



# Western Australian Biosecurity Strategy

2016-2025



The development of the Western Australian Biosecurity Strategy ('the Strategy') led by government and informed by industry and community, sets the strategic direction for partnership arrangements to manage biosecurity issues affecting agriculture, fisheries, forests and biodiversity in our terrestrial and aquatic environments.



Department of **Agriculture and Food**  
Department of **Parks and Wildlife**  
Department of **Fisheries**  
**Forest Products Commission**

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# Western Australian Biosecurity Strategy

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The purpose of the Strategy is to set the overall direction for the management of emerging and ongoing biosecurity issues within WA from 2016 to 2025.

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## Scope

The Strategy covers animal and plant pests, diseases and weeds, and zoonotic diseases that can be transmitted between animals and humans. These have the potential to negatively affect WA's economy, terrestrial and aquatic environments, biodiversity, agricultural resources, human health and social amenity. It doesn't include chemical contamination or residue issues, animal welfare, food safety or human health (except zoonoses), or genetically modified organisms. The strategy covers the period 2016 to 2025.



# Foreword

Western Australia's Biosecurity Strategy (the Strategy) sets the strategic direction for the management of emerging and ongoing biosecurity issues that impact on agriculture, fisheries, forests and the environment within the State.

Biosecurity incursions have the capacity to increase costs and disrupt export and domestic trade of agriculture, forest, aquaculture and commercial fishing as well as affecting our unique environment, biodiversity and social amenity.

Western Australia is fortunate to be free of many of the major animal and plant pests and diseases that occur elsewhere. Effective biosecurity management underpins the state's reputation as a supplier of clean, safe, high quality food, which enables access to valuable markets and trade arrangements. Of equal importance is keeping our marine areas, conservation areas and unique natural ecosystems free from damaging pests.

The vision of the Strategy is 'working together to minimise risks to the state's economic development, environmental assets and social amenity from terrestrial and aquatic pests and diseases'.

The strategy is aligned with national directions and has been informed by Biosecurity Council stakeholder engagement, the Biosecurity Senior Officer's Group and feedback from Industry, government and community members over a five month period of consultation. The Strategy covers the period 2016 to 2025.

A formal review of the Strategy will be conducted within three years.

On behalf of all Ministers who have a responsibility for biosecurity I am delighted to support the release of this Strategy, which through its implementation will support the protection, future growth and economic development of Western Australia.



Hon Mark Lewis MLC

Minister for Agriculture and Food



# What is Biosecurity?

Biosecurity<sup>1</sup> is the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing or spreading

WA's geographic isolation provides a natural advantage for biosecurity protection, however the extensive coastline and numerous points of entry increase the risk of animal, plant and aquatic pests and diseases being introduced.

## Why is biosecurity important to Western Australia?



### Economy

WA agricultural products are renowned as safe, high-quality products and our biosecurity systems ensure our reputation and status is maintained. Our biosecurity status confers significant competitive advantage and value proposition in overseas markets.

### Environment

Effective management of biosecurity risks helps to protect our biodiversity and our distinctive ecosystems and natural environment.

<sup>1</sup>As defined in Australia's Intergovernmental Agreement on Biosecurity (IGAB)



## Social amenity

Biosecurity risks, if not adequately managed, can directly affect both human health and people's ability to enjoy their surroundings. For example, incursions of pests, diseases and weeds may negatively affect the use and enjoyment of the environment by families and pets.

## Human health

Up to 75% of emerging animal diseases may be transferred between animals and humans (such diseases are known as zoonoses). Biosecurity management aims to reduce the spread of zoonoses.

# What are the future challenges?

WA has an extensive, sparsely populated coastline that is exposed to sea lanes, and a variety of environments that can support vigorous plant growth and harbour many animals

Biosecurity management is a complex task and WA's biosecurity system will need to respond to increasing challenges including:



Figure 1 Examples of some pathways that present biosecurity risks

## Globalisation

Globalisation (see Figure 1) increases the volume and range of products traded internationally, the number of aircraft, ship and passenger movements, and therefore the increased risk of pests and diseases entering and establishing in Australia.

