Queensland Invasive Plants and Animals Strategy 2025-2030

This publication has been compiled by Invasive Plants and Animals in Biosecurity Queensland, Department of Agriculture and Fisheries.

Contents

Preamble

Development of the *draft invasive plants and animals strategy 2025-2030* commenced with a stakeholder review of *Invasive plants and animals strategy 2019-2024*. The feedback from stakeholders has informed the development of the draft strategy.

Development of the draft strategy has been prepared by the Department of Agriculture and Fisheries (DAF) in collaboration with the Queensland Invasive Plants and Animals Committee (QIPAC) comprising representatives of industry groups, peak bodies and agencies encompassing conservation, agriculture, local and state government, natural resource management and community.

Introduction

Queensland is a unique and special place. It is the most biologically diverse of all Australian states and territories.

It has a thriving agricultural industry worth $23.67bn. It is a world-leading tourist destination with spectacular landscapes, the Great Barrier Reef, and home to the world's oldest continuing living cultures.

Consistent with worldwide trends, invasive plants and animals are threatening Queensland's natural environment, its agriculture, cultural heritage, and social well-being.

To slow or reverse these trends requires urgent and comprehensive action from all stakeholders.

The draft strategy recognises that managing the risks and impacts of invasive plants and animals is occurring in the context of several potentially exacerbating factors. These include but are not limited to, climate change, land use change, land degradation, biodiversity loss, global trade, and movement of people through travel and migration.

The management of invasive plants and animals is the shared responsibility of landowners, land managers, industry, the community and all levels of government. Shared responsibility has been made a legal requirement through the general biosecurity obligation (GBO) under the *Biosecurity Act 2014*. The primary responsibility rests with those who deal with biosecurity matter—they must reduce the risks that their activities create.

However, a nil-tenure approach that engages all stakeholders is best practice, particularly for highly mobile species. In this approach, control methods are applied in a cooperative and coordinated manner across land tenures by stakeholders at a landscape scale rather than a property scale.

This draft strategy provides Queenslanders with a framework and a set of strategic actions to guide the management and prevention of invasive plants and animals in Queensland.

The draft strategy also details specific stakeholder roles and responsibilities in protecting Queensland from the impacts of invasive plants and animals.

Our vision

Queensland thrives from a collaborative biosecurity system committed to safeguarding our environment, economy, communities, and lifestyle from impacts of invasive plants and animals.

Our mission

To direct, facilitate and deliver strategic and targeted actions to reduce the impacts of invasive plants and animals.

Our scope

This strategy encompasses invasive plants and animals, including exotic weeds and pest animals, invertebrate pests and freshwater pest fish.

This strategy does not include native species or marine pests (which are addressed in the national *Marine pest plan*).

Alignment

This strategy complements other key documents including:

- the *Conserving Nature – A Biodiversity Strategy for Queensland* which lists invasive plants and animals as one of the greatest threats to Queensland's biodiversity. Actions under this Strategy will support the four Goals of Protect, Restore and Recover, Adapt and Connect.
- the *Queensland biosecurity strategy 2024–2029*, which outlines six strategic themes to address Queensland's challenges and opportunities to the biosecurity system.
- the *Australian pest animal strategy 2017–2027*, which embodies eight principles that underpin effective pest animal management.
- the *Australian weeds strategy 2017–2027*, which provides seven principles of effective weed management.
- the Intergovernmental Agreement on Biosecurity (IGAB), which came into effect in 2012, plus the recommendations in the 2017 review endorsed by the Agriculture Ministers' Forum.
- national legislation such as the *Biosecurity Act 2015*, the *Environment Protection and Biodiversity Conservation Act 1999.*

More details on these documents and alignments are provided in appendix 1.

Guiding principles

This strategy embodies seven fundamental principles that underpin effective management of invasive plants and animals. They provide a common basis for all of Queensland.

These principles are most effective when they are used by all partners in the biosecurity system to guide planning and investment, and when they are incorporated into strategies, plans and actions across all management levels.

1. Integration, collaboration and coordination

Managing invasive plants and animals is an integral part of managing natural resources, biodiversity in our environment, and agricultural systems. It is best when integrated at every level by landowners, land managers, the community, industry, and government.

To achieve a collaborative, coordinated and integrated approach to management, stakeholders need to establish long-term consultation and partnership arrangements, including the consistent reporting and sharing of agreed datasets, between land managers, local communities, industry groups, regional natural resource management (NRM) organisations, and federal, state, and local governments.

2. Strategic risk-based planning

Planning for management of invasive plants and animals is most effective when guided by the latest research and best practice, and when focused on risk-based decisions and greatest return on investment. This will ensure that resources target the priorities identified at local, regional, state and national levels.

3. Shared responsibility and commitment

To effectively manage invasive plants and animals, we need shared responsibility and long-term commitment by everyone in the biosecurity system, including landowners, land managers, the community, industry groups and government.

Everybody should play their part to minimise the impacts of invasive plants and animals on the economy, the environment, health, and our way of life.

Those who create risks or cause harm to the environment or other resources should bear the costs associated with managing those risks or mitigating that harm. Similarly, those who benefit from biosecurity management activities, such as research and development of new control methods, or implementation of quarantine measures, may also be called upon to contribute to the costs. This could include governments, industries that benefit from biosecurity measures, or even consumers who benefit from safe and secure food or agricultural products.

4. Capability building through education and awareness

Public education and awareness campaigns on invasive plants and animals will increase the community's capability and willingness to participate in management and control.

For long-term best practice management, we need ongoing, targeted capability and capacity building within industry, regional NRM organisations, community groups (such as landcare), and local, state, and federal governments.

5. Prevention and early intervention

Risk-based prevention and early intervention is the most cost-effective approach for managing invasive plants and animals. This approach can be assisted by:

- developing and implementing early detection, diagnostics, and monitoring systems
- preventing spread, especially human-assisted spread.

6. Best practice and research

Management is most effective when following evidence-based practices that protect the environment and the productive capacity of natural resources while minimising impacts on the community.

Ongoing research and extension programs will inform the development of best practice management and policies.

7. Monitoring and evaluation

We need regular monitoring and evaluation of control activities, including establishment of baselines and reporting on agreed shared datasets against baselines, to make evidence-based decisions and improve management practices.

Impacts of invasive plants and animals

Queensland's environmental and climatic conditions favour the establishment of many invasive plants and animals. Many plants and animals have been introduced, either deliberately or accidentally. Some of these species have become invasive—that is, they have spread and multiplied to the point where they cause damage impacting on the environment, the economy, and important social and cultural values of our communities.

Invasive plants and animals have the potential to adversely alter ecosystem function, reduce biodiversity, decrease primary industry productivity and profitability, threaten human and animal health and Queensland's way of life.

The environment and biodiversity

"Invasive plants and animals, including weeds, pests and diseases, now affect more than half of Australia's threatened plants, fish, reptiles and invertebrates." (Queensland Biodiversity Conservation Strategy 2022).

Introduced invasive plants and animals place considerable pressure on biodiversity in our environment. This can be directly, for example by predation, or indirectly, for example by altering vegetation structure, ecological and physical processes, or landscape resilience.

