

Modernising Australia's approach to managing established pests and diseases of national significance

Discussion paper

National Biosecurity Committee

1 June 2015

Comments and submissions on this paper:

Online www.agriculture.gov.au/biosecurity/australia/managing-established-pests-diseases

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1 Introduction

Pests and diseases are a significant social, economic and environmental burden for Australia. They can affect primary production productivity; access to export markets, public health and amenity; conservation of biodiversity; and the natural and built environments—to our individual and collective detriment. These effects can reveal themselves through increased costs of production, loss of or restrictions to export trade, reduced tourism, loss of biodiversity, greater public health costs and reduced public amenity.

Some introduced pests and diseases—such as pest animals (rabbits, foxes, carp), weeds (blackberry, mimosa), animal diseases (Johne’s disease) and plant pests (potato cyst nematode)—have become established over time in Australia with no prospect of eradication. Some of these pests and diseases may have economic, environmental or social impacts of national significance. Consequently, a nationally coordinated approach may be required. Given the shared responsibilities for their management among stakeholder groups, the effective management of nationally significant threats requires clarity of policy direction, priority, roles and responsibilities.

Governments at the national, state and territory levels; industry; and individual landholders have invested jointly and individually in pest and disease management over many decades. These investments have been made across the biosecurity continuum—onshore, at the border and offshore. Managing biosecurity is critical to a sustainable and productive agricultural sector and healthy environment. It protects our farmers and our environment from the impacts of serious pests and diseases that can significantly increase the costs of production and market access, domestically and internationally, and affect our native flora and fauna. Effective management of established pests and diseases also assists Australia meet its obligations with respect to international trade.

Under the [Coalition of Australian Governments Intergovernmental Agreement on Biosecurity](#), signed in 2012, Australian governments are progressing reforms to strengthen the national biosecurity system. The objective is to deliver more effective and more sustainable biosecurity outcomes for governments, industry and the broader community. One focus of this agreement is to establish a national framework for managing established pests and diseases of national significance.

Consistent with emerging policy across numerous portfolio areas, there are opportunities to:

- move away from government enforcement as a primary means of managing the impacts of established pests and diseases
- adopt approaches in which the nature and magnitude of investment is determined by the extent and balance of public and private benefits
- focus public investments on strategic functions, including addressing market failure
- promote more collaborative working arrangements between government and those stakeholders directly affected by established pests and diseases, rather than have stakeholder groups acting in isolation.

This discussion paper provides an overview of a proposed approach to managing pests and diseases of national significance that have become established in Australia. The paper sets out how governments, industry and landholders might work together to tackle these threats, and seeks feedback on the proposal. Once stakeholder feedback is received on this paper, the department will run a process to determine which established pests and diseases will be considered nationally significant under the proposed new approach.

Following this consultation process, the agreed approach will be reflected in relevant future national biosecurity strategies and plans, such as the Australian Pest Animal Strategy and the Australian Weeds Strategy (both under revision).

The management of overabundant wildlife or native species is subject to different policies and programmes, and is outside the scope of this discussion paper.

Definitions

For the purposes of this discussion paper:

- **Biosecurity** is the management of risks to the economy, the environment and the community of pests and diseases entering, emerging, establishing or spreading in Australia.
- The **biosecurity continuum** is an integrated approach to prevent, detect, contain, eradicate and/or lessen the impact of a pest or disease through complementary biosecurity activities undertaken onshore, at the border and offshore. The **biosecurity continuum** approach
 - better supports consistent service delivery onshore, at the border and offshore
 - provides effective biosecurity risk management underpinned by sound science and policy
 - improves the efficiency and responsiveness of operations
 - strengthens client relationships.
- A **pest** is any animal, plant, invertebrate or pathogen with the potential to have a negative effect.
- A **disease** is the presence of a pathogenic agent in a host that has the potential to have a negative effect.
- **Exotic** pests or diseases are not native to, or established in, Australia and may not have predators or other population control mechanisms.
- An **established pest or disease** has self-sustaining populations in Australia and is not considered eradicable. It may be distributed widely across Australia or only regionally. A regionally-distributed established pest or disease may be the subject of containment measures to mitigate further spread.
- An **established pest or disease of national significance** is an established pest or disease that has a significant impact nationally on
 - international market access and/or trade
 - economic health of the nation
 - human health
 - natural environment and ecosystems
 - infrastructure used by a significant proportion of people over an extensive area
 - amenity of resources, such as public lands, and has the potential to affect more than one state/territory, or
 - Australian culture, cultural assets, practice or custom, or national image.

