

CONSULTATION DRAFT

NATIONAL BIOSECURITY STRATEGY

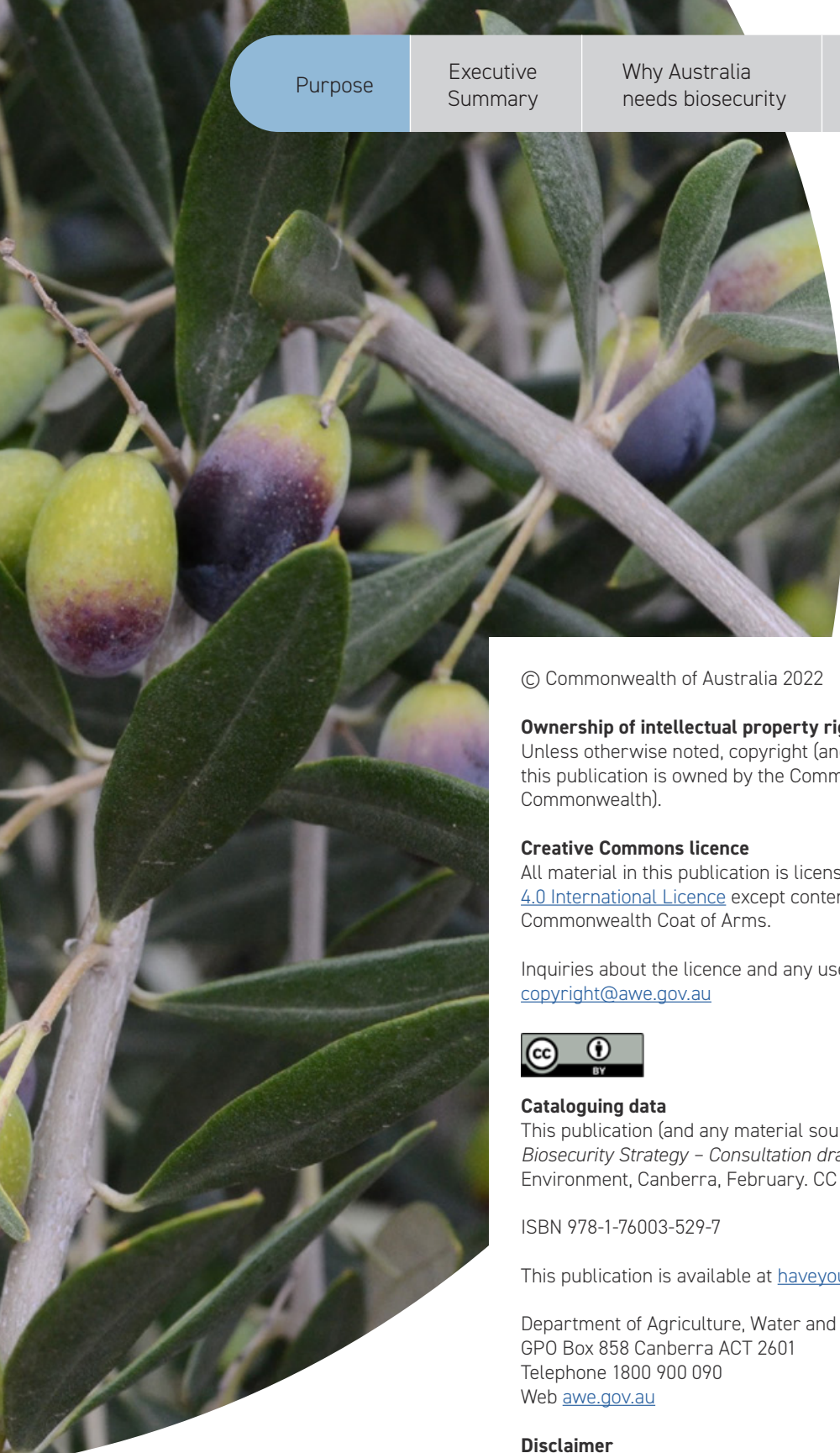
Connected

Resilient

Shared



February 2022



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Acknowledgement of Country

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.

Purpose of the consultation draft

Help to set the direction of our biosecurity system with your feedback on the consultation draft of the National Biosecurity Strategy.

We've been working with biosecurity stakeholders to develop this consultation draft of the National Biosecurity Strategy.

It captures the views we've heard so far from industry, environmental groups, researchers, the community and government stakeholders about how our biosecurity system needs to evolve.

We're now seeking feedback on the consultation draft.

We want to hear from you on the future direction of Australia's biosecurity system, the ideas we've included in the consultation draft and how we should work together to implement the final strategy. We've included some questions at the end of this document to help guide your feedback.

Your input is vital to ensure that the national strategy reflects the role all Australians can and should play within our biosecurity system.

The final strategy will be presented to all Australian ministers responsible for biosecurity in 2022.

WHO ARE WE?

We are the National Biosecurity Committee (NBC) – senior biosecurity officials from all Australian governments. NBC provides advice to the Agriculture Senior Officials Committee (AGSOC) which supports ministers responsible for primary industries.

We've worked with stakeholders to develop this consultation draft, including Plant Health Australia and Animal Health Australia, and have been supported by a reference group of system stakeholders.

SHARE YOUR FEEDBACK

We invite you to participate in the development of the national strategy and share your feedback.

Visit National Biosecurity Strategy Have Your Say: <https://haveyoursay.awe.gov.au/national-biosecurity-strategy>

If you have any questions, please email nationalbiosecuritystrategy@awe.gov.au

NATIONAL BIOSECURITY STRATEGY REFERENCE GROUP

Australian Banana Growers' Council

CSIRO

Freight and Trade Alliance

Invasive Species Council

National Farmers' Federation

Seafood Industry Australia

Torres Strait Regional Authority

Rural Research and Development Corporations representative – Australian Pork Limited

Purpose of the National Biosecurity Strategy

WHAT IS THE NATIONAL BIOSECURITY STRATEGY?

The biosecurity risks facing us are becoming increasingly complex and harder to manage. In this challenging and changing environment, we need to continually evolve our system to ensure our biosecurity remains strong.

The National Biosecurity Strategy will guide this evolution.

Our national system is greater than the sum of its individual parts. It's a multilayered, interconnected network of people, critical infrastructure and technology, partnerships, processes and regulatory activities that function cohesively overseas, at our border and within Australia to protect our national interests.

We will build from this solid foundation, uniting behind a collective vision and purpose in the national strategy to enhance the significant capability within our biosecurity system.

We all have a valuable role to play in supporting our biosecurity. The national strategy will help us to work more effectively together, by driving improved collaboration, innovation and awareness at local, regional, national and international levels.

It will outline the future biosecurity environment and detail the current challenges and barriers we face. To help us overcome these challenges, it will also set the approach for how we can best work together to develop and implement action plans and monitor our progress.

The national strategy's scope will include consideration of exotic and established exotic pests, weeds, and diseases, but will not extend to endemic species or human biosecurity.

It will be informed by, and will build on, the considerable efforts already being undertaken by the Australian, state and territory governments, industry, Indigenous Australians, environmental groups and the community. The national strategy will be developed in consultation with these stakeholders, overseen by the NBC.