Invasive plants and animals can disrupt native ecosystems by outcompeting native species for resources such as food, water, and habitat. This disruption can lead to declines in biodiversity and alteration of ecosystem structure and function, with consequences such as the extinction of native species.

Some of the negative impacts of invasive plants and animals on our environment and biodiversity are outlined below.

Impact	Description
Competition with native species	Invasive plants and animals often outcompete native species for resources such as food, water, and habitat. This competition can lead to declines in native species populations, sometimes even driving them to extinction.
Direct predation or herbivory	Invasive plants and animals may prey upon or consume native species, particularly if they have no natural predators or herbivores in their new environment. This can result in the decline or elimination of native species populations.
Alteration of ecosystem structure and function	Invasive plants and animals can disrupt the natural balance of ecosystems by altering habitat structure, nutrient cycling, and other ecological processes. This can have cascading effects on other species and ecosystem functions including those that support sustainable agriculture.
Changes in species composition and diversity	The introduction of invasive plants and animals can change the composition and diversity of native plant and animal communities. In some cases, invasive plants and animals may dominate ecosystems, reducing overall biodiversity.
Disruption of mutualistic relationships	Invasive plants and animals can disrupt mutualistic relationships between native species, such as pollinators and plants, or between species and their symbiotic partners. This can have far-reaching consequences for ecosystem health and function including those ecosystems that support agriculture.
Introduction of pathogens and diseases	Invasive plants and animals may introduce new pathogens and diseases to native species populations, leading to outbreaks and population declines. This can be particularly devastating in ecosystems where native species have no natural resistance to these pathogens.
Habitat degradation and fragmentation	Invasive plants and animals can contribute to habitat degradation and fragmentation by altering vegetation structure, reducing habitat quality, and creating barriers to movement for native species.

The economy

Invasive plants and animals can have significant impacts on the economy of Queensland. Conservative estimates suggest that invasive animals cost the Australian economy between $720 million and $1 billion annually. This cost stems predominantly from management (public and private) and lost production.

These sectors are affected by invasive plants and animals including the environment, agriculture, tourism, and infrastructure. Some of the key impacts are outlined below.

Impact	Description
Ecosystem disruption	Invasive plants and animals can disrupt ecosystem services such as pollination, water purification, and soil stabilisation. The economic value of these ecosystem services can be substantial, and their degradation due to invasive plants and animals can result in economic losses for industries reliant on them, such as agriculture, forestry, and tourism. An example is the increased cost of fire preparedness and response due to spread of grasses that have high biomass such as gamba grass.
Agriculture	Invasive plants and animals can directly predate on and pose a toxicity risk to livestock and damage crops, pastures, and orchards, leading to reduced yields, lower quality produce, and increased production costs for farmers. Some invasive animals also present a risk pathway for diseases not currently present in Australia such as rabies and foot and mouth disease. Invasive plants and animals increase management costs which arise from the use of physical, mechanical and chemical control methods.
Tourism and recreation	Queensland's natural beauty and diverse ecosystems are major attractions for tourists, but invasive plants and animals can degrade these environments and diminish their appeal. For example, invasive plants like lantana can choke native vegetation in recreational areas, reducing their aesthetic value and recreational opportunities as well as impacting on the movement of native species, such as koalas. Invasive animals such as feral pigs and invasive ants can also impact wildlife viewing experiences and outdoor activities.
Damage to infrastructure	Some invasive plants and animals, such as certain types of invasive plants (e.g. lippia) or burrowing animals (rabbits) can destabilise soil and contribute to erosion which can damage infrastructure such as roads, buildings, and irrigation systems. This can pose safety hazards and result in costly repairs and maintenance efforts.
Aquaculture and fisheries	Invasive plants and animals can disrupt aquatic ecosystems and impact aquaculture operations and commercial fisheries. For example, invasive aquatic plants like water hyacinth can clog waterways and impede navigation, while invasive fish species such as tilapia or carp can compete with native species for food and habitat. These disruptions reduce fishery yields, affect water quality, and increase management costs.
Biosecurity costs	Queensland governments and industries invest significant resources in biosecurity measures to manage the introduction of, spread of and ongoing control of invasive plants and animals. This includes surveillance, monitoring and eradication programs aimed at protecting agriculture, natural ecosystems, and human health. The costs associated with these efforts, including staff salaries, equipment, and research, constitute a significant economic burden on state, local governments and industry.

Social values

Managing the impacts of invasive plants and animals on social amenity and human health requires coordinated efforts at local, regional, state and national levels, including prevention, early detection, rapid response, and sustainable management practices.

Invasive plants and animals can have significant impacts on social amenity and human health some of which are outlined below.

Impact	Description
Impact on recreational activities	Invasive plants and animals can interfere with recreational activities such as hiking, camping, and boating by infesting walking tracks, campsites, waterways, and recreational areas. This can diminish people's enjoyment of outdoor activities and lead to decreased use of affected areas.
Psychological impacts	The presence of invasive plants and animals can have psychological and social impacts on communities, including increased stress, anxiety, and feelings of insecurity, especially with issues like predation on livestock by wild dogs, feral cats, foxes or feral pigs. Disruptions to familiar landscapes and natural environments can also diminish community cohesion and affect social well-being.
Allergies and respiratory issues	Invasive plants like parthenium produce pollen that triggers allergies and exacerbates respiratory conditions such as asthma. Increased exposure to these allergens due to the spread of invasive plants and animals can negatively impact human health and quality of life.
Vector-borne and zoonotic diseases	Invasive plants and animals, particularly like feral pigs can act as vectors for diseases such as brucellosis, leptospirosis and parasitic infections. As these invasive plants and animals spread into new areas, they can introduce or amplify the transmission of these diseases, posing risks to human health.
Contamination of water sources	Invasive plants and animals like salvinia can proliferate in water bodies, leading to reduced water quality, clogged waterways, and increased costs for water treatment and infrastructure maintenance. Contaminated water sources can pose health risks to communities that rely on them for drinking water, recreation, and agriculture.
Impact on food security	Invasive plants and animals can threaten agricultural crops and livestock, leading to reduced yields, increased production costs, and potential disruptions to food supply chains. This can affect food security and nutrition, particularly in communities that depend on local agriculture for sustenance.
Social disruption and conflict	Invasive plants and animals can cause conflicts between different stakeholder groups, such as landowners, conservationists, and government agencies, who may have conflicting priorities and interests regarding invasive plants and animals management. These conflicts can lead to social tensions, legal disputes, and challenges in implementing effective management strategies.

Aboriginal and Torres Strait Islander peoples

The impacts of invasive plants and animals on Aboriginal and Torres Strait Islander peoples can affect their cultural, social, economic, and environmental well-being. Some of the key impacts are outlined below.