The growing volume and speed of online trading presents new challenges for biosecurity because imported plant material and animal products may not encounter established biosecurity checks.

In addition, unauthorised land incursions from overseas increases the risk of pests and diseases being imported into the state.

## Climate change

Climate change may cause shifts in the potential range, habitat, spread and effects of pests and diseases. For example, the potential for severe weather events may assist the spread and establishment of some pests and diseases (e.g. via land degradation).

## Changes in land use

Changes in land use increases the interface between urban and rural areas and the natural environment, and make pest and disease management more complex.

## Population spread

Population spread, urbanisation of rural regions, and increasingly intensive agriculture all complicate the ability to contain a pest or disease incursion and the risk of zoonoses.

## Risks to human health from zoonotic diseases

People in close contact with animals, such as farmers, livestock contractors, hunters, wildlife carers and veterinarians are at a higher risk of contracting a zoonotic



disease that could then be transferred to the general population. Managing the threat of such diseases requires continuous engagement and systematic assessment.

## Key risks to WA's Biosecurity system

A number of key risks to the status of Western Australia's biosecurity system have emerged from recent reviews. These include the risks of regulatory failure, response failure, and innovation failure. These risks are addressed specifically in goals 4, 5 and 7 in the Strategy. Additionally there is a risk that changes to national biosecurity legislation (the *Biosecurity Act 2015*) will impact on the ability of WA to retain its high biosecurity status and market advantage.

# How do we manage the risks?

An effective biosecurity system needs to manage risks across the entire biosecurity continuum



Pre-border and border activities include risk assessment, quality assurance, establishing conditions of entry, pre-clearance checks, inspection and compliance activities. Post-border activities include surveillance, monitoring, risk assessment, emergency preparedness and response planning.

Managing risks across the biosecurity continuum is fundamental to WA's trade and economic development. The continuum is consistent with the approach being adopted nationally following the Beale Review<sup>2</sup> into Australia's quarantine and biosecurity services, which recommended a change in emphasis from the narrow concept of 'quarantine' to the broader one of 'biosecurity'.

The biosecurity continuum also supports Australia's overseas trade obligations, including this country's Appropriate Level of Protection Policy described as 'a high or very conservative level of protection aimed at reducing risk to very low levels, while not based on a zero-risk approach'.

<sup>2</sup>Beale, R., Fairbrother, J., Inglis, A.M., and Trebeck, D. (2008) *One Biosecurity: A Working Partnership*.

# Who manages the risks?

Land managers, government agencies, industry and the community are jointly responsible for pest and disease management

## Partnerships

Controlling pests and diseases requires effective collaboration between international, national and local stakeholders. WA honours international protocol obligations in developing and delivering its biosecurity system. We take into account national agreements and Australian government policy.

## International and national

Australia has responsibilities under the International Sanitary and Phytosanitary Agreement (SPS Agreement) to ensure that domestic quarantine measures are consistent with those applied to international imports.

WA is signatory to the Intergovernmental Agreement on Biosecurity (IGAB), which aims to 'enhance Australia's biosecurity system and strengthen the collaboration between the Commonwealth of Australia and state and territory governments to address Australia's broad range of biosecurity issues'.





Figure 2 WA biosecurity framework for collaboration and advice

IGAB's work focuses on developing national systems to support decision making and investment; use of biosecurity information, surveillance and diagnostics; managing established pests and diseases; engagement and communication; preparedness and response arrangements; and biosecurity research and development.

The state is also signatory to three national cost-sharing agreements for the management of emergency plant, animal and environmental pests and diseases.

## State

At the state level, biosecurity is managed through a legislative framework that includes a number of key pieces of legislation.

The WA government works with industry and the people of WA to identify and manage biosecurity risks and is responsible for:

- policies and systems that relate to specific pests and diseases
- legislation, including import and movement controls

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- inspection and certification services for interstate border and post-border movements, and at international borders (in collaboration with the federal government)
  - control of the impact of invasive plants and animal pests on land and waters for which it has management responsibility.