The national strategy will be a living document that will be reviewed every 5 years or sooner if there is a significant change to the risks, challenges or opportunities facing us.



EXECUTIVE SUMMARY

EVOLVING AUSTRALIA'S BIOSECURITY SYSTEM

Our land, air, seas and waterways are deeply interwoven with our way of life – our people, environment and economy – which is why our biosecurity system is so valuable. It's what protects us and the communities we live in from the harmful impacts of exotic and established exotic pests, weeds and diseases.

Even a single biosecurity outbreak can have potentially devastating, costly and far-reaching impacts for Australia.

While our biosecurity system has served us well, we face growing and more complex biosecurity risks driven by factors such as climate change, shifting and unpredictable trade and travel patterns and changes in land use. More than ever before, we are facing multiple risks, on multiple fronts, at the same time.

To ensure we continue to meet the challenges of today and tomorrow, we must act now and evolve how we work together.

OUR VISION FOR AUSTRALIA'S FUTURE BIOSECURITY SYSTEM

A biosecurity system that protects Australia's way of life.

Connected

Resilient

Shared

SHARED PURPOSE BRINGING US TOGETHER

A risk-based system underpinned by science that protects Australia's people, our environment and economy from the biosecurity threats of today and tomorrow.



6 PRIORITY AREAS TO EVOLVE OUR SYSTEM

To achieve our vision and purpose, we will act in 6 priority areas. Our 6 priority areas have guided the development of initial actions and will help us to focus our effort in the areas with the biggest impact.



Shared biosecurity culture

We will enhance our **culture of biosecurity action** so everyone understands its importance and plays their part.



Highly skilled workforce

We will develop and sustain a **highly skilled workforce** to ensure we have the right capability, in the right place, at the right time.



Sustainable investment

We will ensure **funding and investment** is sufficient, co-funded, transparent, and sustainable for the long term.



Stronger partnerships

We will strengthen and expand **partnerships and networks** between all stakeholders at local, regional, national and international levels.



Coordinated preparedness and response

We will boost our system's **adaptability and its capacity** to detect, prevent, manage, respond to and recover from outbreaks.



Integration supported by technology, research and data

We will create a more **connected, efficient and science-based** system to facilitate more timely, informed and risk-based decisions.

WE WILL TAKE ACTION

IN OUR 6 PRIORITY AREAS



Shared biosecurity culture

Build on and develop national education and awareness programs

Encourage positive biosecurity behaviours and incentivise compliance

Revitalise national communication and engagement mechanisms

Determine opportunities to embed biosecurity considerations into decision-making and risk planning.



Coordinated preparedness and response

Undertake and promote regular national preparedness exercises

Advance regionally based planning activities

Continually review and update risk information to inform priorities

Actively embed continuous learning

Strengthen traceability arrangements

Enhance our national surveillance arrangements

Evolve our national information management frameworks.



Stronger partnerships

Enhance partnerships and engagement with Indigenous Australians

Collaboratively review and refine roles and responsibilities

Review governance arrangements to ensure they include relevant stakeholders

Identify opportunities for industry and community involvement in peak decision-making bodies

Strengthen the involvement of environmental agencies

Deepen international partnerships

Work together to help shape global biosecurity standards, rules and conditions.



Sustainable investment

Work together to identify funding needs and determine priorities

Strengthen frameworks to agree and deliver priority investments

Advance co-funding and investment strategies with stakeholders

Increase the transparency of biosecurity funding

Complete a system performance and evaluation framework.



Highly skilled workforce

Identify current and future skills needs in key areas

Develop a workforce strategy to build, retain and deploy capability

Build on and expand existing cooperative arrangements

Strengthen professional development programs.



Integration supported by technology, research and data

Continue to invest in and rollout transformative technologies to digitise and automate processes

Increase stakeholder coordination to prioritise, drive and deliver national research outcomes

Actively share data and research widely

Enhance the accessibility and use of surveillance and interception data

Further support innovations to build science and research capacity.

OUR WAY FORWARD

DRIVING COLLABORATIVE ACTION

More than 30 actions across our 6 priority areas have been proposed in this consultation draft. These initial actions will be built upon and refined through public consultation to ensure they capture the collective efforts needed to implement our national strategy.

As we all share in the success of our biosecurity system, we all must play an important role in ensuring it remains strong and continues to protect our national interests.

Following finalisation of the national strategy, we will continue to work together to drive its implementation by developing action plans, monitoring our progress and adapting where needed to continually improve our system. The NBC will oversee the national strategy's implementation, working collaboratively with all stakeholders.

Through public consultation, we are keen to hear your views on the actions included in the consultation draft, any additional actions we should take, as well as your feedback on how implementation planning should occur.

WHAT IS BIOSECURITY

Australia is free from many harmful pests, weeds and diseases found elsewhere in the world. Our animal, plant, human and environmental health outcomes rely on strong biosecurity – that is, the controls and measures to manage the risk of these pests, weeds and diseases entering, emerging, establishing or spreading within Australia.

THE REACH AND IMPACT OF OUR BIOSECURITY SYSTEM

SCALE OF BIOSECURITY ACTIVITY ACROSS AUSTRALIA



115m

mail items received (letter articles, packages and parcels) on average each year over five years (2016-17 to 2020-21)



2.6m

shipping containers arrived in Australia (2020-21)



**OVER
15,200**

inspections were conducted on international vessels (2020-21)



**ALMOST
4,500**

post border detections were recorded (2020-21)

SAFEGUARDING AUSTRALIA'S INDUSTRIES, ENVIRONMENT, LIVELIHOODS AND WAY OF LIFE



1.6m

jobs across the agricultural supply chain



\$251.5b

total flow of benefits arising from assets vulnerable to biosecurity hazards, including infrastructure, agriculture, forestry and seafood industries and companion animals (2021 estimate)



\$5.7t

in environmental assets over 50 years in present value terms (2020 estimate)



\$73.5b

in gross value of agricultural, forestry and seafood production (2020-21 estimate)



\$52.3b

in agricultural, forestry and seafood exports (2020-21 estimate)



\$50.4b

direct tourism contribution to Australia's GDP (2019-20 estimate)

ACTUAL AND POTENTIAL IMPACTS OF OUTBREAKS AND INCURSIONS



\$5b

annual cost to Australia for weed control measures and lost production (2018 estimate)



\$1.3b

potential cost to our producers and consumers of pollination-dependent crops over 30 years in the event of a varroa mite incursion (2012 estimate)



500 FROG SPECIES

in population decline in part due to the devastating wildlife disease chytridiomycosis



MORE THAN 380 NATIVE SPECIES

at risk of being infected by myrtle rust



\$49.3-\$51.8b

over 10 years in present value terms in the event of a foot and mouth disease outbreak (2013 estimate)



\$7.8-11.1b

potential cost to Australian horticultural industries over 50 years in present value terms if a worst-case *Xylella fastidiosa* incursion occurred (2021 estimate)

Why Australia needs biosecurity

We all enjoy the benefits of biosecurity. It's what protects our unique natural environment, enables us to generate high-quality primary produce, provides access to key export markets and supports our trusted international reputation with our trading partners.