Impact	Description
Impact on traditional practices	Invasive plants and animals can disrupt traditional hunting, fishing, and gathering practices that are integral to the cultural identity and subsistence of Aboriginal and Torres Strait Islander Peoples. For example, invasive plants may outcompete native plants used for medicinal purposes, while invasive animals may prey on or compete with native species important for traditional hunting.
Loss of cultural knowledge	The spread of invasive plants and animals can lead to the loss of traditional ecological knowledge passed down through generations. As native species decline or disappear due to invasive plants and animals, the associated cultural practices, stories, and rituals tied to those species may also diminish.
Spiritual connections	Many Aboriginal and Torres Strait Islander peoples have deep spiritual connections to their land and its biodiversity. The introduction of invasive plants and animals can disrupt these connections, as native landscapes are altered, and traditional practices become more challenging or impossible to maintain. Aboriginal and Torres Strait Islander Peoples rely on healthy ecosystems for cultural practices, spiritual connection, and sustenance.
Social and economic impacts	The impacts of invasive plants and animals can exacerbate existing social and economic challenges faced by Aboriginal and Torres Strait Islander communities. Efforts to control or manage invasive plants and animals may require resources that could otherwise be directed toward community development initiatives.

Addressing the impacts of invasive plants and animals on Aboriginal and Torres Strait Islander peoples requires culturally sensitive approaches that recognise the interconnectedness of biodiversity conservation, cultural preservation, and community well-being. Collaborative efforts involving Indigenous communities, Indigenous Councils, government agencies, researchers and other stakeholders are essential for developing effective strategies to mitigate the impacts of invasive plants and animals while respecting Indigenous rights and knowledge systems.

Challenges and solutions to invasive plants and animals management in Queensland.

In Queensland, invasive plants and animals management faces unique challenges due to the State's diverse ecosystems and the presence of invasive plants and animals threatening native biodiversity. Invasive plants and animals are the leading cause behind every four out of five mammal extinctions in Australia. Some of the priority challenges and solutions to invasive plants and animals management are outlined below.

Challenge	Challenge description	Challenge solutions
Protecting high-value biodiversity and ecologically sensitive areas	Queensland is widely considered a global biodiversity hotspot and is home to more than half of Australia's native species. Some of these species are found nowhere else in the world. Yet more than 1 000 of these plants and animals are	Specific actions that may support: • Targeting resources towards prevention and control measures for the most significant threats and/or most vulnerable or valuable areas maximises efficiency and effectiveness.

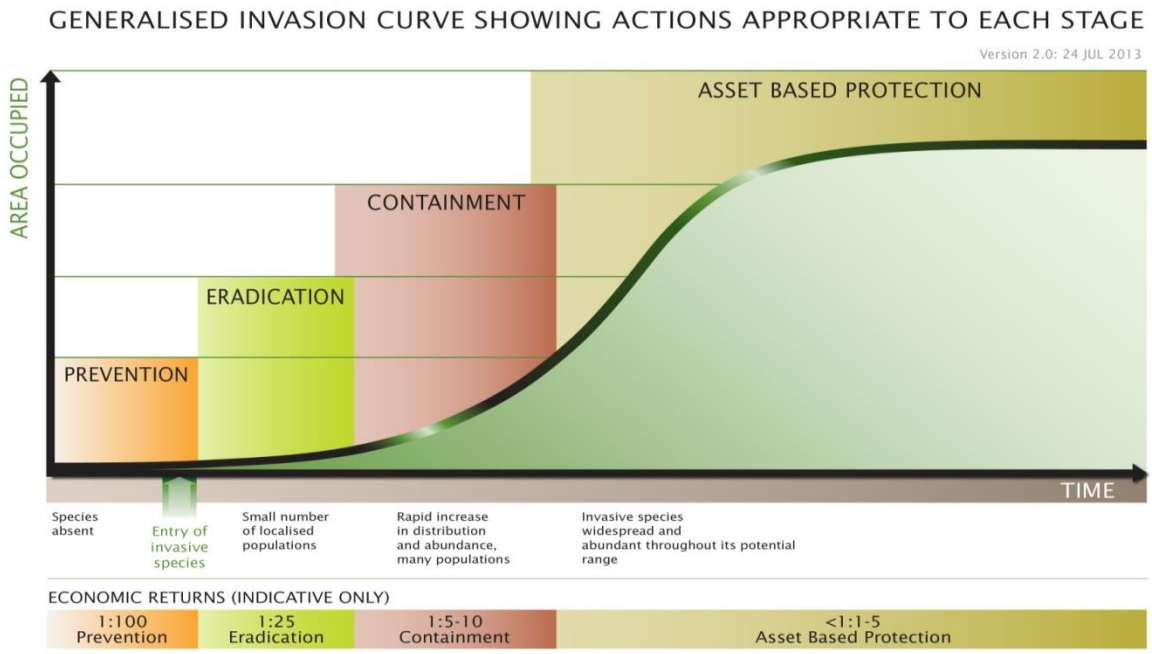
	listed as threatened with numbers growing year-on-year. Queensland's unique biodiversity and sensitive ecosystems are vulnerable to the impacts of invasive plants and animals. This puts the natural, economic, cultural and other values of biodiversity at risk. Managing these impacts while minimising harm to native species and ecosystems is a key challenge for invasive plants and animals management.	• Implement targeted surveillance and monitoring programs in ecologically sensitive areas to detect and respond quickly to invasive plants and animals incursions. • Prioritise eradication or containment efforts for high-risk invasive plants and animals that pose severe threats to native biodiversity. • Use remote sensing and drone technologies, citizen science initiatives, and community engagement to enhance early detection efforts. • Implement integrated pest management (IPM) strategies that combine various control methods, such as biological control, physical or mechanical removal, and targeted chemical treatments, to effectively manage invasive plants and animals populations.
Ownership and coordination gaps	Invasive plants and animals do not know property boundaries. When land ownership is fragmented across the landscape, there is confusion about who's responsible for control measures and how to coordinate management programs. This can lead to inaction and the spread of invasive plants and animals. Different landholders or agencies may have different budgets and priorities. Management can be expensive and time-consuming. Without regulation, plans, codes of practice and guidelines, landholders can be hesitant to act.	Specific actions that may support: • Formalised collaboration: Creating multi-agency working groups can improve communication and cooperation. • Data sharing platforms: Developing online platforms where landholders and agencies can share data on invasive plants and animals distribution, control methods, and funding opportunities. • Standardised protocols: Establishing consistent protocols for early detection, rapid response, and long-term management of invasive plants and animals. • Regulate the management of invasive plants and animals to achieve consistency across the landscape.
Data gaps	Limited distribution data: Often, there's a lack of comprehensive	Specific actions that may support:

