



Australian Government  
Department of Agriculture,  
Water and the Environment

# COMMONWEALTH BIOSECURITY 2030

## Action Plan 2022

Update on progress  
to date and 2022  
actions





Aboriginal and Torres Strait Islander people should be aware that this document may contain images of deceased persons.

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# FOREWORD

Australia's biosecurity system protects our agriculture, environment, people and economy from harmful pests and diseases. However, the world in which we live is changing and bringing with it new risks and opportunities. Increasing volumes and complexity of trade, combined with the effects of climate change, increasing pest and disease spread and changing land use, mean we are evolving the way we operate. We are facing more threats than ever before. We can no longer rely on linear, transactional processes as biosecurity risks become increasingly complicated and multifaceted.

The likelihood of pests and diseases arriving from the near north is now more imminent. African swine fever, lumpy skin disease, African horse sickness, foot-and-mouth disease, rabies and Xylella are just some examples of diseases that can travel through a variety of pathways to Australia. The emergence of Japanese encephalitis virus in Australia is a very recent example of this risk. A number of these threats can bring with them human health risks.

*Commonwealth Biosecurity 2030* is about building our capability to address these threats, including strengthening our partnerships with border agencies, states and territories, industry and the community. Our aim is to achieve a risk-based biosecurity system that effectively, efficiently and sustainably protects Australia from exotic pests and diseases. We have also committed to annual action plans to guide these efforts. In our respective biosecurity capacities, we are pleased to present the first of these plans – our *Commonwealth Biosecurity Action Plan 2022*. Naturally, this will need to adapt if risks or priorities change through the year.

We, along with all our departmental biosecurity colleagues, look forward to continuing to work with our key partners to mature our processes, with an early focus on our planning around animal diseases, and adapt our biosecurity system for the future.



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# INTRODUCTION

In May 2021, the Department of Agriculture, Water and the Environment released *Commonwealth Biosecurity 2030*, setting the future direction for our part in Australia's biosecurity system and providing a clear roadmap to guide the department's efforts towards building a stronger, smarter biosecurity system.

*Commonwealth Biosecurity 2030* outlines how the department will progress changes and reforms to ensure a risk-based biosecurity system that effectively, efficiently and sustainably protects Australia's agriculture, environment and social amenity from current and future threats. It looks to build on existing practices and address growing biosecurity risks by ensuring the best controls and processes are in place into the future. Nine strategic actions were identified to support our efforts toward our 2030 goals together with a set of initial actions for 2021.

*Commonwealth Biosecurity Action Plan 2022* is the first yearly action plan produced by the department. This plan outlines the priority activities we will undertake in 2022 to move us one step closer to realising our vision. It also provides an overview of work undertaken the previous year, including those things we committed to do as early deliverables (Appendix A).

Reviews by the Inspector-General of Biosecurity and the Commonwealth Auditor-General provide an important external assessment of our capacity and capability to address the issues coming our way. We are committed to strengthening our systems to enable this to take place. This plan provides an update on our progress addressing key systemic issues underlying recommendations made by the Inspector-General of Biosecurity and the Australian National Audit Office to ensure lasting improvements are made and the biosecurity system remains fit for purpose (Appendix B sets out relevant reports).





# The past year

The past two years have seen unprecedented changes to the way we work, in large part due to the COVID-19 pandemic but also due to the changing threat landscape we have been facing. The department has adapted, deploying its resources to target the areas of highest risk and demand. The country’s ports have endured capacity issues, not only straining logistics systems but putting pressure on biosecurity officers and our detection resources at the border. The government has provided significant additional funding to advance our reform agenda. This has gone into boosting our frontline resources, advancing our science, technology and information management systems, addressing key pathway risks (especially in relation to hitchhiker pests), and supporting our national preparedness and response capabilities in the event of an incursion. This amounts to over \$500 million in additional funding over the period 2021-22 to 2024-25.