2 Background

Current arrangements

Australia's biosecurity system is extensive. It encompasses and fully integrates import and export activities, services and functions into, within and from Australia and covers the spectrum of pest and disease threats to Australia's environment, primary production and people. The system relies on cooperation between those who create biosecurity risks and those who benefit from the management of these risks, either before or after their realisation.

Primary responsibility for the management of established pests and diseases, including those that could be considered to be nationally significant, rests with the landholder. The landholder could be private, government or community and is also generally the primary beneficiary of pest- or disease-control activities. Many established pests and diseases can be effectively managed property by property. However, for a number of established pests, only a coordinated approach is likely to achieve good results.

Governments individually and collectively have various policies and procedures for managing established pests and diseases. Each government has developed its policies and procedures consistent with its legislative frameworks, the resources available to it and its priorities for action relative to its other responsibilities. Where an established pest or disease affects or threatens to affect two or more jurisdictions, and joint action is desirable and cost-effective, those jurisdictions may develop joint management arrangements. For pests and diseases with effects of national significance, a formal national response may be appropriate.

Governments, industries and communities across Australia have committed significant resources to address the consequences of pests and diseases—both widely established and localised populations—and have operated across the full range of biosecurity management. This has included prevention; eradication of new outbreaks; containment; and asset-based protection, which is about managing the effects of pests and diseases that have become established. However, significant resources have been invested in managing the visible and ongoing presence of established pests and diseases, which by definition are generally not considered to be eradicable.

Continued investment by governments in managing established pests and diseases, constrains their ability to invest in other aspects of biosecurity management, such as prevention, which are more efficient and effective in protecting our national interests. These investments can also be inconsistent with accepted principles for public investments in activities that have predominantly private benefit and may undermine cost-recovery arrangements between governments and industry.

In recent years, industry and community involvement in managing established pests and diseases has increased as they have recognised that the best results are achieved through collaboration between all stakeholders. This approach reflects the realisation that relying primarily on regulation can be inflexible and burdensome, and that a broader mix of approaches can be more cost-effective. Many industries have also recognised that effective pest and disease management is in their interests and have undertaken industry-specific management actions for established pests or diseases.

Maximising returns from biosecurity investments

Governments must manage numerous activities across the biosecurity continuum and seek to maximise the return on investments of public funds. Industry and individual land managers will similarly seek to maximise their investments in biosecurity management. For any given biosecurity threat, the responsibility and the scale and nature of returns will vary from investor to investor, as will the appropriate activity for investment.

Activities to deal with pests and diseases encompass four broad categories: prevention, eradication, containment and asset-based protection.

Prevention activities are focused on keeping pests and diseases offshore and reducing the chance of them entering Australia. Activities include: offshore inspections and verifications; surveillance and intelligence gathering; verification that imports meet conditions; and interception of pests and diseases that may be present in cargo, vessels or mail, or be carried by passengers. The Australian Government generally undertakes these activities.

Eradication activities may be undertaken when a high-impact pest or disease is detected in Australia to prevent it from becoming established. These activities aim to destroy known or suspected infections or infestations, limit the spread of the pest or disease and prevent it from becoming established. They may include activating a national response under longstanding emergency response deeds for animal, plant or environmental pests or diseases. Governments take the lead on these activities and work with industry, landholders and the community.