As the risk landscape rapidly changes, our natural and productive ecosystems are becoming increasingly vulnerable to biosecurity risks. These risks can devastate our native plants and animals, impact our agricultural, seafood and forestry industries and compromise our clean air, water and land.

Even though our biosecurity system has served us well, we face the challenge of managing a range of growing and changing threats. We can't reduce our biosecurity risk to zero and even a single outbreak has the potential to affect our prosperity, environment, national security, ability to trade and way of life.

Biosecurity outbreaks can potentially lead to:

- devastating impacts to agricultural and horticultural industries and their supply chains through lower yields or damage to crops, produce, livestock or fisheries, as well as increased costs in protection, response or ongoing management activities. These costs are often passed onto customers.
- damage to our unique natural environment and ecosystems, plants and animals.
- an inability for Australian primary producers to access export markets, as well as possible reputational damage to our premium, high-quality produce.
- detrimental impacts to areas of nationally significant land and sea Country that have important cultural and heritage value to Indigenous Australians and the wider community.
- delays in access to essential produce due to supply chain disruptions and the impact of biosecurity response activities on stock levels or distribution channels.
- negative impacts on our urban amenity, way of life and human health.

A strong, resilient and adaptable biosecurity system is critical to ensure we manage these increasingly complex risks.



HIGHLY PATHOGENIC AVIAN INFLUENZA

Highly pathogenic avian influenza (AI), also known as bird flu, is a highly contagious viral infection of birds, and can cause severe symptoms and sudden death in poultry. It is generally introduced by infected migratory birds and can be particularly disruptive to chicken, duck, emu and turkey farms, requiring the culling of infected flocks.

A single outbreak of AI could have significant economic impacts and restrict market access for Australian poultry products. Some forms of AI can also have human health impacts, causing influenza in exposed humans.

The Australian, state and territory governments, together with the egg and poultry meat industries, have rapid and effective emergency response plans in place to manage potential outbreaks.

These arrangements were tested in 2020 during the height of Victoria's COVID-19 related lockdowns when an outbreak of AI occurred on six farms. It triggered one of Australia's largest biosecurity emergency responses and demonstrated the critical importance of our people, technology and preparedness arrangements.

The eradication work ran for 9 months with over 340 people involved and included almost 1,400 surveillance visits, as well as significant diagnostic and laboratory testing, at an estimated total cost of \$22 million. This cost was a fraction of the potential losses facing industry if the outbreak had spread further.

Highly pathogenic AI was successfully eradicated from all affected farms in February 2021 and Australia formally regained its AI (notifiable) free status.

KEY – IMPACTS

- Amenity
- Economy
- Environment

KEY – PRIORITIES

- Shared biosecurity culture
- Coordinated preparedness and response
- Highly skilled workforce
- Integration supported by technology, research and data
- Sustainable investment
- Stronger partnerships

How our biosecurity system works

Australia's biosecurity system is multilayered with activities undertaken overseas, at and within our borders. Our system relies heavily on all stakeholders, from governments, industry and research partners, agricultural and environmental groups, Indigenous communities and individuals.

Without strong partnerships at all levels, we can't have a strong biosecurity system.

OVERSEAS

The Australian Government and importers work with overseas counterparts to identify and mitigate biosecurity risks before they reach our border, while also undertaking capacity building activities, including in the Indo-Pacific region, to further our biosecurity, trade, security and national interests. Officials facilitate trade in line with our international obligations, apply import conditions and controls, and engage in risk and intelligence gathering, analysis and horizon scanning. Our overseas partners and industry provide vital intelligence on risks and traceability of products to support this work.

AT OUR BORDER

Robust surveillance and quarantine processes are in place to detect and intercept risks at our national border before they can do us harm. The Australian Government operates border controls, including screening, assessment, inspections and quarantine processes, to support this effort. Travellers have a role to play through their awareness of the importance of biosecurity and declaring goods if required. Industry also helps to protect us by having systems in place to proactively manage risks, apply treatments where needed and participate in surveillance activities.

WITHIN AUSTRALIA

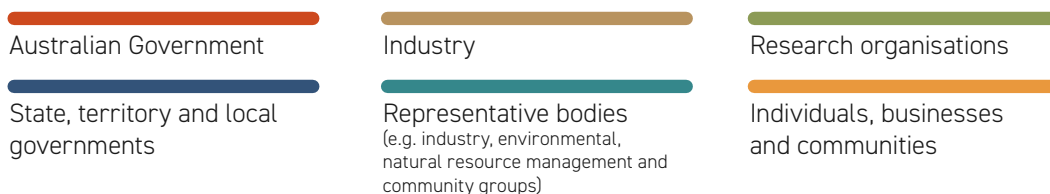
Industry partners, Natural Resource Management organisations, environmental groups, local governments and the wider community work at regional and local levels to plan for, detect and respond to outbreaks and manage and eradicate pests, weeds and diseases. The Australian, state and territory governments lead regulatory activities and support their biosecurity partners to manage or eradicate outbreaks. All system participants work together on the ground to reduce the impact and chance of further spread within and across borders. Research organisations work to enhance our understanding of biosecurity risks and examine new approaches to improve our system in areas like diagnostics, containment and treatments.

The [National Biosecurity Statement](#) mapped the roles we play within the biosecurity system as illustrated below. The national strategy will build from this strong foundation. Through the consultation phase, we want to hear your feedback to ensure that everyone's roles are clear and reflect the future needs of our system.

AUSTRALIA'S BIOSECURITY SYSTEM



PRIMARY RESPONSIBILITIES



OUR BIOSECURITY SYSTEM IN ACTION

Anticipate

Environmental scanning



Offshore surveillance



Collaboration / Programs

with offshore industry and authorities



Import risk analysis / review of import conditions



Modelling



OIE notifiable disease lists



Screen

Inspections



Post entry quarantine



International mail screening



Diagnostics



Border assessments



Storage / destruction

Approved arrangements for storage / destruction of goods



Treatments



Screening



Prepare

Risk analysis



Contingency planning & training



Domestic border assessment



Traceability



Response plans

(e.g. Deeds, PlantPlan & AusVetPlan)



On-farm biosecurity plans



Simulation exercises



Prevent

Offshore treatments / verification and certification



International arrangements



Import conditions / permits



Capability building in neighbours



Partnerships



PRIMARY RESPONSIBILITIES

- Australian Government
- Industry
- Research organisations
- State, territory and local governments
- Representative bodies (e.g. industry, environmental, natural resource management and community groups)
- Individuals, businesses and communities

Detect

Domestic border inspections



Onshore surveillance



Indigenous Rangers



Sentinel herds / plantings



Tracing



Community weed identification



Diagnostics



Respond

Awareness raising



Initial investigation



Emergency responses

(e.g. property quarantines and protocols)



Pest risk analysis



Response plan activation



Community engagement



Recover and/or Adapt

Proof of freedom



Domestic quarantine



Community / industry led programs

(e.g. weed management)



Certification schemes

for product movement



Technical / financial recovery support



Business continuity planning



Biosecurity activity categories sourced from Centre of Excellence for Biosecurity Risk Analysis (CEBRA), Year 1 Report: Valuing Australia's Biosecurity System, Project 1607A – Milestone 6, 28 November 2017, University of Melbourne.