The Strategy emphasises the importance of shared responsibility for the management of biosecurity in WA, which is underpinned by a framework for collaboration and advice (see Figure 2).

The Biosecurity Council of Western Australia provides strategic advice to the Minister for Agriculture and Food, the Director General of DAFWA and other ministers, when required, on matters related to biosecurity. They actively engage with industry, community and government to ensure informed and robust advice is given.

The Biosecurity Senior Officers Group, comprised of senior executives from each of the state government agencies with biosecurity responsibilities, develops and recommends cross-government and state-wide strategies for biosecurity management.

Local governments raise awareness and undertake surveillance and biosecurity management activities within the community, particularly in relation to invasive plant and animal pests.

Industry and land managers play a key role in biosecurity planning and decision making through both national and state committee structures. The Strategy sets the expectation of industry becoming increasingly involved in investment and decision making for management of biosecurity.

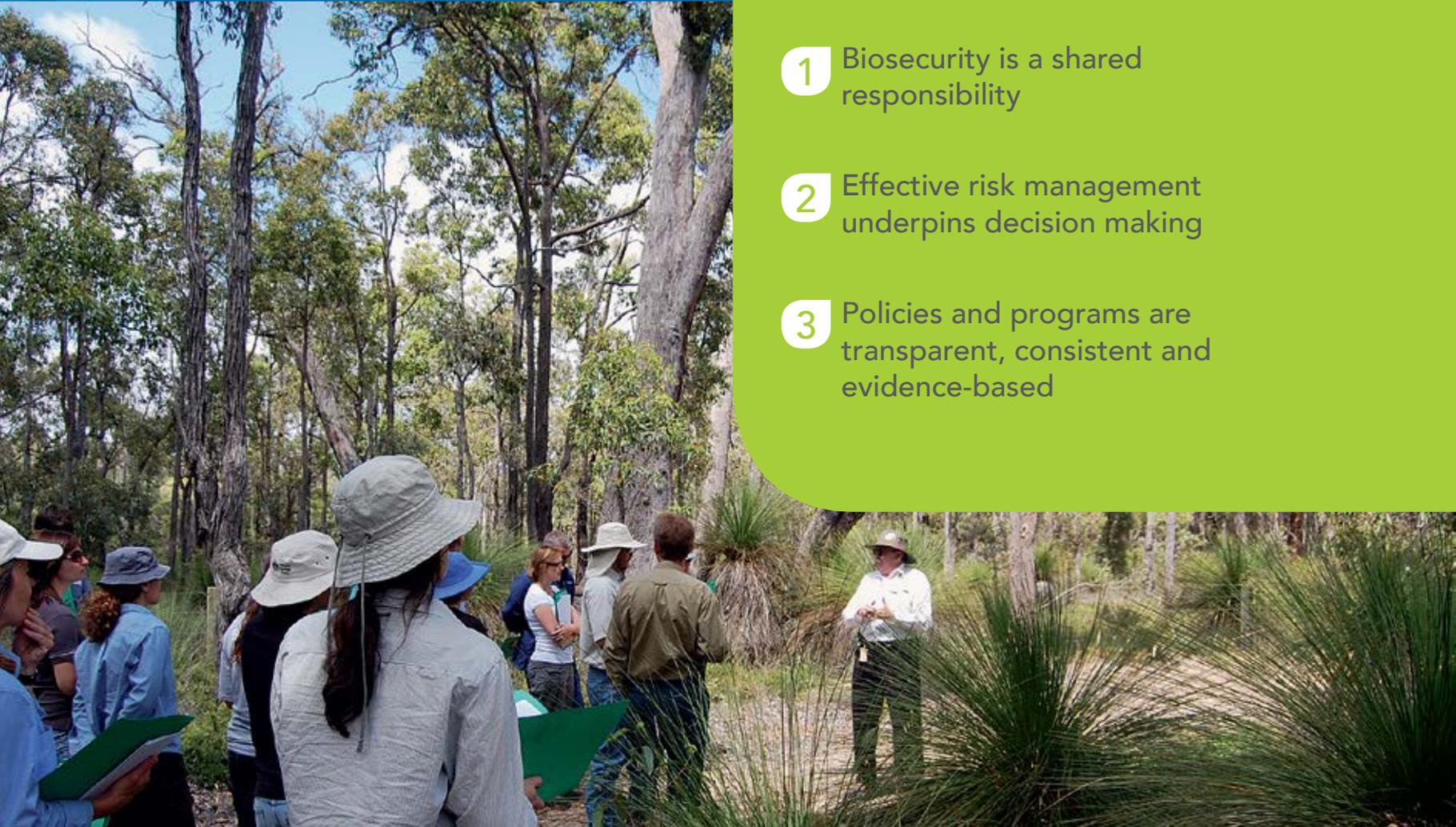
Not-for-profit, research and community organisations are also seen to play an important role through funding and providing human resources for the delivery of biosecurity-related research and on-ground programs, fundraising, communications and awareness-raising activities.