	information on where exactly invasive plants and animals are located and how widespread they are. This makes it difficult to prioritise eradication or control efforts. Different agencies and organisations may use different methods to collect data on invasive plants and animals. This inconsistency makes it difficult to compare data and get a clear picture of the problem.	• Standardised data collection protocols: Implementing standardised data collection methods across regions ensures consistency and allows for easier data sharing and analysis. • Utilising remote sensing technologies such as satellite imagery and other emerging technologies can provide valuable insights into invasive plants and animals distribution and habitat suitability. • Environmental DNA analysis allows for early detection of invasive plants and animals by identifying their presence/absence in water samples.
Climate change impacts	Climate change alters habitat suitability and can facilitate the spread of invasive plants and animals into new regions. Rising temperatures, changing precipitation patterns, and extreme weather events may create new opportunities for invasive plants and animals to establish and thrive. Climate-driven changes can make effective management decisions more difficult over time, therefore increasing the cost associated with acting.	Specific actions that may support: • Develop climate change adaptation plans that incorporate invasive plants and animals management strategies, such as habitat restoration, targeted surveillance in vulnerable regions, and promoting the resilience of native ecosystems. • Invest in research to understand the interactions between climate change and invasive plants including animal behavioural dynamics that can inform evidence-based management decisions. • Support natural disaster recovery initiatives that focus on controlling pest plant and animal outbreaks.
Invasion pathways related to transport	Queensland's extensive coastline, international ports, and domestic transport connections increase the risk of invasive plants and animals introductions. Invasive plants and animals can move long distances in short amounts of time via human assisted transportation, both globally and domestically.	Specific actions that may support: • Conduct risk assessments to identify high-risk pathways and vulnerable ecosystems to inform strategic prioritisation of invasive plants and animals management efforts. • Communicate with the people and organisations creating the biosecurity risks in transportation pathways to

		ensure that they are aware of their biosecurity obligations. • Strengthen biosecurity measures at ports, airports, and state/territory border crossings to detect, intercept and prevent the introduction of invasive plants and animals. • Strengthen awareness and reporting practices within the supply chain. • Training, education, and awareness.
Limited resources	Many stakeholders face constraints in terms of funding, resources, and technical expertise for invasive plants and animals management. Limited resources may hinder efforts to prevent, detect, and control invasive plants and animals effectively.	Specific actions that may support: • Prioritise investment in cost-effective management strategies with high potential for success and monitor outcomes. • An increase in the continuity and level of funding and resources allocated to invasive plants and animals management programs, including government grants, research funding, and partnerships with non-governmental organisations and community groups.
Public awareness and engagement	Engaging stakeholders, including landowners, communities, and policymakers, is crucial for successful invasive plants and animals management. Increasing public awareness of the risks posed by invasive plants and animals and promoting citizen science initiatives can help mobilise support for prevention and control efforts.	Specific actions that may support: • Develop and support existing education campaigns to inform the public about the risks posed by invasive plants and animals and promote citizen science initiatives for early detection and reporting. • Encourage community involvement in invasive plants and animals control activities through volunteer programs, workshops, and collaborative projects with local organisations. • Support community-led approaches through promotion of support tools and development and extension of evidenced-based approaches and methodologies.

The stages and scope of management

To effectively address the impacts of invasive plants and animals, we need to consider management in the context of the full continuum of activity as it relates to biosecurity. This continuum is shown in the following generalised invasion curve.



Source: *Biosecurity Strategy for Victoria* (2009)

Key management stages of the invasion curve are:

- prevention of an incursion (including planning and preparedness)
- eradication of an incursion (usually requiring early detection)
- containment of an incursion (to a geographical area)
- protection of assets (from impacts once an invasive plant or animal is established)

The invasion curve includes an indicative economic return for management/action at each stage. The return on investment is higher for prevention than for management of localised or widely established populations.

Operationally, the approach required to eradicate new invasive plants and animals is quite different from that required to protect assets from established invasive plants and animals. Managing established invasive plants and animals focuses on mitigating impacts on assets, as eradication may not be feasible.

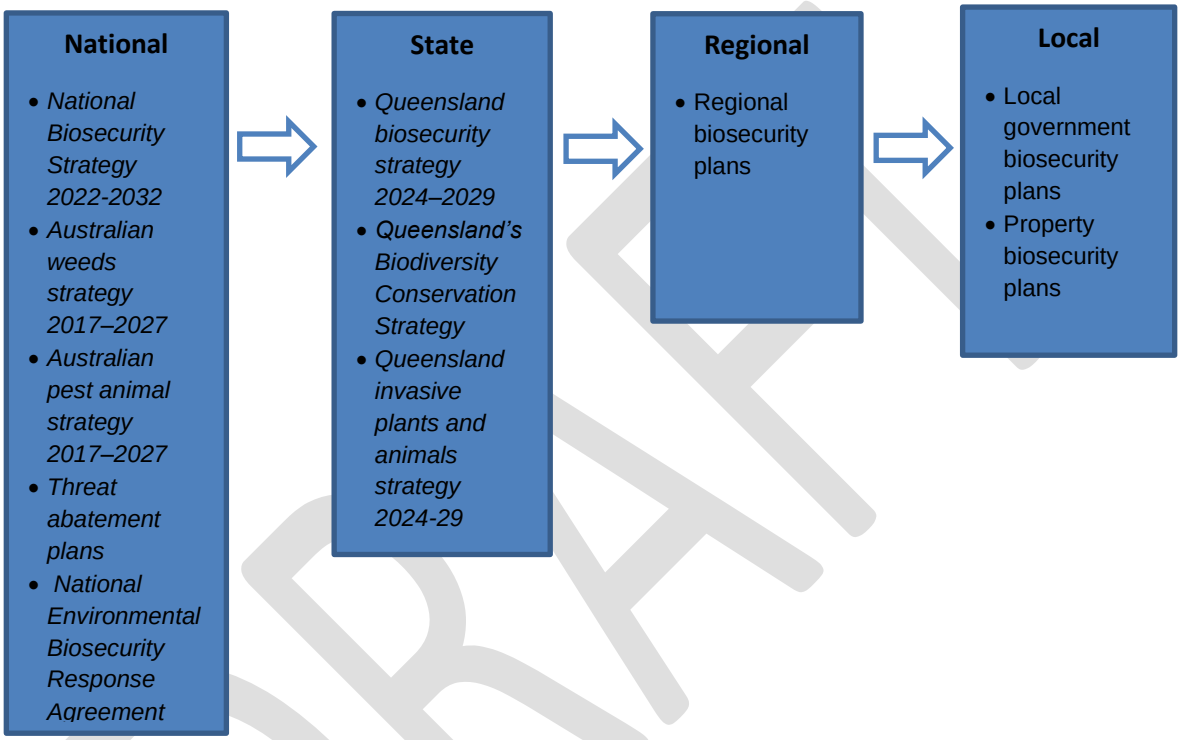
The roles and responsibilities of each stakeholder change along the invasion curve, in line with the actions needed and who is best placed to carry them out. Given the higher costs and greater return on investment at the beginning of the invasion curve, governments have more involvement in the earlier stages of management—prevention, eradication and, to an extent, containment. Protection of assets (whether public or private) from the impacts of established invasive plants and animals is better managed locally by the owners and managers of those assets, or in some cases by local community groups.

Decisions on the protection of private assets (such as land, crops, and livestock) are often best made at a property, enterprise, or local level. Prevention and early detection can be

highly effective at a property level. Actions are most effective when prioritised through risk management.

Government's role in the later stages of the invasion curve includes providing support for on-ground management, as well as support for research, extension, facilitation, planning, policy, and regulation.