Containment activities aim to restrict a pest or disease to a defined area and to limit its spread. Containment can occur as part of an eradication response (emergency containment) or where the pest or disease is not eradicable but can be confined to a limited area. These activities are undertaken by governments, industry, landholders and the community, although their involvement depends on the pest or disease and the type of containment required.

Where a pest or disease is contained to a defined area, the emergency response deeds make provision for eradication should they occur in a new area or in a different, more virulent, form. The proposal outlined in this paper does not apply to these circumstances, or to emergency containment as part of an eradication response.

Asset-based protection activities take place when a pest or disease is widely established in Australia. Activities in this category aim to reduce the effect of an established pest or disease on Australia's assets. Assets can be economic (such as livestock and crops), social (health and social amenity) or environmental (ecosystems, landscapes, flora and fauna). They can be divided into two categories:

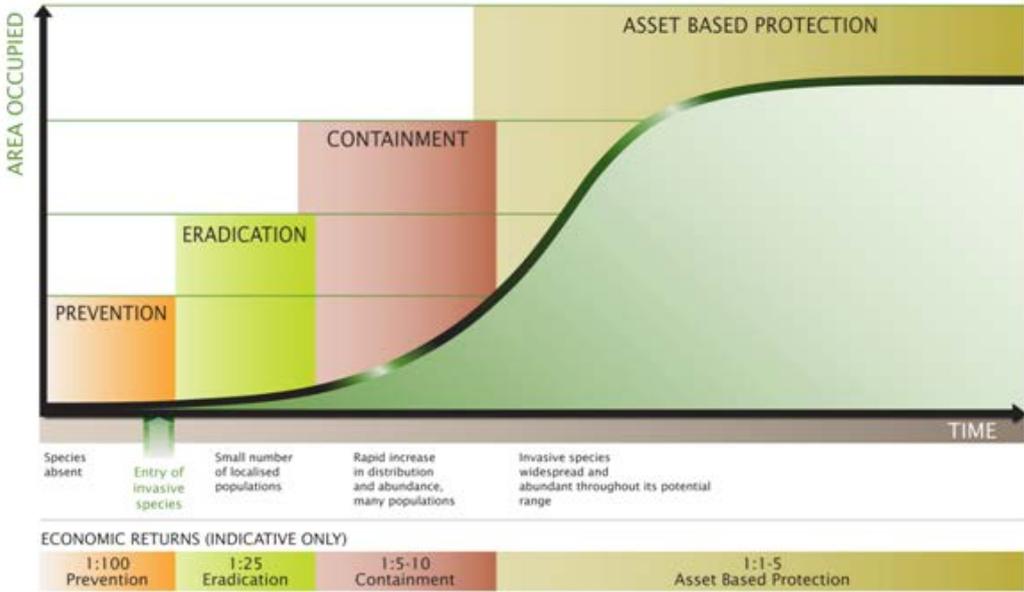
- privately owned assets, such as livestock, crops and built structures. Actions to protect these kinds of assets have a high private benefit to the landholder or producer and only a small benefit to surrounding landholders and producers who might be affected by local-scale spread
- other assets, including public health, social amenity and environmentally sensitive ecosystems. Actions to protect these kinds of assets have a higher public benefit.

Overall, the responsibility for leading asset-based protection activities depends on whether the benefit is predominantly private or public.

Figure 1 shows the changing roles of governments and stakeholders in managing pests and diseases. Different activities may be appropriate at different stages of the generalised invasion curve. The responsibility for action and funding also changes along the curve.

The curve also shows an indicative scale of the aggregate return on investment in the different activities. The return on investment of public funds generally diminishes when progressing from left to right along the curve. Governments have a greater responsibility in the earlier stages of prevention and eradication. However, those best placed to protect assets from established pests and diseases are generally the owners of those assets (public or private).

Figure 1 Curve showing actions appropriate to each stage of a pest or disease incursion



Source: [Department of Economic Development, Jobs, Transport and Resources, Victoria](#)

Public benefit from protecting private assets is generally lower, particularly compared with other activities where government can play a role such as prevention or early detection of incursions. The benefits of managing an established pest or disease accrue predominantly to the owner of the land or the owner of the asset, so asset-based management may be the most cost-effective for an individual and/or as the basis for collective action by a community or industry.