	2019-20	2020-21
Cargo consignments	58.9 million	77.2 million
Aircraft	75,830	16,206
Vessels	18,860	17,848
Shipping containers	2.3 million	2.6 million
International travellers	17.3 million*	747,000
International mail items	94 million	72.1 million

*\*Excluding data from the month of May 2020*

# The operating environment through to 2023-24

The strategic environment identified in *Commonwealth Biosecurity 2030* has not materially changed, but the lens has sharpened. While global supply chains are adapting in the face of the presence of COVID-19, the geo-political environment remains very fluid. We will continue to see new and irregular supply and value chains into Australia, which will intensify already increasing pest and disease risks. Supply disruptions and costs will remain as key issues, with implications for when and how goods arrive in Australia. COVID-19 will continue to impact our working arrangements at the border together with those businesses delivering approved third-party arrangements. With our international borders reopening to travellers, it will be important that we adapt to the changed nature of this pathway and the associated human health requirements.

This operating environment will place pressure on the ability of all parties to secure investment in stronger biosecurity arrangements. It could also incentivise deliberate attempts to circumvent biosecurity requirements, but also unintended non-compliance associated with increasing global e-commerce.

Our concerns regarding the increasing threat being posed by the global spread of pest and diseases, particularly from the north, are being realised. The risks associated with natural pathways such as wind, water and transitory wildlife, along with non-regulated movements of people and goods, will continue to grow. The presence of lumpy skin disease in Indonesia, a significant disease of cattle and buffalo, and the spread of the zoonotic Japanese encephalitis within Australia by mosquitoes are current examples. Biosecurity outcomes will continue to be challenged by the ongoing impacts of weather and climate events, amplifying arrival into and spread through Australia. This will require an increased focus on our preparedness for such events, not just their prevention.

At the same time, the opportunities to realise the benefits of our efforts developing and trialling new screening, detection, diagnostic and tracing technologies; better information management, intelligence and risk assessment systems; and automation solutions, have never been better. The need and desire to mobilise meaningful partnerships has also never been stronger: whether with other border agencies through integrated and networked technology and information sharing; with industry to deliver streamlined border intervention arrangements where biosecurity risks are considered low; or with states and territories to strengthen the national system. The emerging threat environment, together with stronger community awareness of biosecurity, will drive broader engagement and commitment to evolving the national biosecurity system.



# STRATEGIC ACTIONS

Australia has a strong and effective biosecurity system. The department's role in this system is mature, involving ongoing and evolving functions and programs to deliver on our regulatory objectives and obligations and to fulfil our partnership in the national system as set out through the Intergovernmental Agreement on Biosecurity and other arrangements, such as national sectoral plans. Our strategic actions are intended to help modernise the system and focus our efforts on the specific uplift needed to better meet emerging threats and opportunities. This section outlines our priority actions for 2022.





# Action 1

## **Accelerate our efforts with key partners to create a strong, future orientated and efficient national biosecurity system**

The success of the national biosecurity system in protecting our environment, economy and way of life relies on the efforts of all parties. We will work across the Commonwealth and with governments, industry, research institutions and community groups to implement improvements across the system to efficiently and effectively manage biosecurity risk.