The management focus for invasive plants and animals may vary across spatial scales. For example, the management strategy for a certain invasive plant may be asset protection at the state level, but for some regions it may be containment and within that region, at a local level, it may be eradication. Therefore, the management of invasive plants and animals requires planning and coordination at national, state, regional, local, and even property levels.



The law

This strategy has the intention to provide guidance to all Queenslanders about how to meet their obligations under the *Biosecurity Act 2014* (*the Act*).

To cope with the threat posed by invasive plants and animals, Queensland needs flexible and responsive laws. The Act provides this by establishing a framework for minimising biosecurity risks and facilitating the timely and effective response to biosecurity events and impacts.

The Act imposes a general biosecurity obligation, known as the GBO, on each person to manage biosecurity risks in their control and prevent biosecurity events from occurring. Everyone must take all reasonable and practical measures to prevent or minimise biosecurity risks, such as those presented by invasive plants and animals.

Risk-based decision-making is included in the Act. This means that an appropriate level of response must be actioned to address a potential risk.

More detail on the Biosecurity Act is provided in Appendix 2.

Ensuring compliance with the *Biosecurity Act 2014*

Local Government and State Government are authorised to ensure that people dealing with invasive plants and animals do so in compliance with the Act. Each organisation has a role outlined in the legislation to ensure that people are fulfilling their GBO and their obligations with respect to prohibited and restricted invasive biosecurity matter with which they are dealing. The leading role of each organisation is summarised below.

State Government - Department of Agriculture and Fisheries compliance responsibilities

The Department of Agriculture and Fisheries:

- is responsible for the administration of the Act.
- monitors the implementation of the Act to ensure that those with functions and obligations under the Act take reasonable steps to manage invasive biosecurity matter.
- co-operates with Local Governments by undertaking joint compliance for invasive biosecurity matter.

Local Government compliance responsibilities

Local Governments in Queensland:

- must have a biosecurity plan (Section 53 of the Act) for invasive biosecurity matter in its Local Government area.
- are required to implement the Act in Queensland as per section 48 obligations. The main function of a Local Government under the Act is to ensure “Invasive Biosecurity Matter” is managed in its area in compliance with the Act. This means that Local Governments are responsible for the management of compliance programs that ensure invasive biosecurity matter is managed in accordance with the Act and in accordance with Local Government biosecurity plans.
- must meet their GBO for the management of invasive plants and animals on land that it manages.

Implementing the Strategy - Management responsibilities

The roles and responsibilities in implementing the strategies and actions in invasive plants and animals management in Queensland presented in this Strategy are summarised in Table 1. However, responsibilities may vary in certain circumstances, and many stakeholders work beyond those outlined.

Table 1 - Roles and responsibilities in invasive plants and animals management in Queensland

Stakeholder	Responsibility
Federal Government	- Border protection - Emergency response coordination - National framework - National legislation, policies, and programs.
Queensland Department of Agriculture and Fisheries	- Enforce compliance with *Biosecurity Act 2014 (*see section - Ensuring compliance with the *Biosecurity Act 2014*) - State research capability and collaboration - Coordination and Declaration of Emergency Responses - Undertake State responses and State component of national responses

	- Invasive plants and animals legislation and policy development - Awareness, extension, and education programs to support the communication of the GBO to people.
Local Government	- Enforce compliance with *Biosecurity Act 2014* (see section - Ensuring compliance with the *Biosecurity Act 2014*) - Local Government biosecurity planning - Local Government area policy development - Communication of the GBO to people in the Local Government area - Management of invasive plants and animals on Local Government lands as per GBO - Implement 'good neighbour' policy.
Regional Pest Management Subcommittees	- Determine regional priorities and associated management plans - Foster involvement of all region stakeholders and collaboration across all land tenures - Regional biosecurity plan development and implementation.
Landowners/ managers – Excluding State Government Land Management	- Management of invasive plants and animals on their own land as per GBO - Undertake management activities - Participate in collaborative management - Utilise best management practice approaches - Implement and practice 'good neighbour' policy - Develop and implement property biosecurity plans.
Department of Environment, Science and Innovation (DESI)	- Management of invasive plants and animals on protected areas as per GBO - Collaborate in Local Government biosecurity planning processes - Develop and deliver programs in accordance with policies for biodiversity conservation including for protection against threats posed by invasive plants and animals - Implement "good neighbour" policy - Administer legislation for nature conservation / Enforce compliance with the *Nature Conservation Act 1992* including for management of protected areas, control of threatening processes - Ensure protected area plans include actions to manage invasive plants and animals.
State Government Land Management agencies – excluding DESI land	- Management of invasive plants and animals on state lands as per GBO - Implement 'good neighbour' policy - Collaborate in Local Government biosecurity planning processes - Development and implementation of State land biosecurity plans.
Industry groups	- Facilitation of management for local priorities - Assistance in shaping relevant policies

	- Support land manager engagement - Leadership of the implementation of best management practice.
Regional NRM organisations, Landcare, community and conservation groups	- Facilitation of regional and local strategies by contributing to regional planning processes - Promote community awareness - Provide technical and extension advice - Investigate the delivery of incentives - Facilitate land manager engagement - Support and inform development of best management practice.
Research providers	- Deliver invasive plants and animals research and development - Support extension, training, and education in best management practice - Support the development of relevant policies.

Themes

Six key themes, with related objectives and strategic actions will help to achieve the vision and provide the means for undertaking the mission. The specific actions aligned with each strategic action, under each theme should be guided by the principles on page 5 - 6 and incorporated into these actions across all management levels.

- Theme 1: Prevention and preparedness
- Theme 2: Effective management approaches
- Theme 3: Strategic planning
- Theme 4: Communication, engagement and training
- Theme 5: Commitment, roles and responsibilities
- Theme 6: Monitoring and assessment

How will you protect Queensland

The Australian Government, the Queensland Department of Agriculture and Fisheries, Local Government, Regional pest management subcommittees, landowners and managers, the Queensland Department of Environment, Science and Innovation, State Government land management agencies, industry groups, Regional NRM organisations, land care, community and conservation groups, research providers and others have an opportunity to contribute to this strategy by identifying specific actions they will undertake..

Everyone who has a GBO is encouraged to develop a plan of action to identify and deliver on their obligations. We encourage all to take ownership of managing biosecurity within their organisations or communities. Using the objectives and the strategic actions table below, where relevant, identify your roles and responsibilities in conjunction with the themes. Consider the strategy and then provide reasonable and actionable feedback on how you see yourself contributing to the objectives outlined within each theme.

Use the template from the document library on the engagement hub webpage when providing this feedback.

Theme 1: Prevention and preparedness

Prevention and early intervention are the most cost-effective management strategies. It is usually impossible to eradicate an established invasive plant or animal. Impacts and/or management costs for these species often become perpetual.

Government has a greater involvement in the earlier stages of prevention and eradication than in later stages of management. However, everybody has a role in preventing the introduction and spread of invasive plants and animals.

An invasive plant or animal may present different levels of risk and hazard in different regions, environments and productive systems. We need to determine these levels before deciding on priorities for prevention and management.

Preventing the spread of current invasive plants and animals will reduce the risk of further negative impacts.