3 The proposed framework to address established pests and diseases of national significance

The proposed national framework for the management of established pests and diseases of national significance consists of three parts:

- policy principles to guide management actions—to guide overall policy settings
- national significance/national interest test—to guide decisions on the form and extent of national intervention or management
- roles and responsibilities for government and other stakeholders—to provide greater clarity for all stakeholders.

The proposed approach reinforces steps taken in recent times to share responsibility for biosecurity (including management of established pests and diseases) between governments, industry, landholders and the community.

Proposed policy principles

To deliver more cost-effective and sustainable outcomes for governments, industries and communities, new policy principles are being proposed to guide management actions for established pests and diseases of national significance:

- onshore management of established pests and diseases focuses on asset-based protection to minimise impacts
- the management of established pests and diseases is a shared responsibility between landholders, community, industry and government
- to achieve asset-based protection, government gives priority to supporting industry and community leadership and actions
- governments will work with stakeholders to support innovation for more effective pest and disease management
- enforcement intervention should be the minimum necessary to achieve the desired result
- where there is a national interest to intervene, established pests and diseases assessed as being nationally significant will have an associated national management plan or strategy
- the list of established pests and diseases deemed nationally significant is regularly reviewed against the relevant assessment criteria and principles.

Consultation questions

On the management of established pests and diseases of national significance:

- 1) Are the proposed policy principles appropriate and practical?
- 2) Are the proposed policy principles sufficient?

Proposed national significance/national interest test

Australian governments agreed in the Intergovernmental Agreement on Biosecurity (Schedule 5) to identify established pests and diseases of national significance, and to develop and implement collaborative frameworks and systems for the management or containment of these pests and diseases.

The [National Biosecurity Committee](#) has asked its four sectoral committees (the [Invasive Plants and Animals Committee](#), the [Plant Health Committee](#), the [Animal Health Committee](#) and the [Marine Pest Sectoral Committee](#)) to consider potential candidate species for listing as established pests and diseases of national significance. The first weeds listed on Weeds of National Significance (Appendix 1), which predated the 2012 Intergovernmental Agreement on Biosecurity, were identified using criteria similar to those used for the established pests and diseases of national significance.

The *Environment Protection and Biodiversity Conservation Act 1999* also provides for the identification and listing of key threatening processes. These are defined as processes that threaten, or may threaten, the survival, abundance or evolutionary development of a native species or ecological community. The list of key threatening processes will be considered when determining whether an established pest and disease should be deemed nationally significant. National management plans and strategies should not be inconsistent with threat abatement plans developed for the listed key threatening processes.

Where a net benefit in nationally coordinated management for a pest or disease deemed to be nationally significant exists, a national management plan or strategy should be prepared. The form and breadth of activities included in this management plan or strategy will depend on the specific circumstances. The implementation of a national management plan or strategy should have considerable flexibility and provide opportunities for government, industry or community groups (or other parties such as Animal Health Australia or Plant Health Australia) to lead the delivery in partnership with other relevant stakeholders.

This approach is not new. It has already been adopted to manage some established pests and diseases in Australia (see Section 4 Case Studies).

National significance

The Intergovernmental Agreement on Biosecurity defines a pest or disease of national significance as ‘one that would be likely to have far reaching and/or national impacts’.

A pest or disease is nationally significant if it has a significant impact at a national level on:

- international market access and/or trade
- the economic health of the nation
- human health
- the natural environment and ecosystems
- substantial damage to, or deterioration of infrastructure used by a significant proportion of people over an extensive area
- amenity of resources, such as public lands, and that has the potential to affect more than one state/territory; or
- Australian culture, cultural assets, practice or custom, or national image.

In assessing the impact of a pest or disease, the primary consideration should be the projected impact on any or all of the economic, environmental and social aspects of contemporary Australia at a national level.