### **Our priority actions for 2022 are to:**

- Finalise a national biosecurity strategy and transition to action planning and implementation, in collaboration with state and territory governments, industry, environment and community stakeholders.
- Deliver on the Northern Australia Biosecurity Strategy (NABS) through the NABS Implementation Plan.
- Support a refreshed and refocused Biosecurity Futures group and support the emergence of an industry and community biosecurity advisory group to all governments.
- Conclude a strategy with Australian Border Force to support joint effort to lift our capability and capacity to manage risk at Australia's international border.
- Advance a new Memorandum of Understanding with the Department of Home Affairs/ Australian Border Force to guide our operating and strategic relationship.
- Finalise the review of the Memorandum of Understanding with the Department of Health and complete the vector policy.
- Strengthen support to global OneHealth outcomes, including through wildlife health surveillance by Wildlife Health Australia and new working arrangements with the Commonwealth Department of Health in relation to zoonotic diseases.
- Partner with plant stakeholders to build national capacity and capability in plant pest surveillance and diagnostics, facilitate the implementation of national and international policies on plant biosecurity and contribute to plant health research efforts.
- Complete phase one of an animal biosecurity system assessment, in collaboration with key partners, to identify trends, emerging vulnerabilities and future system pressures to inform strategic planning and priorities.
- Redesign fit and proper person test arrangements to streamline the application process and be more aligned with the Department of Home Affairs' Australian Trusted Trader program, including progressing more integrated cross-agency arrangements where practicable.

- Build on work through the Simplified Trade System agenda and industry roundtables held in 2021, by identifying further options for reducing unwarranted regulatory impacts on system participants.
- Undertake a comprehensive review of the Imported Food Control Act 1992.
- Work closely with CSIRO and other partners to enable targeted, co-developed research outcomes to improve biosecurity.
- Implement the National Environment and Community Biosecurity Research, Development and Extension Strategy that will drive collaboration across the biosecurity sectors for efficient and targeted research outcomes.
- Collaborate with states, territories and stakeholders to implement on-ground activities and national coordination to target significant established pests, weeds and diseases.



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# Action 2

## Expand offshore assurance arrangements and overseas supply chain integration

Addressing biosecurity risks before they reach our shores is a strong mitigant to preventing incursions and to minimising the scale and cost of border interventions. We will implement a range of initiatives to increase offshore compliance with our import requirements while supporting faster clearance of commodities at our borders where it is safe to do so.

### Our priority actions for 2022 are to:

- Develop new protocols for offshore treatments to improve management at the border and expand the offshore treatment assurance system for hitchhiker pests to increase confidence in the effectiveness of these treatments.
- Progress efforts to enhance compliance prioritisation and prediction tools with a view to streamlining import clearances.
- Continue and complete proof-of-concept trials with industry partners toward streamlined clearance arrangements based on an individual importer's assurance arrangements across their supply chains.
- Build a business case for an integrated risk-management system for imported cargo that will enable better targets and management of risk earlier in the supply chain, informed by three proof-of-concept trials exploring options for continuous pre-border biosecurity risk assessment, expanding business partnerships and supply chain data exchange.

# Action 3

## Increase partnership activities with our near neighbours to build their risk management capability and continue our engagement with key international bodies

Mitigating biosecurity risks before they reach Australia is important, as is supporting neighbouring countries in their efforts to grow their economies and protect their environment. Regional pest and disease pressure is growing. Building on our established relationships, we will partner with neighbouring countries to improve regional capability to identify and mitigate biosecurity risks. We will also work with international bodies to strengthen regional and global biosecurity frameworks and practices.

### Our priority actions for 2022 are to:

- Finalise our *Pacific Biosecurity Strategy 2021-2026*.
- Enhance engagement with the World Organisation for Animal Health (OIE) across the Pacific, including initiatives to increase OIE membership.
- Deliver support to near neighbours for lumpy skin disease and African swine fever preparedness and response, including in the areas of biosecurity risk assessment, surveillance and post-entry quarantine capability.
- Support continued engagement and participation of Asian and Southwest Pacific region members to the International Plant Protection Convention (IPPC), including regional standard setting and implementation.
- Partner with Papua New Guinea, Timor-Leste and the Solomon Islands to deliver plant health surveillance activities focused on priority production and environment threats.
- Partner with Indonesian authorities and the OIE to deliver a mass dog vaccination program in Bali, to protect locals and their dogs from rabies, and reduce the threat of rabies in our region.
- Deliver against the Pacific Biosecurity Partnerships Program with a focus on trade and market access support, technology and systems support and biosecurity capability uplift.
- Progress with Papua New Guinea, the development of an animal health information system to provide data to support evidence-based decisions when responding to animal disease outbreaks.
- Enhance regional plant pest diagnostic and surveillance capability by collaborating with ASEAN partners.



