of integrating biosecurity as providing “an opportunity to embed environmental considerations as equal to those of human health and primary production in all stages of Australia’s approach to managing biosecurity...”, noting that environmental biosecurity issues have not received the same attention as those affecting agriculture. The risk of integration is that “environmental outcomes could be compromised if the primary focus remains on trade and primary production – a problem of ‘culture’”.

To ensure adequate consideration of the environment, the review recommends the following:

- That the legislation should require that the environment be given equal consideration alongside human health and economy and social considerations.
- That the proposed Biosecurity Commission should include environmental representatives appointed by the Environment Minister.
- That the Environment Minister should have a deliberative role in approving the biosecurity guidelines.
- That environmental considerations should be required to be taken into account when determining Australia’s Appropriate Level of Protection.
- That the activities of the new Biosecurity Authority must be consistent with Australia’s international

biodiversity obligations.

The review notes the lack of emergency arrangements to deal with animal and plant pests where they impact on biodiversity (in contrast to those impacting on primary production and human health). It is recommended that the “new Biosecurity legislation should require equal treatment, and the same arrangements, for emergency responses to animal and plant pests that present biosecurity risks to the environment, health and/or social and economic values.”

**Recommendation 7:** Adopt the Hawke recommendations about federal biosecurity (in appendix 6)

Other biosecurity reforms are proposed. The review notes that once a species is included on the live import list new variants have generally been granted entry: “As suggested by the Invasive Species Council, a more systematic approach is needed for assessing proposed new imports to respond to the potential invasive risks of new variants of currently listed species” (s. 12.18). The review proposes that specimens listed should not include variants or hybrids unless otherwise specified (although there is no recommendation specific to this).

The review also proposes that a “definitive nationally agreed list of exotic species for controlled private keeping in Australia should be created,” (s. 12.57) although we recommend it should be limited to species assessed as low risk.

**Recommendation 8:** Require assessments of the potential invasive risks of new variants proposed for importation and develop national lists of exotic species for controlled private keeping in Australia.