National interest

Some pests or diseases may meet the test on impact for national significance, but the return on any projected intervention may not exceed the cost of implementing it. This may be because no practical management option exists or because the costs would exceed the benefits. In these cases no intervention or management would be justifiable.

A response to a nationally significant established pest or disease would be in the national interest if:

- the proposed management approach is technically feasible and practical, and
- there is a net economic, social or environmental benefit in taking action, and
- there is a clear benefit from, or requirement for nationally coordinated action or approach.

The national interest principle, as just described, is essentially a national interest test: is it in the national interest to intervene in a nationally coordinated way?

Consultation questions:

On the management of established pests and diseases of national significance:

- 3) Should listing of established pests and diseases of national significance be for a defined period or open ended?
- 4) What form of review should be required to maintain the listing of a pest or disease as an established pest or disease of national significance?
- 5) What is an appropriate time for such a review?

Proposed roles and responsibilities of government and other stakeholders

Successful collaborative action to manage established pests and diseases, including those that are considered to be nationally significant, depends on all stakeholders having an understanding of their roles and responsibilities. Appropriate roles and responsibilities can vary depending on statutory responsibility, the location of the pest or disease, financial incentives to take action and the level of collaborative effort required for management.

Governments may be significant landholders in their own right, and the proposed roles and responsibilities for landholders apply equally to public and private landholders.

Roles and responsibilities consistent with the insights from the generalised invasion curve are proposed for government, industry and community groups, landholders and risk creators.

Government

Roles and responsibilities proposed for government:

- provide support where sustained collective action to manage an established pest or disease by an industry or community exists
- undertake enforcement actions and regulatory interventions with respect to individual landholders only when necessary to support sustained collective action by an industry or community
- when necessary to contain an established pest or disease, apply nationally consistent regulatory measures only to the minimum extent necessary to manage unacceptable risks
- promote development of partnerships between government, industry and the community
- facilitate coordinated policy across jurisdictions for the management of established pests and diseases of national significance when in the national interest to do so
- work with risk creators where possible to assist adoption of risk management measures as part of normal business practices
- support research into improved control or management of established pests and diseases of national significance when a strong public interest exists to do so
- meet responsibilities as a manager or owner of public land to protect assets of high public value
- ensure national approaches to established pests or diseases of national significance management meet international obligations
- work with other parties to identify established pests and diseases that meet the national significance and national interest principles
- work with industry, community and/or landholder groups where market failure restricts the effective management of established pests and diseases of national significance.

Industry and community groups

Roles and responsibilities proposed for industry and community groups:

- promote and undertake collective action based on industry or community needs at a local, regional or national level to mitigate impacts of established pests and diseases on industry or community assets
- build risk mitigation measures, including containment measures where relevant, into normal industry practices
- promote development of partnerships between government, industry and the community
- facilitate coordinated policy across industry and community groups for management of established pests and diseases of national significance when in the national interest to do so
- support and promote industry-driven or market-driven approaches to management and containment of established pests and diseases where practical and applicable
- support research into management and control of established pests and diseases that provides industry benefit

- work with other parties to identify established pests and diseases that meet the national significance and national interest principles.

Landholders

Roles and responsibilities proposed for landholders, including individual owners of assets on public or private land:

- control and manage established pests and diseases to mitigate as necessary effects on the landholders' assets, or as required by regulation
- take reasonable steps to minimise effects of established pests and diseases on other landholders, particularly when part of a programme of collective industry- or community-led action
- work with other parties to identify established pests and diseases that meet the national significance and national interest principles.

Risk creators (may also be one of the above)

Roles and responsibilities proposed for risk creators (may include government, industry and community groups, and landholders):

- participate as necessary in industry- or community-led actions to manage or contain established pests and diseases
- identify risk-creating activities and build risk mitigation measures into normal business practices.