All Western Australians and visitors to WA have a role to play in protecting the biosecurity status of WA (abiding by biosecurity legislation, maintaining good farm practices, reporting anything unusual in animals, crops and the environment) to ensure the community continues to benefit from our healthy environment and economy.

# What are the biosecurity principles?

Biosecurity management in WA is underpinned by three principles

- 1 Biosecurity is a shared responsibility
- 2 Effective risk management underpins decision making
- 3 Policies and programs are transparent, consistent and evidence-based



# What are the biosecurity goals?

The Strategy identifies seven goals that are considered essential to underpin and reform WA's biosecurity system<sup>3</sup>

## 1 Enhanced partnerships and collaboration

Controlling pests and diseases is not a task that government agencies can manage on their own. The scale of the task requires cooperation and collaboration among all stakeholders.

Improved cooperation and communication between organisations and community members who have a stake in biosecurity management are needed to build stronger partnerships and networks and to deliver efficiencies. This sharing should lead to a broader base of knowledge and expertise, and reduced duplication. Existing relationships between industry, government and the community provide a strong foundation for sharing responsibility.

<sup>3</sup> The outcomes and tactics that underpin the achievement of the goals are described in Table 1

## CASE STUDY – ERADICATION

In October 2012 a crab caught in WA's Swan River near Mosman Bay by a recreational fisher was identified and confirmed as being the international high-risk marine pest species, Asian paddle crab (*Charybdis japonica*).

This species presents a serious biological threat to WA's marine environment due to its highly aggressive nature and its potential to out-compete native crabs for food and habitat.

In response to the discovery of the paddle crab, the Department of Fisheries assembled an incident management team, with input from the Swan River Trust and other stakeholders.

Government and community members worked together to implement reporting of possible paddle crab sightings via the FishWatch hotline. Since 2012, no further paddle crabs have been found from ongoing reporting.



## CASE STUDY – CONTAINMENT

The cane toad (*Bufo marinus*) is a highly invasive species that is believed to have entered WA from the Northern Territory in 2009, occupying the habitats of many native species. The people of Kununurra have been active in trying to slow the spread of cane toads and the Department of Parks and Wildlife has established a number of toad 'drop-off points' in the east Kimberley for travellers. A dog trained in cane toad detection is also used as a proactive quarantine measure, inspecting high priority freight for 'hitchhiker' toads to help prevent the spread of cane toads to other parts of the state.



### 2 Enhanced engagement

Engagement refers to how people involved in biosecurity interact to achieve outcomes.

A proactive biosecurity system based on shared responsibilities relies on active participation from people across WA. Those on the ground are best placed to detect and respond to a biosecurity threat. They must, however, know what to look for, what to do, who to report it to and what might happen after they report the threat.

Government, industry and community groups can all play a role in increasing the awareness and participation of citizens in biosecurity activities.