# Action 4

## **Invest in a skilled and responsive workforce supported by improved regulatory tools and information**

Our staff, together with those people working under third party arrangements, will remain critical to managing biosecurity risk. As biosecurity threats change and grow, and technology offers new ways of doing business, our workforce needs to be equipped to respond. We will grow the capacity and skills of our people, together with the critical regulatory tools and information systems supporting them. This will increase our effectiveness, responsiveness and resilience as regulators and deliver digital transformation.

### **Our priority actions for 2022 include:**

- Establish a Biosecurity Training Centre to build the skills of our staff and those of our key system partners.
- Implement a targeted program to support the recruitment, retention and professional development of scientifically qualified staff to support the department's technical needs, with an early focus on diagnostic capability.
- Finalise the implementation of a modernised workforce management system to optimise the efficient deployment of biosecurity resources and increase data analytics capability.
- Develop augmented reality and virtual reality training materials and test their application and effectiveness as training tools to support decision making.
- Modernise decision support material and approaches for our biosecurity officers.
- Complete delivery and evaluation of the legal organisational capability training program to support policy and frontline staff in performing their regulatory and policy functions.
- Undertake a pilot of regulation specialist roles in operational pathways to mature our regulatory culture and capability and provide support to our frontline biosecurity officers.
- Deliver a biosecurity compliance plan and strategic assurance framework to guide robust regulatory settings, decision making and work with industry to address non-compliance outcomes and incentivise more compliant behaviour.
- Develop a risk management framework to guide regulatory approaches and decisions.
- Establish a digital reform roadmap for biosecurity, guided by a new Digital Reform Division, which maximises integration with government and industry systems.

- Deliver further digital, risk assessment and workflow capabilities for the international mail pathway.
- Develop a biosecurity risk workflow tool that captures, assesses and identifies mitigation measures to manage the risk of emerging pests and diseases and records outcomes for changes in biosecurity risk.
- Develop a biosecurity data and analytics data platform that leverages Microsoft Azure, including Azure data lake, to provide greater analytics capacity and tooling.



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# Action 5

## Roll out advancements in detection technologies and business practice innovations

New and emerging technologies are revolutionising how governments and industry operate. We will continue to explore and adopt these tools and ways of working, in partnership with industry and others where appropriate, to help us mitigate biosecurity risks and improve system efficiency for the benefit of all.

### Our priority actions for 2022 include:

- Finalise a pilot of new remote capabilities to increase inspection efficiency and mitigate workplace health and safety risks.
- Complete a trial of X-ray applications to automate the identification and capture of seed packets coming through international mail gateways.
- Partner with key stakeholders to pilot High-Throughput Sequencing in post-entry quarantine.
- Deliver a national environmental DNA (eDNA) testing program to assist border surveillance for key exotic pests, supported by a partnership with University of Canberra.
- Roll out the Biosecurity Portal, which will provide an online self-service capability for industry, initially for inspection bookings.
- Progress automated import document assessment (self-assessed clearance and minimum documentation assessment processes) and enhancements to the processing of documents.
- Trial mobile handheld technologies to better detect pests.
- Partner with industry to deliver a prototype sensor that identifies and quantifies residual fumigants on sea containers in real time and identifies biosecurity pests of concern.
- Pilot automating shipping container screening using hyperspectral cameras attached to port cranes.
- Complete testing of tools to improve monitoring of compliance with aircraft disinsection requirements.
- Progress the development of a tool using artificial intelligence to enable real-time identification of brown marmorated stink bug (BMSB) and exotic bees.
- Implement interoperable system functionality to provide for accurate, consistent and current taxonomic information to support regulatory decision-making.
- Progress use of enhanced capabilities such as machine learning, anomaly detection and geo-spatial mapping to assist with risk management.