Theme 1: Prevention and preparedness			
Objective	**Strategic Actions**	**Specific action by whom?** *Do I have a responsibility for this action?* *How will your roles and responsibilities achieve the specific strategic actions?* *What you will do.....?*	**What does success look like?** *What are the expected outcomes?* *How will you know when you meet your responsibility for this action?* *Can it be measured/how?*
Prevent the introduction, establishment and spread of invasive plants and animals	1.1 Cooperate with all Australian states and territories and the Federal Government to develop consistent, risk-based policies to prevent the introduction of potentially invasive plants and animals.		
	1.2 Enforce legislative provisions and implement compliance strategies for high-priority potentially invasive plants and animals.		
	1.3 Collaborate on the development of national invasive plants and animals response plans, including agreements on cost-sharing for new incursions.		
	1.4 Encourage industry-driven approaches (such as standard operating procedures and quality assurance advance agreements between government and industry) to improve prevention, eradication and control.		
	1.5 Encourage community-driven approaches to improve early detection, eradication and control methods.		

	1.6 Support and promote best practice prevention of spread of invasive plants and animals.		
	1.7 Develop and maintain biosecurity emergency preparedness based on quality information, training and administration systems.		
	1.8 Adopt and implement risk-based eradication, mitigation and control plans for specific invasive plants and animals.		

Theme 2: Effective management approaches

It is widely accepted that, for invasive plants and animals, integrated management systems are the most effective. That is, best practice for effective control often involves multiple control methods, and successful long-term management relies on cooperation with neighbors and the coordination of control activities. Therefore, to ensure the best possible outcomes, we will call upon all stakeholders to advocate and adopt best practice for all management activities.

Legislation on the management of invasive plants and animals is backed by suitable enforcement measures, but enforcement is best used when other approaches have failed.

Theme 2: Effective management approaches			
Objective	**Strategic Actions**	**Specific action by whom?** *Do I have a responsibility for this action?* *How will your roles and responsibilities achieve the specific strategic actions?* *What we will do…..?*	**What does success look like?** *What are the expected outcomes?* *How will we know when we met our responsibility for this action?* *Can it be measured/how?*
Use management approaches	2.1 Develop and deliver continually evolving best practice approaches for the management		

that effectively reduce the impacts of invasive plants and animals	of invasive plants and animals based on the risk presented.		
	2.2 Develop control programs that include input from land managers (including First Nations) and are consistent with sustainable management practices.		
	2.3 Strengthen research capacity.		
	2.4 Enhance control techniques through continued research, development and extension that develops and informs best practice management.		

Theme 3: Strategic planning

Through strategic planning, we can prioritise actions and ensure that resources are used for maximum effect.

However, a strategic approach can only achieve common goals and priorities if there is effective communication and cooperation between all parties within the system. Biosecurity planning offers a 'partnership' mechanism to achieve this level of coordination and efficiency.

The *Biosecurity Act* facilitates a risk-based approach to the management of invasive plants and animals; this approach promotes the efficient use of resources.

Theme 3: Strategic planning			
Objective	**Strategic Actions**	**Specific action by whom?** *Do I have a responsibility for this action? How will your roles and responsibilities achieve the specific strategic actions? What we will do.....?*	**What does success look like?** *What are the expected outcomes? How will we know when we met our responsibility for this action? Can it be measured/how?*
Develop strategic plans for managing	3.1 Develop Local Government area biosecurity plans in collaboration with the community, the State Government, land		

invasive plants and animals in collaboration with stakeholders and using a risk-based approach	managers and regional NRM organisations (including input from regional NRM plans).		
	3.2 Determine priorities and develop Statewide strategic plans for individual invasive plants and animals and specific practices.		
	3.3 Develop biosecurity plans for state-controlled lands that complement Local Government plans.		
	3.4 Promote sharing of resources, expertise and knowledge to foster effective detection and response processes.		
	3.5 Foster a long-term focus for resources and research, development and extension activities.		

Theme 4: Communication, engagement and training

Effective management of invasive plants and animals relies on broad stakeholder knowledge of the problem and the management issues. However, people are often not aware of the impacts that invasive plants and animals have on the environment or primary production, or that their own actions may be contributing to a problem.

In fact, many such problems are increased through lack of community knowledge. For example, people may not realise that they assist the spread of invasive plants and animals if they release domestic animals or pets into the environment or unintentionally move seeds of invasive plants (via contaminated livestock, soil or equipment).

The level of knowledge on invasive plants and animals is increasing, but more targeted public education and a higher public profile are needed. Different stakeholders need different information and support to raise their awareness of problems and increase their willingness to help with management.

Increased industry support for management of invasive plants and animals is one way of increasing awareness of land managers.

Overall community awareness may improve when stakeholders have accessible, science-based information on invasive plants and animals, their characteristics, their impacts and required control actions. When people have this knowledge, they may also be enabled to take ownership of the issue with increased confidence and be more likely to act.

Theme 4: Communication, engagement and training			
Objective	**Strategic Actions**	**Specific action by whom?** *Do I have a responsibility for this action? How will your roles and responsibilities achieve the specific strategic actions? What we will do.....?*	**What does success look like?** *What are the expected outcomes? How will we know when we met our responsibility for this action? Can it be measured/how?*
Communicate and engage with stakeholders so they understand their role and have the skills and knowledge to manage invasive plants and animals	4.1 Publicise and provide information on invasive plants and animals and the GBO to all relevant stakeholders and the wider community.		
	4.2 Promote the use of citizen science initiatives to enhance management efforts.		
	4.3 Improve communication networks at all levels to encourage best practice and discourage actions that contribute to or maintain invasive plants and animals impacts.		
	4.4 Review the Australian Qualification Framework to promote and facilitate new competencies to meet Queensland's future needs.		
	4.5 Promote and facilitate high-quality training in the management of invasive plants and animals.		

Theme 5: Commitment, roles and responsibilities

To successfully control invasive plants and animals in the long term, we need clearly defined and accepted roles and responsibilities. There is often some confusion within the community about the exact responsibilities of land managers, Local Governments, and the State Government in the management of invasive plants and animals —this confusion must be addressed.

When planning and implementing management programs, stakeholders should recognise each other's capacity to deliver the desired outcomes. The broad scope and nature of problems demands a long-term commitment by all stakeholders; they need to recognise the effort, time and cost required for effective management.

Local Government planning is crucial to the success of invasive plants and animals' management and provides an opportunity to foster community commitment to roles and responsibilities. NRM organisations facilitate planning and management at a regional level, while State Government agencies have a responsibility to manage invasive plants and animals on lands and water bodies under their control. Community and Local Government planning must include all stakeholders (such as managers of state land) early in the process.

Theme 5: Commitment, roles and responsibilities			
Objective	**Strategic Actions**	**Specific action by whom?** *Do I have a responsibility for this action? How will your roles and responsibilities achieve the specific strategic actions? What we will do.....?*	**What does success look like?** *What are the expected outcomes? How will we know when we met our responsibility for this action? Can it be measured/how?*
Foster stakeholder commitment to coordinated, landscape-scale management programs and initiatives	5.1 Develop the knowledge, capacity and commitment of key stakeholders so that they can play an active and constructive role in the management of invasive plants and animals.		
	5.2 Encourage all land managers, including government, to use a collaborative landscape approach to the management of invasive plants and animals.		
	5.3 Seek alternative investment opportunities (private, industry etc) for projects addressing management of invasive plants and animals.		
	5.4 Promote the economic and environmental benefits of managing invasive plants and animals to encourage co-investment.		