KHAPRA BEETLE

BIOSECURITY OUTBREAKS CAN HAVE FAR-REACHING IMPACTS

KHAPRA BEETLE COULD COST AUSTRALIA

\$15.5B OVER 20 YEARSIF IT BECAME ESTABLISHED
(2014 ESTIMATE)**In 2020-21, responses to 20 interceptions of the khapra beetle (*Trogoderma granarium*) were managed across Australia.**

Changes in global trade patterns, such as increased volumes of goods, container movements and declining container hygiene are some of the drivers of recent increases in khapra beetle interceptions.



THE KHAPRA BEETLE IS SMALLER THAN A GRAIN OF RICE

**AFFECTED CUSTOMERS HAD THEIR PURCHASES REPLACED, AND THE GOODS WERE FUMIGATED**

The incident affected around 300 retail customers across Australia who had their homes and cars inspected and treated with insecticides, with some of their food and pet food collected for destruction. This response prevented the pest from establishing in Australia which could have been severely damaging to our domestic grain producers.





KHAPRA BEETLE

Smaller than a grain of rice, khapra beetle is a serious pest that can contaminate stored grains, rice, oilseeds and dried foodstuffs. It is not established in Australia. Khapra beetle can cause losses of up to 75% from direct feeding. Infested produce also becomes contaminated with beetles, cast skins and hairs from larvae, which can pose a health risk and are difficult to remove from storage structures and transport vessels.

If it were to establish itself here, many of our trading partners would refuse to buy our stored produce, particularly grains. Given Australia exports 65 to 75% of the grain we grow to more than 50 countries, this could cause significant economic losses.

Responding to a khapra beetle (or another exotic pest, weed or disease) outbreak can have wide ranging impacts across the supply chain.



AUSTRALIA EXPORTS
65-75%
OF THE GRAIN WE GROW

EXPORTING TO MORE THAN
50
COUNTRIES



IMMEDIATE ACTION WAS TAKEN ACROSS OUR BIOSECURITY SYSTEM

The retailer worked closely with the Australian Government to remove the goods that were in this consignment from sale across Australia. It secured those goods that had made their way through the supply chain – from the port to the warehouse, to the distributor, to retailers and to customers' homes.



OCTOBER 2020 A DETECTION IN IMPORTED GOODS

The Australian, state and territory governments began investigating and managing a detection of khapra beetle in a container of goods imported by a large retailer. This detection was initially reported by a member of the public who found khapra beetle in packaging material and notified biosecurity officials.



FURTHER BIOSECURITY MEASURES WERE IMPLEMENTED



Additional urgent measures were developed by the Australian Government in consultation with industry to better safeguard our agricultural sector and economy. This included stricter import conditions for high-risk goods and changes to container management. State and territory governments continue to undertake further monitoring and surveillance activities.

We are facing a changing biosecurity environment

Managing biosecurity risks is becoming more complicated. We face a range of compounding risks on multiple fronts, including from our near north.

CHANGING OR INCREASING BIOSECURITY RISKS



> CLIMATE CHANGE

is impacting the global environment. It is altering the habitat, range and distribution of many pests, weeds and diseases, as well as increasing their ability to spread and establish in new areas. These exotic species are also reducing the ability of our precious natural ecosystems to cope with changing climatic conditions.

For example, the buffalo fly, a harmful parasite that can irritate beef cattle, interrupt feeding and cause sores, is already present in Australia's north and has been moving further south as the climate changes. It is predicted that it will establish itself in South Australia and Western Australia by 2030. As climate change increasingly affects global plant and animal habitats, it will also have flow-on impacts for biosecurity risks associated with changes in trade and travel patterns.





> SHIFTING TRADE AND TRAVEL PATTERNS

have seen Australia's supply chains, trading partners and demand for goods continuously evolve and increase in complexity. This is changing the biosecurity risks reaching our international and domestic borders and impacting how we work with trading partners and each other.

Increased movement of people, equipment and goods increase biosecurity risks by providing more opportunities for pests, weeds and diseases to spread. Within Australia, interstate road freight is predicted to increase by 1.7% every year until 2030. Additionally, predicted increases in trade and vessel movements will result in a greater likelihood of the introduction of marine pests like tunicate didemnum (*Didemnum vexillum*) – sometimes known as 'sea vomit' – which poses a serious threat to our cultured shellfish industries and our ability to export seafood.



> DECREASING BIODIVERSITY

driven by invasive species, climate change and changing land uses weakens the resilience of our ecosystems to future outbreaks. It is estimated that 8 out of 10 land-based threatened species are at risk due to invasive species. This is a growing problem in Australia. For example, around 20 new weed species are unintentionally introduced or become unmanaged populations each year, displacing native plant life and changing entire ecosystems, while creating fuel for bushfires and choking our waterways.

Additionally, decreasing levels of crop genetic diversity in parts of the agricultural sector, such as in Australia's banana industry, which is 95% Cavendish bananas, expose Australia to higher levels of risk in the event of a pest, weed or disease outbreak.



> CHANGING LAND USES

are altering the interface between urban and non-urban areas and the environment. As our population grows and spreads, it brings people closer to wildlife, natural habitats and agricultural areas, potentially increasing biosecurity risks. Recent COVID-19 restrictions have accelerated this change in some areas, acting as a driver for Australians to relocate from our cities to regional centres in search of a different lifestyle.

As cities grow and peri-urban environments change, the risk of the introduction and spread of pests, weeds and diseases may increase. These changes to our urban and natural environment will also expose new people to biosecurity who may have limited awareness of its importance.





> INCREASING BIOSECURITY RISKS OVERSEAS

including in our region, make us more susceptible to pests, weeds and diseases entering Australia. We have kept out many high-risk animal diseases such as rabies, lumpy skin disease and African swine fever. However, geographically some of these diseases are only 5km from Australian shores. Climate change is altering the movement patterns of some species within the region, and increasing arrival risks through natural pathways like wind and tide.

Australia's vast northern coastline is the frontline for many of these risks, with modern biosecurity infrastructure, trained people and strong surveillance activities critical to protecting our nation. Pests such as fall armyworm, citrus canker, fruit flies and rust species can be wind borne, making them harder to track and limiting risk management options.



> ILLEGAL ACTIVITY

has increased in recent years, leading to a higher risk of biosecurity threats. The growth and increasing complexity of trade and online shopping – exacerbated by the COVID-19 pandemic – has inadvertently opened new pathways for illegal plants and animals to reach Australia, impacting biosecurity risks. The increasingly lucrative illegal trade in plants and animals was valued at US\$7-23 billion per year globally in 2016.

Additionally, increasing illegal fishing practices heighten the risk of exotic marine animals invading Australian waters, with poorly maintained vessels often harbouring marine pests on their infrastructure above and below the waterline.