# Action 6

## Generate greater shared responsibility through improved awareness and understanding

Everyone can play a part in protecting our economy and environment from biosecurity risks. We will seek to enhance engagement, awareness and understanding of biosecurity risks across the Australian community and business sectors.

### Our priority actions for 2022 are to:

- Complete the first annual biosecurity threat assessment.
- Develop a biosecurity brand to increase awareness of the importance of biosecurity and people's roles in the biosecurity system.
- Deliver targeted biosecurity education campaigns, in multiple languages where relevant, including with a focus on online shoppers and African swine fever.
- Improve the user experience of the national biosecurity website to further build on it as the first stop for biosecurity information for Australians.
- Develop a tool to intervene and understand the motivations, barriers and drivers of people who purchase seeds online.
- Strengthen work with government, communities, industry, Indigenous groups, veterinarians and other service providers to raise awareness of biosecurity risks in the north.
- Establish and support a peri-urban environmental biosecurity community of practice with NSW to assist volunteers to perform environmental biosecurity surveillance functions.



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# Action 7

## Increase offshore intelligence, research and data sourcing to support risk-based interventions, preparedness and response

We will build our overseas strategic and operational intelligence, and associated analytics capability. This will assist us to quickly identify current and emerging trends and risks to inform future planning, ensure timely and appropriate border assurance and interventions and support preparedness planning, including for possible incursions.

### Our priority actions for 2022 include:

- Conduct a Global Biosecurity and Trade Technology Challenge to identify emerging technology and uncover novel ideas to support a proactive approach to managing emerging biosecurity risks at the Australian border beyond the next five years.
- Finalise a proof-of-concept trial to inform the digital design of biosecurity traveller declarations, enabling a more efficient pre-arrival acquisition of data to inform border clearance and compliance processes.
- Finalise a fit-for-future strategy to gather, analyse and disseminate animal biosecurity intelligence.
- Progress work to build animal biosecurity capability of our near neighbours in intelligence gathering, information sharing, early detection and alerts.
- Continue to work with New Zealand to increase our joint intelligence capacity (including concluding an intelligence-sharing arrangement).
- Develop a new capability, in partnership with industry, to access and analyse information on the current and historic global movements of shipping containers.

# Action 8

## Lift our national preparedness, response and resilience to exotic pest and disease incursions

The biosecurity threats to Australia will continue to change. Even with our best efforts, no system can reduce our risk to zero. We will invest in domestic preparedness, response, recovery and resilience planning and arrangements to help minimise potential impacts and disruptions.

### Our priority actions for 2022 include:

- Complete phase 1 of a national emergency preparedness exercise program (Exercise Parabus) and refreshed biosecurity emergency management arrangements.
- Agree a near-border biosecurity incident response framework with states and territories.
- Establish a dedicated response team and protocols to respond to detections of exotic pests and diseases post biosecurity control.
- Implement and build staff capacity around a new biosecurity incident management system.
- Advance region-based biosecurity preparedness planning and investment in northern Australia, including operational response arrangements, starting with lumpy skin disease and other vector-borne diseases.
- Finalise and implement a national action plan for hitchhiker plant pests to enhance Australia's capacity to prevent, prepare for and respond to the threat of such pests.
- Create a network of private veterinarians, supported by jurisdictions, to investigate and report on unusual disease presentations in production animals.
- Develop new modelling tools to support preparedness activities – for example for African swine fever.
- Implement new tools and systems to improve biofouling risk identification and management.
- Commence development of a National Action Plan for Trees and Timber to build national capability to prevent and respond to pest and disease threats to trees.
- Progress work with states and territories towards national harmonisation of biosecurity treatments.
- Enhance national plant health surveillance for early detection of high priority exotic plant pests entering through international pathways.
- Undertake a risk assessment of lumpy skin disease introduction into northern Australia, including modelling the potential dispersal of insect vectors from neighbouring countries.
- Expand Australia's testing capability for lumpy skin disease.
- Release the Exotic Environmental Pest List Implementation Plan detailing work to continue to reduce the establishing risk of exotic environmental pests, weeds, and diseases.