Theme 6: Monitoring and assessment

We need reliable data from monitoring to ensure that invasive plants and animals are managed holistically and for the long term. This data will inform progress and investment.

To control invasive plants and animals, we need a balance between prevention, surveillance and preparedness.

An increasing amount of information is available on the distribution, abundance and impacts of invasive plants and animals. However, this data could be better organised and analysed through existing and new technologies, leading to improved decision-making.

Investment in this area is critical to the success of the strategy.

Theme 6: Monitoring and assessment			
Objective	**Strategic Actions**	**Specific action by whom?** *Do I have a responsibility for this action? How will your roles and responsibilities achieve the specific strategic actions? What we will do.....?*	**What does success look like?** *What are the expected outcomes? How will we know when we met our responsibility for this action? Can it be measured/how?*
Develop and use standardised methods to monitor, report on and assess the status and effectiveness of invasive plants and animals management actions undertaken	6.1 Develop, promote, and utilise standardised protocols for data collection to integrate invasive plants and animals monitoring systems from multiple sources and jurisdictions, including citizen science.		
	6.2 Develop and establish monitoring and reporting programs for priority invasive plants and animals management activities.		
	6.3 Quantify and understand the impacts of significant invasive plants and animals through research programs to determine acceptable levels of impact and develop strategies to mitigate risk.		
	6.4 Undertake regular risk reviews to update priority species.		

Glossary

asset	something with environmental, social or economic value, whether publicly or privately owned, that invasive plants or animals may directly or indirectly affect
asset protection	action taken to mitigate the impacts of an invasive plants and animals on specified assets in a predefined area (e.g. indirect protection such as exclusion fencing for rabbits, wild dogs or foxes); not necessarily direct control, reduction or destruction of the species
biosecurity matter	**1** a living thing other than a human or part of a human **2** a pathogenic agent that can cause disease in a living thing other than a human, or in a human by transmission of the pathogenic agent from an animal to a human **3** a disease **4** a contaminant
biosecurity risk	a risk of any adverse effect on the environment, the economy, human health or social amenity caused or likely to be caused by biosecurity matter, by dealing with biosecurity matter or a carrier, or by carrying out an activity relating to biosecurity matter or a carrier
carrier	any animal or plant (or part of an animal or plant) or any other thing—whether dead, alive, or inanimate—that is capable of moving biosecurity matter attached to or contained in the animal, plant or other thing
containment	action taken to prevent the spread of invasive plants and animals beyond a predefined area
eradication	the removal of all individuals of invasive plants and animals from a defined area
established invasive plants and animals	an invasive plant or animal that is perpetuated, for the foreseeable future, within an area where it is not feasible (either technically or financially) to eradicate it
good neighbour policy	the development and maintenance of positive relationships with neighbours and the local community to help support invasive plant and animal management
general biosecurity obligation	a legal obligation requiring a person who deals with biosecurity matter or a carrier, or who carries out an activity, to take all reasonable and practical measures to prevent or minimise biosecurity risks associated with that biosecurity matter or activity
invasive animal	an animal, including an invertebrate pest, that has or may have an adverse impact on the environment, the economy, human health or social amenity
Invasive biosecurity matter	as defined in section 48 of the *Biosecurity Act 2014*
invasive plant	a plant that requires some form of action to reduce its negative effects on the environment, the economy, human health, or social amenity
land manager	an individual, company, organisation or government that owns, leases or manages private, commercial or government land
natural resource management (NRM) group	an organisation that acts as a regional delivery agent (under the regional stream of the National Landcare Program and the Queensland Regional Natural Resource Management Investment Program) and focuses on on-ground activities that protect, improve and restore waterways and rangelands by managing invasive plants and animals, and improving soil, vegetation and water quality at a river-catchment or other landscape level
nil-tenure approach	an approach in which a range of control methods are applied across all tenures by all stakeholders at a ‘landscape’ (rather than ‘property’) level in a cooperative and coordinated manner

predation	the killing of one animal (prey) by another animal (predator) for food
prevention	actions such as pre-border risk assessments and quarantine that minimise the risk of a species entering an area
risk management	the process of identifying risks and selecting and implementing measures to reduce levels of risk
social amenity	refers to facilities, services, or features within a community or society that contribute to the well-being, quality of life, and social interactions of its residents. Also, it can be defined as the liveability of a "place"

Appendix 1: Alignment with other strategies

This strategy promotes actions that will complement those arising from the following documents.

Conserving Nature – A Biodiversity Strategy for Queensland (2022)

Queensland's Biodiversity Conservation Strategy sets out four Goals, each with relevance for management of invasive plants and animals:

1. Protect – biodiversity is protected and managed, so large, representative areas of ecosystems are intact and as free from threats as possible. Protecting our habitats, ecosystems and threatened species from weeds and pests, and avoiding the spread of invasive plants and animals in protected areas, are focus areas.
2. Restore – Queensland ecosystems and species populations are recovered to maximise the viability of ecosystems and threatened species in the wild. Reducing the pressures of threats is essential to improve degraded habitat and reinstate lost ecosystem function.
3. Adapt – biodiversity is resilient to changing environmental conditions, including the current and future impacts of climate change. Managing the increased risk of invasive plants and animals and managing future impacts to maximise resilience are key elements.
4. Connect – biodiversity is valued, including for its contributions to wellbeing, and people are motivated to protect it. Building awareness, supporting community action and engagement in conservation, and ensuring policy decisions of government consider impacts on biodiversity and the precautionary principle, are key focuses.

Approaches to monitoring and evaluation are being identified to allow progress reporting and to inform future reviews or amendments of the Biodiversity Conservation Strategy.

Queensland biosecurity strategy: our next five years 2024–2029

The biosecurity strategy outlines six themes for management within the Queensland biosecurity network:

1. collaborative governance and leadership
2. every Queenslander plays their part
3. empowered to act
4. innovation and intelligence valuing and building on our investments
5. response effectiveness and preparedness.

Australian pest animal strategy 2017–2027

The approach in this strategy embodies eight principles that underpin effective pest animal management:

1. Prevention and early intervention to avoid the establishment of new pest animal species is generally more cost-effective than ongoing management of established populations.
2. Pest animal management is a shared responsibility between land managers, community, industry and government.
3. Management of mobile pest animals requires a coordinated approach across a range of scales and land tenures.
4. Management of established pest animals should focus on the protection of priority assets (for example, a lambing paddock or a threatened ecological community) but also usually requires a 'buffer' management area around the asset to account for pest animal mobility.
5. Pest animal management should be based on actual rather than perceived impacts and should be supported by monitoring to measure whether impact reduction targets are being achieved.
6. Best practice animal management balances efficacy, target specificity, safety, humaneness, community perceptions, efficiency, logistics and emergency needs.
7. Best practice pest animal management integrates a range of control techniques (including commercial use where appropriate), considers interactions between species (such as rabbits and foxes) and accounts for seasonal conditions (for example, to take advantage of pest animal congregations during drought) and animal welfare.
8. The cost of pest animal management should be borne by those who create the risk and those who benefit from its management. Governments may co-invest where there is a net public benefit from any such intervention.