> THE COVID-19 PANDEMIC

has disrupted supply chains and the movement of goods and people through travel restrictions. While these changes are temporary, they are likely to have created permanent changes in behaviour and supply chain pathways. For example, many Australians have moved to online shopping with businesses that are often based in other states or countries. Additionally, retailers have looked to change or diversify suppliers to improve the reliability and resilience of their supply chains. Higher trade volumes and new pathways have changed and increased the risk of threats reaching our shores.





BIOSECURITY IN THE TORRES STRAIT

Pests like exotic fruit flies can enter Australia from our near neighbours, by wind or through human-mediated pathways, such as people or vessel movements. Exotic fruit flies and other wind-borne exotic pests could have devastating impacts on Australia's \$12 billion horticultural industries, with fruit flies recognised as the world's most destructive fruit pests.

Targeted prevention and seasonal eradication activities focused in the Torres Strait are the first and best line of defence against these threats entering Australia.

Since 1996, an eradication program has been in place to manage seasonal fruit fly incursions in the Torres Strait, supported by strong relationships, collaboration and knowledge sharing between Indigenous communities and Traditional Owners, all levels of government, industry bodies and community groups.

The National Exotic Fruit Fly in Torres Strait Eradication Program was established in 2015 under the Emergency Plant Pest Response Deed to monitor and eradicate seasonal detections of exotic Oriental fruit fly (*Bactrocera dorsalis*), melon fly (*Zeugodacus cucurbitae*), and New Guinea fruit fly (*Bactrocera trivialis*), before they can establish in Australia. The program is led by the Queensland Government, with support from the Australian Government.

The program includes a range of activities, such as trapping, male annihilation ("blocking") and bait spraying, some of which are supported by Indigenous Rangers from the Torres Strait Regional Authority (TSRA). The ongoing engagement of the TSRA enhances the success of the program and provides employment and training opportunities within remote Torres Strait communities.

KEY – IMPACTS

- Amenity
- Economy
- Environment

KEY – PRIORITIES

- Shared biosecurity culture
- Highly skilled workforce
- Sustainable investment
- Stronger partnerships
- Coordinated preparedness and response
- Integration supported by technology, research and data

AFRICAN SWINE FEVER

African swine fever (ASF) is a contagious viral disease that infects domestic and wild pigs and is not present in Australia. The disease leads to death in approximately 80% of affected pigs and there is currently no vaccine. A multi-state incursion could cost the local pork industry, the majority of which is made up of small-scale family businesses, up to \$2 billion over five years (2019 estimate) and would impact export market access for Australian pork products.

ASF is established in Asia and parts of Europe and continues to spread around the world. During 2019 and 2020, it was found in our northern neighbours Timor-Leste and Papua New Guinea and the disease continues to impact both countries today. The close proximity of ASF to our border represents a significant biosecurity risk for Australia. To support the efforts of our neighbours to manage and slow the spread of the disease, in early 2022 the Australian Government announced it would provide aid funding to Timor-Leste



and Papua New Guinea as part of an ASF biosecurity response package. This funding is designed to help our near neighbours to manage and respond to ASF outbreaks and strengthen the overall biosecurity capacity of our region.

Within Australia, dedicated funding to support surveillance and diagnostic activities is in place, which is complemented by the cooperative preparedness activities of governments, industry and producers to enhance on-farm biosecurity.

CHARRU MUSSEL

The charru mussel (*Mytella strigata*) is an exotic marine pest not present in Australia that is spread through international shipping and threatens Australia's unique marine ecosystems and economy. The mussel forms dense clusters that outcompete native marine species, impact aquaculture production, damage infrastructure and foul vessels.

Native to the waters of South and Central America, the charru mussel has spread rapidly through North America and Asia. Like many marine pests, charru mussels can hitch a ride on boats and ships, either as biofouling or as larvae in a ship's ballast water. Charru mussels have been detected on vessels heading to Australia but have been successfully eradicated.

A combination of national regulations and surveillance activities are used to keep this pest out of Australian waters. As a further line of defence to prevent the



introduction of this or other marine pests, surveillance programs are also run by Australian, state and territory governments around the country. Innovative tools like underwater drones and analysis of environmental DNA are used to support these activities. National education and engagement activities are employed to engage communities and users of Australia's vast coastline and marine environments in biosecurity.

KEY – IMPACTS



KEY – PRIORITIES



VARROA MITE

Internal and external mites of bees, including varroa mite (*Varroa destructor* and *Varroa jacobsoni*) are National Priority Plant Pests. Varroa mite, particularly *Varroa destructor*, weakens and eventually kills European honeybees (*Apis mellifera*). An outbreak could have significant repercussions for our economy, potentially costing producers and consumers of pollination-dependent crops – like almonds and pears – \$1.3 billion over 30 years (2012 estimate).

Australia is currently the only inhabited continent to successfully prevent the pest from establishing itself. While varroa mites have been detected on recently arrived bee swarms several times at ports across Australia, such as at the Port of Townsville (2016, 2019, 2020 – *Varroa jacobsoni*) and the Port of Melbourne (2018 – *Varroa destructor*), each time the swarms and the mites have been successfully eradicated or destroyed on entry. This success is down to our strong partnerships, robust surveillance methods and coordinated preparedness activities across the system.

The National Varroa Mite Eradication Program was established in 2016 after varroa mite (*Varroa jacobsoni*)



Image: *Varroa destructor*

was detected in Townsville. The program is co-funded by industry, including the Australian Honey Bee Industry Council, the state and territory governments and the Australian Government under national response arrangements. It funds important surveillance activities like GPS tracking, community awareness campaigns and extensive inspections of bees and their colonies, including the examination by entomologists of around 880,000 honeybee wings in 2019-20 alone. *Varroa jacobsoni* was declared eradicated in 2021 following the success of the program.

Across Australia, the close collaboration of governments, industry and the community has allowed for the rapid and transparent sharing of resources and information to effectively prepare for and eradicate the pest.

PANAMA TR4

Panama disease Tropical Race 4 (TR4) is a National Priority Plant Pest that affects bananas and is present in parts of Australia. The pest blocks the tissues that carry water and nutrients in banana plants, eventually killing them. Without management, it could devastate Australia's banana industry. Panama TR4 can live in soil for decades without a host and is spread easily in contaminated soil, plant material and water. There is currently no cure for the disease and our only defence is to implement effective separation and decontamination processes. The success of these prevention and management measures relies on strong partnerships and awareness of system stakeholders, as well as sustainable funding to support ongoing activities.

The Panama TR4 Program is a joint initiative between the Queensland Government and the Australian Banana Growers' Council (ABGC) to control and contain the disease. Since the region's first detection in 2015, the program has focused on early detection through surveillance on commercial banana farms in Far North Queensland and compliance activities



Image: *Kerry Trapnell*

on known infested properties. The program also seeks to generate community support for efforts to protect against the disease through communications and engagement activities.

With the ABGC co-funding the Panama TR4 Program since 2019, a management board of equal government and industry representation has been established to govern and deliver the program's strategic direction until mid-2023. Beyond July 2023, industry will take leadership of disease management. Continued success will require us to harness the potential of our shared biosecurity culture, supported by broad community engagement and awareness activities.