# Action 9

## Align our funding and investment model to emerging system needs

Governments, businesses and community groups invest in Australia's biosecurity to protect our collective interest in avoiding and mitigating the considerable and ongoing costs associated with exotic pests and diseases. We will work toward ensuring our funding and investment strategies are fit-for-purpose and sustainable for the long-term, and that biosecurity partners contribute equitably. This will involve consultation with our key system partners and participants.

### Our priority actions for 2022 include:

- Undertake a public consultation process on options to deliver sustainable biosecurity system funding and investment.
- Complete detailed work and industry engagement to support longer-term reforms of our current biosecurity cost recovery arrangements to ensure they are fit for purpose.
- Identify changes to our compliance framework to incentivise compliant behaviour and remove unnecessary system costs associated with addressing non-compliance.
- Progress work on options to fund critical national biosecurity infrastructure and systems, including through state and territory government co-investment, aligned with efforts being led by the National Biosecurity Committee.





# Addressing systemic issues raised by the Inspector-General of Biosecurity and other independent reviewers

The department continues to make meaningful progress addressing recommendations made by the Inspector-General of Biosecurity (IGB), a position established under the *Biosecurity Act 2015*, and the Australian National Audit Office in relation to our biosecurity system. These assessments of our performance are important contributions to our efforts to ensure Australia has a robust, risk-based biosecurity system able to meet current and future challenges. The department has received 205 recommendations across 16 IGB reviews, together with 8 recommendations from the single ANAO audit since December 2017. As at March 2022, 95 IGB and 8 ANAO recommendations remain open. All ANAO recommendations have a suggested implementation date of 1 July 2022. A summary breakdown by each report is at Appendix B. The IGB's recent reports, including recommendations and the department's response to them, can be found at [www.igb.gov.au](http://www.igb.gov.au).

As recognised by the IGB, while a range of recommendations reflect matters very specific to the area under review, many go to the heart of our underlying system with similar root causes emerging across issues and time. Embedding meaningful change in response to these findings may not always be fast or simple. Some recommendations require significant change (in policy and/or operational arrangements) as well as consultation with other national and international agencies, industry and/or further decisions by government. A recent IGB review also highlighted that the department needed to significantly improve its internal governance structures around the accountability and tracking of responses to IGB recommendations. Additionally, the ANAO (2021) pointed to the need for an established framework for assessing and managing risk across the biosecurity system.

*Commonwealth Biosecurity 2030* committed the department to report on its progress addressing the systemic issues underpinning IGB and other independent reports over recent years. These are grouped broadly as:

- improving the regulatory maturity of the biosecurity system, including ensuring the department has a professional regulatory capability and associated frameworks
- facilitating partnership approaches to the risk management of biosecurity pathways, for example, through co-regulation and industry partnership arrangements
- bolstering the capacity and capability of frontline biosecurity staff
- considering a sustainable funding and investment model for the biosecurity system that supports and adapts with changing risks and operating models
- setting a strategic direction for biosecurity management in Australia, supported by an enhanced governance framework.

The strategic actions in *Commonwealth Biosecurity 2030* were informed by findings of the IGB and ANAO. The report on our progress against our early deliverables and the key actions for 2022 set out in this report highlight the core of our current response to these findings. We are focussed on ensuring we have the appropriate accountability arrangements in place to deliver meaningful progress. Recognising the reporting elsewhere in this action plan, this section highlights our efforts across three key areas.