Risk creators are individuals, organisations, or industry groups who create risks that may result in a disease or pest entering, emerging, establishing or spreading in Australia and causing harm to the environment or economic or community activities. This does not include governments undertaking biosecurity activities as part of enforcement responsibilities but does include importers, land developers, operators of earthmoving equipment, contractors engaging multiple landholdings, linear reserve managers (managing roads and railways) and plant nurseries.

Consultation questions:

On the management of established pests and diseases of national significance:

- 6) Are the proposed roles and responsibilities clear, particularly in relation to your role?
- 7) Are the proposed roles and responsibilities appropriate and practical?

What would change

Adoption of the proposed approach would represent a significant change in the way governments work with others to manage established pests and diseases. It would formalise an approach at the national scale that has been evolving for some time. The approach is marked by:

- a more market-driven approach in which the form and extent of management is determined by the returns and the distribution of benefits between public and private stakeholders
- a shift in governments' role towards supporting collective action by others and investing public funds where they can add the most value.

Landholders would continue to be responsible for managing established pests and diseases, including those considered nationally significant, on their land. Governments would retain a clear responsibility as a landholder to manage established pests and diseases on public land to protect assets and to act as a good neighbour.

Governments would not cease their involvement in management of established pests and diseases as a result of these changes. However, they would focus on contributing to coordinated and collaborative action by all affected stakeholders to address those pests and diseases identified as nationally significant. The extent and form of that involvement may vary from case to case.

Governments would continue to:

- provide support for programmes to manage priority pests and diseases where sustained collective action by an industry or community exists
- consider enforcement actions and regulatory interventions with respect to individual landholders when necessary to support sustained collective action by an industry or community
- work together to apply nationally consistent regulatory measures and then only to the minimum extent necessary to manage unacceptable risks
- support research into improved control or management approaches when a strong public interest exists to do so.

The approach recognises that better results are achieved when governments work with relevant industry, community, environment and local landholders groups to help build momentum for management of established pests and diseases of national significance. Stakeholders would be included in the processes to identify those pests and diseases that would be considered nationally significant.

Benefits of coordinated approach

The approach proposed for the management of established pests and disease of national significance is expected to generate benefits for all stakeholders through better targeting of individual and collective efforts, greater sharing of knowledge to tackle complex pest and disease issues and reduced regulation and duplication of activities.

The proposed approach acknowledges that communities, industries and landholders better understand the issues at the local level. It would provide an opportunity for those stakeholders to:

- have more influence on management of established pests and diseases at the landscape level. They would be better able to identify and implement the most appropriate mechanisms for their circumstances
- explore more effective management models, particularly those based on collective industry or community-led action, with clarity about the nature and extent of possible government support

- build measures to reduce the spread or effects of established pests and diseases into normal industry practices
- partner with government to co-manage nationally important issues or nationally significant pests and diseases.

The proposed approach would mean interventions would be cost-effective and driven by outcomes (such as asset protection and damage mitigation), rather than by inflexible and expensive activity-based designs (such as reliance on regulation). It would also enable governments to make more strategic investments.

Consultation questions:

On the management of established pests and diseases of national significance:

- 8) What are the issues with establishing and maintaining effective collective action?
- 9) How can the coordinated approach be best implemented across the various stakeholder groups?
- 10) How do you see yourself (or your interest/industry/organisation) contributing?

4 Case studies

These case studies demonstrate management of some established pest and diseases.

National Wild Dog Action Plan

Wild dogs are a serious pest in Australia. Economic impacts from livestock predation and costs associated with control are very significant, and producers suffer personal trauma as a result of wild dogs attacking their livestock. Wild dogs also pose a risk to native mammals, reptiles and birds.

Many wild dog management programmes are in place across Australia, but they are often fragmented by tenure and jurisdictional boundaries. A national approach would provide for more consistent action across jurisdictions and enhanced opportunities for collaborating and coordinating control activities and developing nationally consistent best practice.