Our opportunities for meaningful change

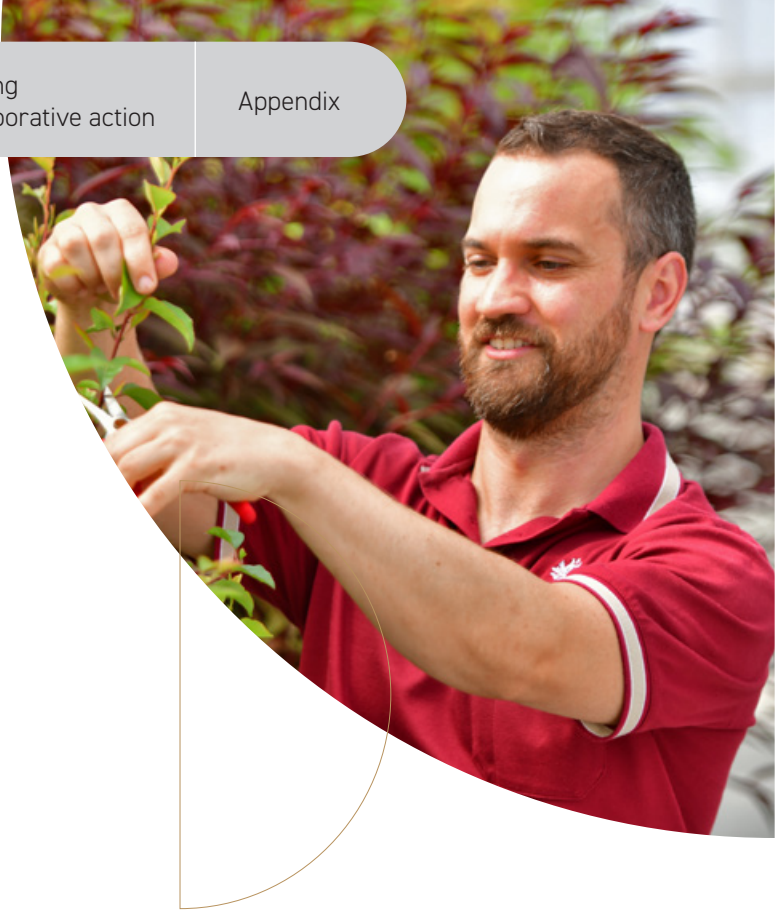
To meet the biosecurity risks of today and arm ourselves for the new and increasing risks coming our way, we must continue to evolve our system and act on our opportunities for meaningful change.

This requires us to go beyond scaling our current efforts to enhance how we work together and leverage opportunities for improvement.

Engaging everyone in the biosecurity system

is a fundamental opportunity to create a stronger system that is action-oriented and raises awareness of risks, shared benefits, and outcomes. This will rely on a greater understanding and valuing of biosecurity, as well as behavioural change across the entire system. The National Biosecurity Statement, developed in 2018, provides a solid starting point for the sharing of ownership across the biosecurity system. Additionally, enhancing our engagement with international organisations and trading partners on biosecurity has the potential to help us mitigate risks before they reach our shores. We have a significant opportunity to build upon previous efforts to connect, motivate, include and empower a broader range of stakeholders.

Opportunities in the north exist to support and enhance existing biosecurity efforts. The north of Australia is at high risk of threats entering via natural pathways and is home to some of our key primary production and tourism growth areas. The Northern Australia Biosecurity Strategy provides a platform for us to focus our efforts on high priority activities, which include expanding our Indigenous Ranger programs and capacity, increasing surveillance and diagnostic capabilities, addressing regional skills needs in key areas and improved data collection for wider use.




A more flexible, improved risk-based regulatory system is needed to drive more efficient processes through targeted and adaptable regulatory frameworks that provide benefits to all stakeholders. We have significant opportunities to facilitate data sharing and operationalise real time innovations in technology to support faster risk-based decision-making and traceability. Co-regulation with industry can also provide material benefits to all stakeholders in managing risk and streamlining processes when they are carefully designed and supported by harmonised compliance frameworks.

Enhanced collaboration at regional and local levels through on the ground coordination and locally driven solutions could support better biosecurity outcomes. In addition to the potential to improve collaboration amongst the state and territory governments, and with the Australian Government, opportunities exist for diverse stakeholder groups, including Natural Resource Management organisations, to work more closely together at regional and local levels. This collaboration will help to implement biosecurity priorities matched to regional needs, collect data and measure results consistently, coordinate mutually beneficial activities, and maintain open and continuous communication.

Funding and investment is currently sourced from all levels of government, industry and the community through a variety of models, reducing transparency of system-wide investment. Funding has been under recent strain, due to the evolving risk environment and growing demand for resourcing. We have the opportunity to work together across government, industry and the community to assess and reset our funding and investment frameworks to ensure they are fit for purpose, sustainable in the longer term and that all biosecurity participants contribute equitably.

Additional skills and quality infrastructure are required to support a more responsive biosecurity system. Our system is currently supported by a skilled workforce with deep and diverse technical expertise, but there are capacity constraints and recruitment challenges, especially in a range of specialist capabilities. The skills of our people and the infrastructure that supports them are the foundations of our system. We will only realise the benefits of new approaches and innovative technologies, like High-Throughput Sequencing and eDNA, if we have the skilled people and the supporting infrastructure necessary to operationalise them. The national strategy presents an enormous opportunity to plan for the skills and critical infrastructure we need going forward.

Understanding the changing risk environment and enhancing the way we share threat information is critical to maintaining a strong system. Biosecurity risks are constantly evolving and as threats change, our risk profile changes. We have the opportunity to better share risk information and threat assessments with a wider range of biosecurity stakeholders to improve their understanding of the changing environment, support preparedness activities and investment and research prioritisation.



It's time to evolve how we work together

The only way we can build an even stronger biosecurity system is to evolve how we work together.

Australia's biosecurity is underpinned by the 2019 Intergovernmental Agreement on Biosecurity, which provides a strong foundation to focus our collective efforts and supports wide-ranging partnerships.

However, as the challenges facing biosecurity continue to build, we need a renewed focus on enhancing national capacity and capability going forward.