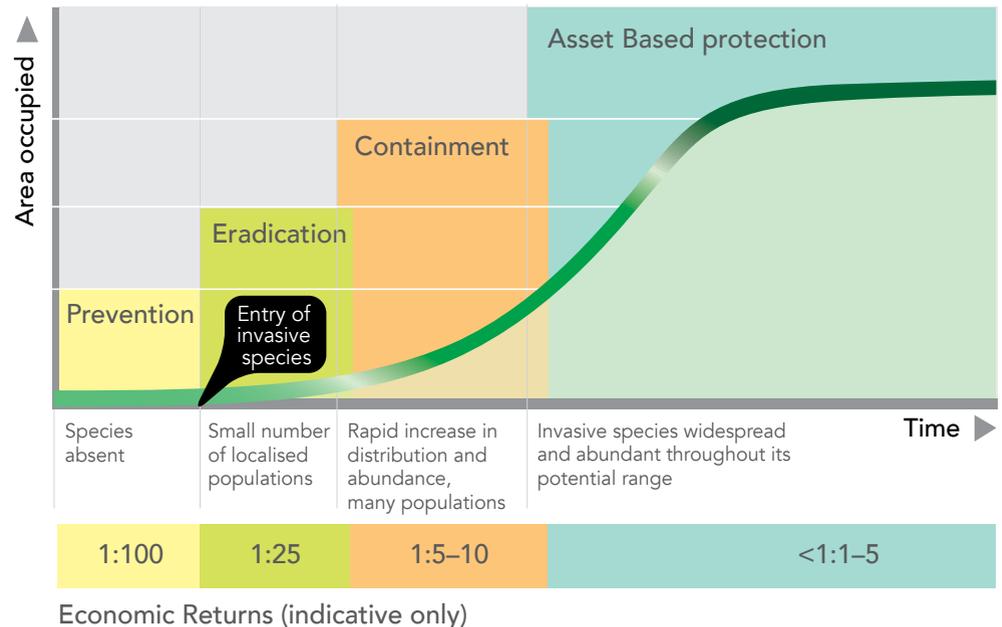
### 3 Increasing use of evidence and agreed principles to inform decision making and investment

Evidence-based protection of the biosecurity status of WA ensures that there is a consistent approach to decision making and prioritising investment.

The IGAB investment principles outlined above have been accepted by federal, state and territory governments.

## IGAB investment principles

1. Activity is undertaken and investment is allocated according to a cost-effective, science-based and risk-management approach, prioritising the allocation of resources to the areas of greatest return.
2. Relevant parties contribute to the cost of biosecurity activities:
  - a. Risk creators and beneficiaries contribute to the cost of risk management measures in proportion to the risks created or benefits gained (subject to the efficiency of doing so)
  - b. Governments contribute to the cost of risk management measures in proportion to the public good accruing from them.
3. Governments, industry and other relevant parties are involved in decision making, according to their roles, responsibilities and contributions.



**Figure 3 Invasion Curve**

The Invasion Curve indicates greater economic return on investment for actions on the left side compared with asset-based protection on the right

Adapted from Department of primary Industries Victoria (2009)

## CASE STUDY – MANAGEMENT

Wild dogs can be a significant pest to livestock and native animals. To mitigate wild dog impacts, sustained and cooperative management programs are required.

The Recognised Biosecurity Group (RBG) framework provides WA communities with a legislated opportunity through the *Western Australia Biosecurity and Agriculture Management Act 2007* (BAM Act) to work in partnership with the state government to address 'declared pest' issues over large areas.

While land managers are responsible for wild dog control on their own properties, broader management programs allow managers to use their resources more effectively, significantly improve livestock production and profits, and contribute to the protection of vulnerable wildlife.



## 4 Effective legislation, regulation and policy

It is essential all stakeholders have a clear understanding of the what, why and how of the biosecurity system.

A number of pieces of legislation support the delivery of an effective biosecurity system (for key WA legislation, see under 'Partnerships'). The legislation articulates the roles and responsibilities of landholders, business owners, transporters and certain individuals.