The [National Wild Dog Action Plan](#) is an industry-driven initiative. It promotes and supports community-driven action for landscape scale management of wild dogs. Under the plan, stakeholders would work together to deliver effective, coordinated and humane wild dog management. The plan focuses on managing the effects of wild dogs on public and private assets.

Consistency with proposed approach

The National Wild Dog Action Plan is consistent with the approach proposed to manage established pests and diseases of national significance. The plan recognises:

- the importance of managing and minimising the negative impacts on assets at risk and, in the case of wild dogs, these are agricultural, social and environmental assets
- the responsibility for wild dog management should be shared between landholders, communities, industry and governments
- governments have a role to support collective industry and community-led action.
- governments have a role to work with other stakeholders to support research and innovation for more effective pest management where significant public benefits in doing so exist.

Victorian Blackberry Taskforce

The [Victorian Blackberry Taskforce](#) was formed to tackle the spread and impact of blackberry. The task force encourages and supports community participation in blackberry control by adopting new approaches, community capacity building and providing incentives for action. The task force comprises volunteer community members, representatives from government agencies and commercial forestry, and a research scientist.

Blackberry is a serious invasive weed that can infest entire landscapes if left uncontrolled. It can affect agricultural productivity, recreational activity on public land and the environment through altering water flows and reducing in biodiversity.

The task force's community partnership programme supports community-led blackberry action groups to reduce the effects of blackberry in their local areas. These action groups motivate and support hundreds of private landowners to control blackberry on their property. The Victorian Government funds support and targeted regulatory action. The Department of Environment and Primary Industries, Victoria, has implemented compliance projects in action group areas where landholders have failed to control blackberries to the standard that their neighbours have.

Consistency with proposed approach

The Victorian Blackberry Taskforce model is consistent with the approach proposed to manage pests and diseases of national significance. The model recognises:

- responsibility for established pest management should be shared between landholders, communities, industry and governments.
- the blackberry as a weed of national significance
- governments have a role to support collective community-led action
- regulatory approaches alone are not effective in the absence of community support, but compliance activities targeted to support local community-led action can be very effective
- governments have a role to work with other stakeholders to support research and innovation for more effective pest management where significant public benefits in doing so exist.

National Johne's Disease Control Programme

The [National Johnes Disease Control Programme](#) is an industry-driven, nationally coordinated approach to cross-species management of the disease. The programme aims to reduce the impact of the disease and control measures on industries and to protect access by Australian livestock industries to international markets. An industry and government steering committee manages the programme. The programme supports voluntary market assurance programmes designed to enable producers to offer low-risk stock in the marketplace. Subprogrammes focus on management of the disease in cattle and in sheep. The cattle subprogramme makes financial and non-financial assistance available to beef producers affected by the disease.

Johne's disease is a production-limiting disease that affects numerous domestic livestock species in Australia. It is unevenly distributed across Australia; it is endemic in some regions and livestock sectors and rare or absent in others. Strong regulatory approaches to Johne's disease control in areas where the disease is endemic have been largely ineffective, in part because they have not been well supported by livestock producers. Also, producers and industry groups have felt they should have been involved more in disease management decisions that affected their businesses and the wider industry.

Affected livestock industries funded the National Johne's Disease Control Programme at a national level, and government primary industry agencies provide in-kind support.

Consistency with proposed approach

The National Johne's Disease Control Programme is consistent with the approach proposed to manage pests and diseases of national significance. The programme recognises:

- responsibility for endemic livestock disease management should be shared between producers, industry and government, with industry playing the lead role
- governments have a role to support collective industry-led action
- regulatory approaches alone are not effective in the absence of producer and industry support, and industry or market-driven schemes can be very effective alternatives to mandatory interventions.

National Potato Cyst Nematode Plan

Potato cyst nematode (*Globodera rostochiensis*) is a harmful pest for potato crops. It can cause significant yield reduction and economic loss across stakeholders in the Australian potato industry.