WHERE WE'RE GOING

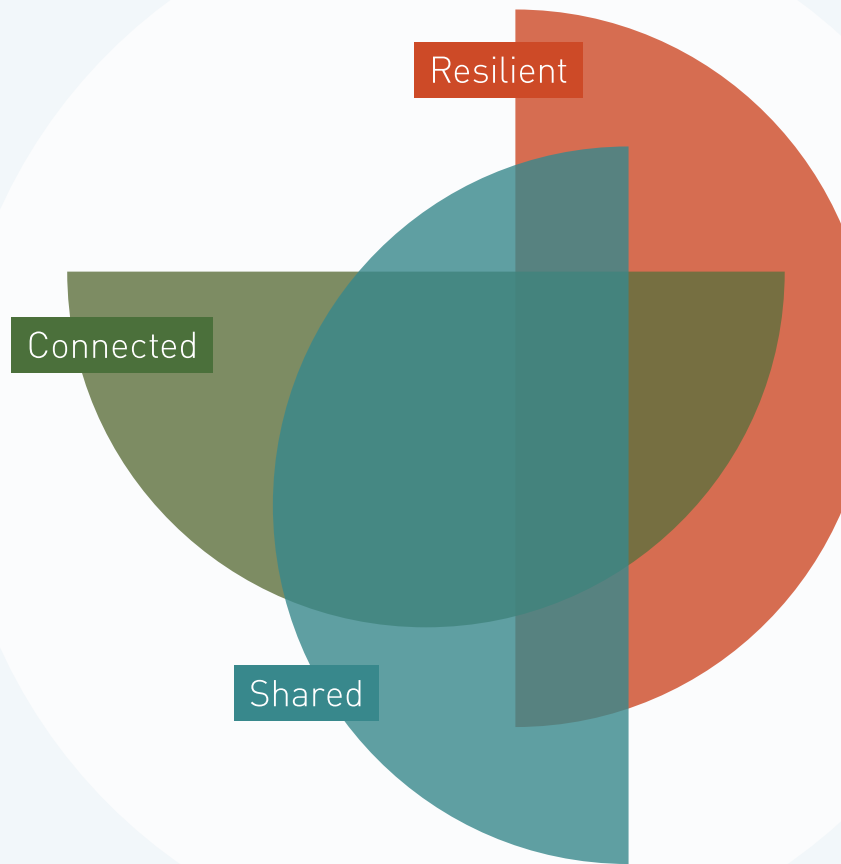
In the future, we will more efficiently and effectively manage biosecurity risks.

Key to our success will be the adaptability and sustainability of our preparedness, surveillance, response, management and recovery systems, combined with a collaborative culture that encourages action and embeds continuous learning.

Everyone will know why biosecurity is important, care about it, understand their role and how they should play their part to ensure that our biosecurity remains strong.

HOW WE'LL GET THERE

We will work together to act in 6 priority areas. These priorities will guide our efforts so that we have the biggest impact and remain on track as we move into implementation planning.



VISION

A biosecurity system that protects Australia's way of life.

Connected Resilient Shared

SHARED PURPOSE

A risk-based system underpinned by science that protects Australia's people, our environment and economy from the biosecurity threats of today and tomorrow.

PRIORITIES AND ACTIONS TO REALISE OUR VISION

Enhancing our capabilities and embedding advancements in technology and research will be key enablers of the national strategy. However, improving our system will also rely heavily on strengthening our biosecurity culture – the way we think, behave and work together – to promote awareness and drive coordinated action across the nation.

The initial actions for our 6 priority areas have been crafted to support our vision and purpose. Our next step will be to refine and build upon these actions during consultation and implementation.

WE WILL TAKE ACTION IN 6 PRIORITY AREAS:



Shared biosecurity culture

We will ensure all Australians understand what biosecurity is and are empowered to act to support our system. We will create a culture of biosecurity action in which we all care about biosecurity as we all enjoy the benefits that effective biosecurity brings and potentially suffer the consequences of our system's failures.

Initial actions:

- Build on and develop national education and awareness programs – including introducing biosecurity into curricula – to deepen understanding of, and commitment to, biosecurity and encourage community and industry stewardship in the system.
- Progress innovative approaches to encourage positive biosecurity behaviours and incentivise compliance, including through the leveraging of community and other networks and exploring new channels of engagement.
- Revitalise and further collaborate through national communication and engagement mechanisms, as well as relevant fora and symposia, to encourage greater knowledge sharing, build trust and increase transparency.
- Determine opportunities to embed consideration of biosecurity into all levels of government, community, industry and other stakeholders' broader decision-making and risk and business continuity planning.



Stronger partnerships

We will strengthen and expand partnerships with all stakeholders at local, regional, national and international levels to leverage our different expertise, resources and knowledge for greater impact and to

support better biosecurity outcomes. Underpinning these partnerships will be mutual trust, formal recognition, transparency and a clear understanding of the importance of everyone's role.

Initial actions:

- Enhance partnerships and engagement with Indigenous Australians to ensure Indigenous interests are considered and to provide for participation in the design and delivery of biosecurity outcomes and initiatives.
- Work with biosecurity stakeholders to review and refine roles and responsibilities, providing flexibility to adapt as the system evolves.
- Review governance arrangements to ensure that they include relevant stakeholders in the design, development and implementation of national policies, programs and regulatory arrangements.
- Strengthen the involvement of environmental agencies across the biosecurity system.
- Identify opportunities for industry and community involvement in peak decision-making bodies.
- Deepen international partnerships, including in the Indo-Pacific, to increase engagement, harmonisation and information and intelligence sharing on national priority pests, weeds and diseases.
- Work together to help shape global biosecurity standards, rules and conditions to support strong biosecurity in Australia.



Highly skilled workforce

We will develop and sustain the pipeline of biosecurity skills needed for the future, within government, industry and community. We will ensure our people

can be deployed when and where they are needed, and that they have the right skills by providing targeted education and training.

Initial actions:

- Investigate national skills to identify current and future needs in key areas, such as science, data, new technologies and regulatory capabilities, considering the findings of existing industry and government workforce strategies.
- Develop a national biosecurity workforce strategy to build, develop, retain and deploy capability across the system, including surge support for responses, taking into account regional needs across Australia.
- Build on and expand existing cooperative arrangements to leverage the expertise and capability of biosecurity stakeholders to support system needs where there are mutual benefits.
- Strengthen professional development programs and exchanges between biosecurity stakeholders to facilitate knowledge and information sharing and improve skills.



Coordinated preparedness and response

We will enhance our preparedness through improved coordination, regional planning, increased collaboration and faster information and data sharing to support our system's resilience and adaptability.

Initial actions:

- Undertake and promote regular national preparedness exercises with biosecurity stakeholders to test and improve our collective readiness and increase public awareness of significant biosecurity threats.
- Advance regionally based planning activities to better align effort, integrate biosecurity practices and facilitate greater education and awareness opportunities.
- Continually review and update risk information, including through regular strategic threat assessments, to inform priorities and share this with stakeholders.
- Actively embed continuous learning supported by enhanced post-incident review and evaluation practices.
- Strengthen traceability arrangements to support improved biosecurity outcomes.
- Enhance our national surveillance arrangements to ensure they are robust given the changing threat environment, drawing on the expertise and capabilities of biosecurity stakeholders.
- Evolve our national information management frameworks to ensure they are fit for purpose, interoperable and promote seamless information exchange.



Sustainable investment

We will develop long-term sustainable biosecurity funding and investment approaches that recognise the value of government, industry and the community

investing in biosecurity to support the system's growing needs. We will ensure these approaches are efficient, equitable, adaptable and transparent.

Initial actions:

- Work together to identify funding needs and determine priorities, including critical assets, infrastructure and research priorities.
- Strengthen frameworks to agree and deliver priority investments having regard to the level of risk and benefits from activities and to increase efficiency by reducing duplicative investments and processes.
- Advance co-funding and investment strategies with stakeholders, including models that consider key risk creators and system beneficiaries in an equitable manner.
- Increase the transparency of biosecurity funding to support improved accountability.
- Complete the development and implementation of a system performance and evaluation framework to inform future investment decisions.