Government policies also highlight the public land management responsibilities for applicable agencies and the need to protect high-value biodiversity assets.

A compliance framework is in place to ensure biosecurity responsibilities are adhered to. Education and raising awareness of biosecurity responsibilities is a fundamental element of achieving voluntary compliance.

Recognition and acceptance by all stakeholders (government, industry, the broader community and users of the environment) of their responsibilities is a key goal of the Strategy.

## 5 More effective preparedness and capacity to detect, respond and recover from new incursions

Due to the strong reliance of our agricultural, fishing and fibre industries on export markets, strengthening the surveillance and diagnostic systems supports the continued economic development of WA. Reporting and assurance of WA's pest and disease status under national and international agreements is pivotal to access a number of domestic and international markets.

Similarly, early detection and action is necessary to protect WA's valued environmental assets from pests and diseases.

The earlier that we detect and accurately identify unwanted pests and diseases, and the more we know about them, the more likely we will be able to effectively manage them.

Having effective, coordinated emergency management systems and capacity for biosecurity response and recovery is critical.

## CASE STUDY – PREVENTION

Foot and mouth disease (FMD) is the most important biosecurity threat to Australia's livestock industries because it is highly contagious, trade sensitive and has a high potential cost. It affects cloven-hoofed animals including cattle, sheep, goats and pigs.

Disease surveillance to demonstrate freedom from FMD is critical to maintain access to our international markets as well as to ensure that FMD is detected as early as possible.

Government is working with industry to increase awareness of signs of exotic disease, to minimise the time to first detection.

The roles of government, industry and the community are critical in maintaining vigilance for signs of FMD, and ensuring all biosecurity measures designed to minimise the risk of an incursion and enhance emergency response capacity and capability are in place.





## 6 Community and industry understand and use available mechanisms for managing priority pests and diseases

A number of invasive pests and diseases are established in WA, or in particular areas of WA, and have the potential to cause damaging impacts to agriculture, forests, the environment or social amenity.

The BAM Act provides mechanisms (including Industry Funding Schemes and Recognised Biosecurity Groups) to support industry and local or regional community groups to lead eradication, containment or management of pests and diseases where industry or community are motivated to do so.

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## Biosecurity management is underpinned by science and technology-based innovative solutions

Research and development activities, innovation and continuous improvement are critical to the development of a flexible biosecurity system that can adjust to changing circumstances.

A collaborative approach to develop new knowledge and adapt existing knowledge and technologies to WA conditions is recognised as good practice.

In particular, the involvement of end-users in identifying knowledge gaps and developing research priorities is crucial to ensure the research is well directed, and to maximise uptake of new knowledge and systems.