Australian weeds strategy 2017–2027

This strategy promotes seven principles that underpin effective weed management:

1. Effective weed management is a responsibility shared between land managers, community, industry and government.
2. Evidence-based decision-making should underpin the approach to weeds.
3. Risk-based prevention and early intervention is generally the most cost-effective approach for managing weeds.
4. Prioritisation of weed management must be informed by a risk-based approach, considering feasibility, likelihood of success and impact.
5. Coordination amongst land managers, community, industry and government is necessary to manage weeds at a landscape scale.
6. Sustaining capability and capacity across land managers, community, industry and government is fundamental to effective weed management.
7. Individuals, organisations and industry groups that create risks that may result in a weed entering, emerging, establishing or spreading in Australia have a role in minimising the impacts and contributing to the costs of management.

Appendix 2: Further information on the *Biosecurity Act 2014*

Purposes of the Act

The main purposes of this Act are as follows:

- To provide a framework for an effective biosecurity system for Queensland that—
    - helps to minimise biosecurity risks; and
    - facilitates responding to impacts on a biosecurity consideration, including responding to biosecurity events, in a timely and effective way;
    - to ensure the safety and quality of animal feed, fertilisers and other agricultural inputs;
    - to help align responses to biosecurity risks in the State with national and international obligations and requirements for accessing markets for animal and plant produce, including live animals and plants.
- To manage risks associated with the following:

- emerging, endemic and exotic pests and diseases that impact on:
    - plant and animal industries, including agriculture, aquaculture, horticulture, fisheries and forestry industries; or
    - the built environment; or
    - companion or leisure animals; or
    - biodiversity and the natural environment; or
    - tourism, lifestyle and pleasure industries; or
    - infrastructure and service industries, including power, communication, shipping and water supplies;
- the transfer of diseases from animals to humans and from humans to animals;
- biological, chemical and physical contaminants in carriers.

How purposes of the Act are primarily achieved

The purposes of this Act are to be achieved primarily by:

- imposing a general obligation on persons to prevent or minimise the impact of biosecurity risks on human health, social amenity, the economy and the environment (each a ***biosecurity consideration***); and
- regulating activities involving biosecurity matter or carriers; and
- including in risk-based decision-making under this Act the principle that lack of full scientific certainty should not be used as a reason to postpone taking action to prevent a biosecurity event or to postpone a response to a biosecurity risk; and
- providing for flexible and timely ways of minimising and mitigating biosecurity risks; and
- providing for monitoring and enforcement of compliance with this Act; and
- providing for codes of practice relating to a person's obligations under this Act; and
- providing for the chief executive to make guidelines or policies about the application of this Act and how a person may comply with obligations imposed under this Act; and
- providing for a framework that improves the capacity of Local Governments, industry and the community generally to respond to biosecurity risks.

General Biosecurity Obligation (GBO)

Biosecurity is everyone's responsibility, and we all play a role to ensure we minimise biosecurity risks to protect Queensland's lifestyle, industries and environment from pests and diseases.

All people in Queensland have a GBO under Queensland's *Biosecurity Act 2014* to ensure they do not spread a pest, disease or a contaminant. This applies to corporations too.

This means everyone is responsible for managing biosecurity risks that are under their control; and to the best of their ability, recognise and minimise biosecurity risks where they work, where they live and at places they visit.

Under the GBO, individuals and corporations whose activities pose a biosecurity risk must:

- take all reasonable and practical steps to prevent or minimise each biosecurity risk
- minimise the likelihood of causing a 'biosecurity event ', and limit the consequences if such an event is caused by preventing or minimising the harmful effects a risk could have, and
- not do anything that might make any harmful effects worse.

Precautionary principle

In addition, the Act includes the precautionary principle that a lack of full scientific certainty will not be used as a reason to postpone preventative action or to delay response to a biosecurity risk. The precautionary approach in the case of invasive plants and animals will

refer to the prevention of introduction and establishment, or taking prompt action to control the spread, even when scientific certainty about the potential impact may be lacking.

For example, an inability to identify a specimen in the field would not prevent a person including an inspector or an authorised officer from taking immediate steps to prevent the escape or loss of the specimen thereby further exacerbating the risk where it is later determined to be biosecurity matter.

Invasive plants and animals

There are certain species of invasive plants and animals that are regulated as prohibited or restricted matter and invasive biosecurity matter under the Act due to the high level of biosecurity risk that they pose.

Not all invasive plants and animals are listed as prohibited or restricted matter in Queensland, but people dealing with unregulated invasive plants and animals still have an obligation under the GBO to manage the biosecurity risks.

Prohibited invasive plants and animals

Prohibited invasive plants and animals:

- are not present in Queensland
- would seriously threaten Queensland's agriculture industries, natural environment, livestock, human health and people's livelihoods
- if found in Queensland must be reported to Biosecurity Queensland within 24 hours of the sighting
- a person reporting the prohibited plants and animals must take all reasonable and practical steps to minimise the risk of it spreading until they receive advice from an authorised officer.

Restricted invasive plants and animals

Restricted invasive plants and animals:

- are established in Queensland
- seriously threaten Queensland's agriculture, natural environment, livestock, human health and people's livelihoods
- under the *Biosecurity Act 2014*, there are 7 categories of restricted matter (i.e. restricted matter may include matter such as plants, animal diseases, invasive fish, insects, invasive animals and weeds).

Restricted invasive plants and animals may fall into one or more risk categories (listed below). Under each category the restricted invasive plant or animal has listed restrictions. The specific restriction requirements also apply to a person when dealing with restricted invasive plant or animal unless they have a restricted matter permit.

Restricted invasive plant and animal categories and restrictions:

- Category 1: the invasive plant or animal must be reported to an inspector (the Department) within 24 hours
- Category 2: the invasive plant or animal must be reported to an authorised officer (Local Government or the Department) within 24 hours
- Category 3: the invasive plant or animal must not be distributed either by sale or gift or released into the environment
- Category 4: the invasive plant or animal must not be moved
- Category 5: the invasive plant or animal must not be kept
- Category 6: the invasive animal must not be fed
- Category 7: The invasive animal must be killed.

Invasive Biosecurity Matter

Invasive biosecurity matter refers to the following biosecurity matter that Local Governments in Queensland are obligated to manage within their Local Government's area in compliance with this Act:

- prohibited matter mentioned in schedule 1, parts 3 and 4;
- prohibited matter taken to be included in schedule 1, parts 3 and 4 under a prohibited matter regulation or emergency prohibited matter declaration;
- restricted matter mentioned in schedule 2, part 2;
- restricted matter taken to be included in schedule 2, part 2 under a restricted matter regulation.