Integration supported by technology, research and data

We will create a more connected and efficient system in which we better leverage technology, research and data to facilitate more timely, informed and risk-based decisions. We will continue to deliver our

biosecurity research priorities and develop, share and embed new technologies in areas such as traceability, surveillance, screening, data analytics, treatments and diagnostics.

Initial actions:

- Continue to invest in and rollout transformative technologies to digitise and automate processes, and support rapid and accurate detection, identification and response.
- Increase coordination and engagement with biosecurity stakeholders, including research and development bodies, to prioritise, drive and deliver national research outcomes.
- Actively share data and research to streamline research efforts and facilitate adoption of outcomes.
- Enhance the accessibility and use of surveillance and interception data to support effective decision-making by all stakeholders.
- Further support innovations to build science and research capacity in areas such as assessing pathway risks and species identification.

Our way forward: Driving collaborative action

Our national strategy will set the future vision and priorities for the biosecurity system; however, it will only be realised through action from all of us.

More than 30 actions across our 6 priority areas have been included in this consultation draft for your feedback. These initial actions will be built upon and refined through public consultation to ensure that they capture the actions needed to implement the national strategy. We want to hear your views, as well as any other ideas you have on the collective efforts needed to evolve our system.

Following the strategy's finalisation, we will work together to develop action plans which will provide a pathway for implementation. Our action plans will be monitored regularly to keep us on track and ensure that we adapt where needed and remain focused on the continual improvement of our system.

While implementation will be overseen by the NBC, it will be a consultative process that includes all stakeholders and takes into account local and regional priorities. To help us develop this process, we want your feedback as part of the public consultation phase on how you think implementation planning should occur.







Questions on the National Biosecurity Strategy consultation draft

We are keen to receive your feedback on the consultation draft of the National Biosecurity Strategy.

The questions below cover key areas of the draft to help guide your input, but you can comment on any aspect of it that you like.

Provide your feedback through to National Biosecurity Strategy Have Your Say

– <https://haveyoursay.awe.gov.au/national-biosecurity-strategy>

If you have any questions, please email nationalbiosecuritystrategy@awe.gov.au

1. SCOPE OF THE STRATEGY

- Do the proposed vision and purpose reflect what we want to achieve and how we want to evolve our system into the future?
- Are our 6 priority areas where we should focus our efforts in the future? Is anything missing?

2. ROLES WITHIN THE BIOSECURITY SYSTEM

- Can you see your current role within the biosecurity system reflected in the consultation draft?
- Do you think the '[How our biosecurity system works' diagram \(page 15\)](#) reflects your role and responsibilities in the biosecurity system? If not, what amendments should be made?
- How do you see your own and others' roles changing into the future?

3. BIOSECURITY RISKS AND OPPORTUNITIES

- Are there any key risks and opportunities not captured in the consultation draft?
- Do any of the biosecurity risks or opportunities outlined in the consultation draft have additional implications for our 6 priority areas?

A collaborative process will be established following the finalisation of the national strategy to consider additional actions in the 6 priority areas and develop action plans:

4. ACTIONS

- What are your views on the proposed initial actions?
- What other actions should be included to deliver our 6 priority areas, address biosecurity risks and capitalise on our opportunities for change?
- How can you contribute to achieving our 6 priority areas?

5. IMPLEMENTATION AND REVIEW

- What mechanisms should be established to ensure stakeholders are involved in the further development of actions and implementation planning?
- How regularly should the strategy be reviewed?
- How should we monitor and evaluate the success of the national strategy and implementation plans?

Appendix

OUR BIOSECURITY SYSTEM ARCHITECTURE

Our system is supported by a mature and dynamic architecture of agreements, arrangements, deeds and statements between governments, plant and animal industries, environmental groups and research organisations. This is complemented by reviews undertaken by the Inspector-General of Biosecurity, CSIRO and other stakeholders.

Australia is also a signatory to a range of international biosecurity, trade, health and environmental agreements, including measures outlined by the World Trade Organization, International Plant Protection Convention, World Organization for Animal Health and the World Health Organization.

The Intergovernmental Agreement on Biosecurity (IGAB) sets out commitments for governments, outlines agreed national goals and objectives and clarifies roles and responsibilities.

The IGAB also establishes the NBC. The NBC provides advice to the AGSOC on national biosecurity issues, and progresses the implementation of the IGAB. AGSOC reports to ministers responsible for primary industries.

The NBC is responsible for managing a national, strategic approach to biosecurity risks that could impact agricultural production, the environment, community wellbeing and urban amenity.

The NBC is supported by several sectoral committees – the Animal Health Committee, Environment and Invasives Committee, Marine Pest Sectoral Committee and Plant Health Committee – and the National Biosecurity Community Engagement Network, as well as ongoing expert groups and short-term, task-specific groups.

Formal emergency preparedness and response agreements establish arrangements for responding to exotic pests, weeds and diseases that are detected within Australia and have the potential to impact animal, plant or human health, or the environment. These agreements are the:

- Emergency Animal Disease Response Agreement (EADRA)
- Emergency Plant Pest Response Deed (EPPRD), and
- National Environmental Biosecurity Response Agreement.

These arrangements are formal agreements between governments and (where relevant) industry signatories, and as appropriate, Animal Health Australia (AHA) and Plant Health Australia (PHA).

The arrangements cover the management and funding of responses to biosecurity outbreaks, or where a pest, weed or disease primarily impacts the environment and/or social amenity (where the response is for the public good).

AHA and PHA are the custodians of the EADRA and EPPRD respectively and are national coordinators of key government-industry biosecurity partnerships in the areas of animal and plant health, producing and inputting into strategies and plans to guide these efforts. AHA and PHA facilitate a national approach to enhancing Australia's animal and plant biosecurity systems, through awareness, preparedness and emergency response management.

The National Biosecurity Statement was finalised in 2018 and outlines national biosecurity goals, roles and responsibilities and principles for managing biosecurity risk. The national strategy will build from this strong foundation.

Government strategies

The Australian, state and territory, and local governments have published a range of strategies, roadmaps and reviews that outline the goals, objectives, priorities and frameworks for the biosecurity system within their jurisdiction.

Peak research organisations and environmental biosecurity stakeholder publications

Research organisations and environmental groups are instrumental in the protection and continual enhancement of our biosecurity system. Research organisations develop strategies, research and position papers, and strategic actions that explore and inform initiatives and outline innovative approaches in science, research and collaboration.

Environmental groups, such as regional Natural Resource Management organisations, play a critical role in environmental biosecurity, regional planning, natural resource management and policy advocacy. Indigenous Australians undertake important surveillance activities and management of Country. Surveillance activities are also enhanced by citizen science initiatives which support education, collaboration and capacity building.

Industry strategies and position papers

Industry peak bodies who understand and acknowledge the shared benefits of a strong and resilient biosecurity system are consistent advocates for its improvement. Most importantly they publish, in consultation with their members, an array of ambitious and considered strategies and position papers that seek to make a case for reform, action and investment.

System stakeholders work together on a range of holistic plans and strategies, such as Animalplan 2022 to 2027, which has recently been developed through collaboration between relevant animal health stakeholders from government, industry, research and other sectors as Australia's first national action plan to strengthen our animal health system.