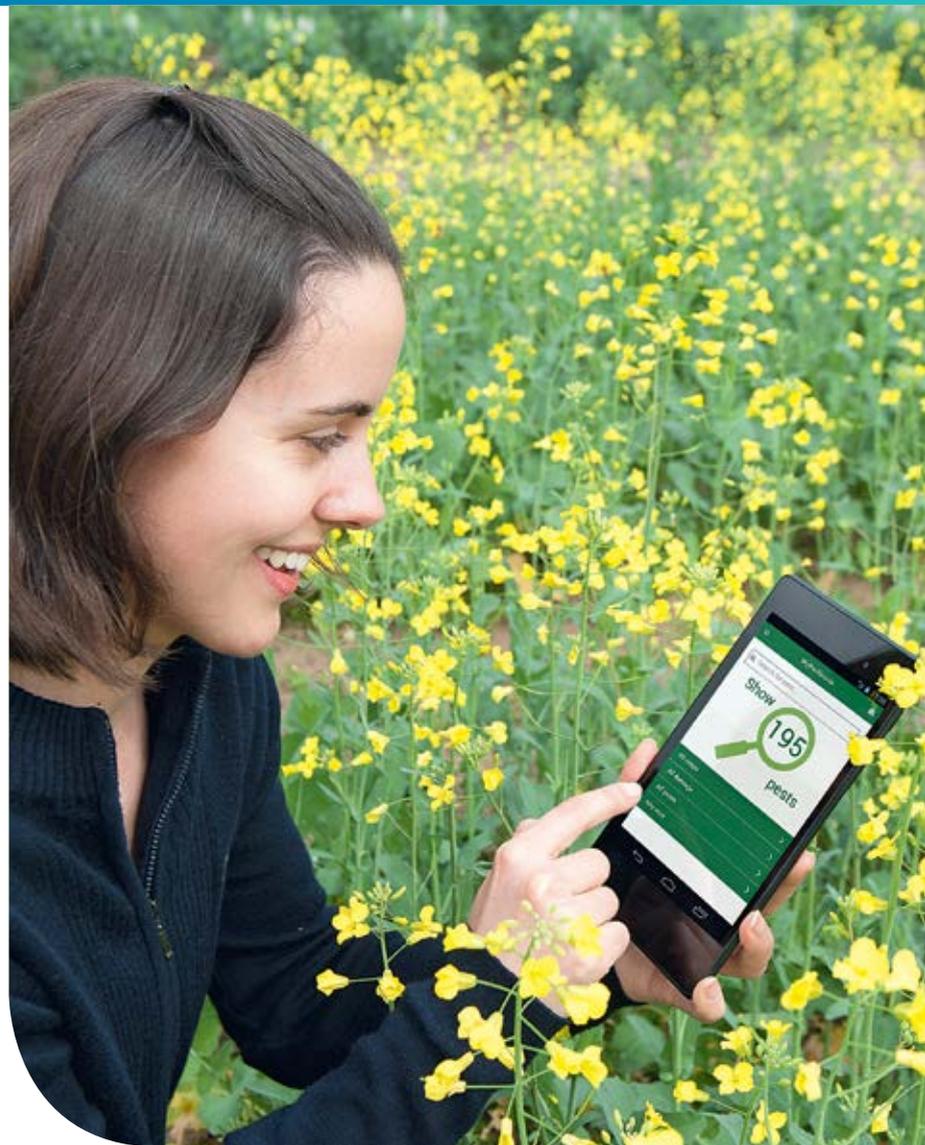


Table 1: Summary of the Western Australian Biosecurity Strategy Goals, Outcomes and Tactics

Goal	Outcome	Tactics
1. Enhanced partnerships and collaboration	1.1 Industry, government and community are partners who also understand and respect each other's roles and responsibilities	1.1.1 Define and communicate roles and responsibilities of all stakeholders (government, industry and community) in existing biosecurity legislation according to public and private benefits 1.1.2 Government biosecurity agencies collaborate effectively to enable coordinated policy and cross-portfolio administrative arrangements
	1.2 Industry and community play a greater role in decision-making and biosecurity management	1.2.1 Government biosecurity agencies collaborate effectively to enable coordinated policy and cross-portfolio administrative arrangements to effectively manage risk
2. Enhanced engagement	2.1 Increased industry and community awareness of biosecurity risks and participation in biosecurity	2.1.1 Identify the most effective partners in industry and the community for engaging in biosecurity related activities/messages
		2.1.2 Develop and deliver engagement strategies and communication mechanisms directed at increasing community awareness of biosecurity issues and their potential roles
		2.1.3 Develop and deliver engagement and communication strategies directed at increasing government, industry and community awareness of biosecurity science, its applications and benefits
3. Increasing use of evidence to inform decision making and investment, and support market access	3.1 Government, industry and community understand and apply the investment principles outlined by IGAB	3.1.1 Improve knowledge of the costs, benefits and lessons learned from current and previous intervention for pests and diseases
		3.1.2 Ensure impacts of pests and diseases on access to priority trade markets are clearly understood and data is available to support area freedom declarations to maintain Western Australia's competitive advantage.
		3.1.3 Increase awareness and application of the IGAB investment principles to investment decision-making
	3.2 State government resources targeted to provide the greatest public benefit, and for agriculture this is prevention and eradication of priority pests and diseases	3.2.1 Use risk assessment and cost benefit analyses to prioritise biosecurity prevention, eradication, containment and asset based protection measures with resourcing targeted towards threats across terrestrial and aquatic environments
4. Effective legislation and regulation	4.1 Effective and appropriate state biosecurity legislation exists and is understood by stakeholders	4.1.1 Ensure legislation supports the roles of government, industry and the community to deliver effective biosecurity activities
		4.1.2 Conduct periodic reviews of biosecurity legislation at a state and national level
		4.1.3 Effectively negotiate arrangements with the Commonwealth that ensure Western Australia's area freedoms and market access is recognised and leveraged
	4.2 A compliance framework that is well understood, effective and efficient	4.2.1 Ensure the compliance continuum from education to prosecution is implemented in an appropriate and consistent manner
	4.3 Effective control of established priority pests and diseases on land and water assets managed by government agencies	4.3.1 State government to review and develop programs to manage established priority pests and diseases so as to minimise harm to people, the environment and assets, on land and water for which it has management responsibility