The Australian potato industry and state and federal governments are working towards a risk-based and shared approach to potato cyst nematode management and mitigation. This recognises that the best approach is to use a combination of prevention and control. The pest would have a significant detrimental economic impact on the Australian potato industry if the pathogen were not managed consistently across jurisdictions and industry or if potential new pathotypes or strains were not regulated at the Australian border.

The Australian potato industry is developing a [National Potato Cyst Nematode Management Plan](#) for consideration by the Australian and state governments. The Department of Economic Development, Jobs, Transport and Resources, Victoria, has incorporated regulatory elements of the plan into a risk-based regulatory reform model. The model provides the basis for national harmonised protocols for the control, management and mitigation of spread of potato cyst nematode in Australia.

The risk-based regulatory approach focuses government intervention on controlling pathways identified as high risk for the entry and spread of potato cyst nematode; while industry continues to manage lower risk pathways. The plan adopts scientifically valid measures based on acceptable risk. It implements the minimum regulation necessary to manage the risks of spread from infested properties. Interstate certification assurance arrangements have been agreed to by governments. This lowers the cost of government compliance activities and the regulatory burden on producers and their businesses.

The governance arrangements set out in the plan propose a strong collaborative partnership between industry and government.

Consistency with proposed approach

The National Potato Cyst Nematode Management Plan is consistent with the approach proposed to manage pests and diseases of national significance. The plan recognises:

- responsibility for established plant pest management should be shared between producers, industry and government, with industry playing a lead role
- where regulatory control is deemed necessary, regulations should be science-based and risk-based; regulations should be minimum necessary to achieve the disease management objective.

Appendix A: Weeds of national significance

Table A1 Weeds of national significance

Common name	Scientific name
African boxthorn	<i>Lycium ferocissimum</i>
alligator weed	<i>Alternanthera philoxeroides</i>
asparagus weeds	includes <i>Asparagus aethiopicus</i> , <i>A. africanus</i> , <i>A. asparagoides</i> , <i>A. declinatus</i> , <i>A. plumosus</i> and <i>A. scandens</i>
athel pine	<i>Tamarix aphylla</i>
bellyache bush	<i>Jatropha gossypifolia</i>
bitou bush/boneseed	<i>Chrysanthemoides monilifera</i>
blackberry	<i>Rubus fruticosus</i> agg.
bridal creeper	<i>Asparagus asparagoides</i>
brooms	includes Scotch (<i>Cytisus scoparius</i>), Montpellier (<i>Genista monspessulana</i>) and flax-leaf (<i>G. linifolia</i>) brooms
cabomba	<i>Cabomba caroliniana</i>
cat's claw creeper	<i>Macfadyena unguis-cati</i>
Chilean needle grass	<i>Nassella neesiana</i>
fireweed	<i>Senecio madagascariensis</i>
gamba grass	<i>Andropogon gayanus</i>
gorse	<i>Ulex europaeus</i>
hymenachne	<i>Hymenachne amplexicaulis</i>
lantana	<i>Lantana camara</i>
madeira vine	<i>Anredera cordifolia</i>
mesquite	<i>Prosopis</i> spp.
mimosa	<i>Mimosa pigra</i>
opuntoid cacti	includes <i>Austrocyllindropuntia</i> , <i>Cylindropuntia</i> and <i>Opuntia</i> species
Parkinsonia	<i>Parkinsonia aculeata</i>
parthenium weed	<i>Parthenium hysterophorus</i>
pond apple	<i>Annona glabra</i>
prickly acacia	<i>Acacia nilotica</i> ssp. <i>indica</i>
rubber vine	<i>Cryptostegia grandiflora</i>
sagittaria	<i>Sagittaria platyphylla</i>
salvinia	<i>Salvinia molesta</i>
serrated tussock	<i>Nassella trichotoma</i>
silverleaf nightshade	<i>Solanum elaeagnifolium</i>
water hyacinth	<i>Eichhornia crassipes</i>
willows, except weeping willows, pussy willow and sterile pussy willow	<i>Salix</i> spp. except <i>S. babylonica</i> , <i>S. x calodendron</i> and <i>S. x reichardtji</i>