Table 1: Summary of the Western Australian Biosecurity Strategy Goals, Outcomes and Tactics (cont.)

Goal	Outcome	Tactics
5. More effective preparedness and capacity to detect, respond and recover from new incursions	5.1 The introduction and establishment of pests and diseases is prevented by effectively regulating risk pathways (Prevention stage of the invasion curve)	5.1.1 Maintain effective and efficient risk-based quarantine operations (surveillance, tracking and reporting) to minimise the introduction of new pests and diseases and limit the risks to market access, environment and social amenity  5.1.2 Enhance skills, knowledge and capacity within industry, government and community for the delivery of biosecurity prevention activities
	5.2 Industry and community understand the importance of prevention and early eradication and increasingly support surveillance for pests and diseases	5.2.1 Industry and community contribute to surveillance and response
	5.3 Effective biosecurity emergency preparedness, response and recovery (Eradication stage of the invasion curve)	5.3.1 Develop skills, knowledge and capacity within industry, government and community for the delivery of biosecurity eradication activities  5.3.2 Develop and deliver effective information, training, logistics and administrative systems to underpin emergency response and recovery and regularly practise using these systems  5.3.3 Commonwealth and other states and territories work together to improve national arrangements for managing exotic pests and diseases
6. Community and industry understand and increasingly utilise available mechanisms for managing their priority pests and diseases	6.1 Community and industry increasingly lead management of established pests and diseases where they consider them a priority (Containment and asset based protection stages of the invasion curve)	6.1.1 Review and develop programs with industry and community to manage established priority pests and diseases so as minimise harm to people, the environment and assets
		6.1.2 Develop skills, knowledge and capacity within industry, government and community for the delivery of biosecurity containment and asset based protection activities
7. Biosecurity management is underpinned by science and technology based innovative solutions	7.1 Western Australia has access to effective identification, diagnostic, surveillance, reporting and tracing systems	7.1.1 Maintain and improve diagnostic capability, surveillance, reporting and tracking systems using effective technologies, and information management systems
	7.2 Research and development is applied to fill important knowledge gaps	7.2.1 Strengthen research and development partnerships and encourage research and development to address priority knowledge gaps in biosecurity that impact on the management of agriculture, fisheries, forests and environment within the State

All Western Australians and visitors to WA have a role to play in protecting the biosecurity status of WA (abiding by biosecurity legislation, maintaining good farm practices, reporting anything unusual in animals, crops and the environment) to ensure the community continues to benefit from our healthy environment and economy.

Detailed descriptions of the roles and responsibilities of government, industry and the community can be found on the Biosecurity Council web page.

[www.agric.wa.gov.au/biosecurity-roles-and-responsibilities](http://www.agric.wa.gov.au/biosecurity-roles-and-responsibilities)

Development and refinement of the Strategy was part of the Boosting Biosecurity Defences project, led by the Department of Agriculture and Food, WA and made possible by the State Government's Royalties for Regions program.



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