## **Delivering the transparency and accountability needed to ensure continuous improvement**

A Biosecurity and Compliance Board was established in June 2021 to provide oversight to the Biosecurity and Compliance Group and its business reforms, with a particular focus on the significant and growing pressures faced by the Australian biosecurity system and the department's role in addressing these. Implementing *Commonwealth Biosecurity 2030*, while ensuring this investment is realised in the best possible way, is a priority for the Board. Within this context, it seeks regular reporting on priority projects. The Board's Terms of Reference include a specific requirement to consider implementation of agreed IGB and ANAO recommendations, which is supported by operating and oversight procedures.

Three sub-committees support the Board, providing advice and assurance on:

- managing risk to the biosecurity system, including compliance and assurance approaches
- biosecurity data, research and intelligence activities
- key investment priorities, ensuring a strategic approach to reduction in biosecurity risk and optimising return on investment.

A refreshed set of corporate performance indicators for biosecurity has been agreed, with detailed guiding material to support their measurement and evaluation. The department's Portfolio Audit Committee provides independent oversight, with reporting to the Executive Board. It also seeks advice on progress implementing IGB and ANAO reports. Work is also underway with states and territories toward a national biosecurity evaluation framework, which is expected to be concluded by the end of 2022.

## **Building the regulatory capacity and capability of our workforce**

Our people are a significant part of the biosecurity system. Their training, development and support tools are critical to enabling them to do their job well – including to deliver lawful, reasonable, transparent and accountable regulatory decisions.

The department has taken some important steps to strengthen and professionalise its regulatory practice. This includes releasing a Regulatory Practice Statement and Compliance Policy; developing a professional regulatory capability framework, including targeted training packages, to assist staff performing regulatory activity; and establishing a regulatory community of practice. This is guiding efforts within biosecurity, including a refreshed biosecurity compliance plan and strategic assurance framework, while supporting cross-learning from other regulatory systems.



A highlight for the year was the Building Legal Organisational Capability training project, designed to enhance biosecurity officer understanding of the Biosecurity Act 2015 in the conduct of their duties. Training was developed, piloted and rolled out through 2021, with all biosecurity staff expected to have undertaken the training by the end of 2022.

A review of biosecurity instructional material (now called decision support material – DSM) and its delivery commenced, with an initial focus on our human biosecurity functions. The principals of co-design and user centred design underpin the development of DSM. DSM forms an integrated document hierarchy (policy, guidance, procedure) based on import pathways, providing alignment across legislation, risk policy and regulatory settings including controls and risk tolerances, supporting legislated and defensible decision making.

The development of the DSM framework is well advanced with operational pathway policies published for conveyances, travellers, cargo and mail. The department is continuing to reform the previous instructional and operational support material for biosecurity officers into the new DSM framework, with work currently underway in all pathways.

Additionally, the department has started the process toward establishing a Biosecurity Training Centre, which will provide a professionalised, structured foundation for biosecurity training going forward.

#### **Understanding and evolving our operating and risk models**

Work was commissioned in 2021 to develop a common operating model for the Biosecurity and Compliance Group, building on work undertaken in relation to our operational division. This is expected to be finalised in 2022. There has also been ongoing effort to embed better risk management approaches into the biosecurity management framework, including the development of a fit for purpose risk management framework. This framework is expected to be finalised in 2022. A strategic assurance framework and annual plan are also in development, which will help deliver confidence that our control settings are robust and fit for purpose. It will also support program assurance activity.

The new Board arrangements support a more strategic focus on issues (operational, technical and policy). Its Risk, Compliance and Assurance Sub-Committee will monitor, co-ordinate and prioritise risk management and assurance arrangements within the biosecurity system. The Board is also supported two other sub-committees covering investment prioritisation and data, research and intelligence.

As highlighted previously, actions are underway to enhance our strategic focus. This includes a focus on strategic intelligence gathering and analytics. This will provide an important lens through which to consider and review our operating model and our mitigation strategies for emerging risks.

While there remains work to do, there has been considerable progress made towards addressing IGB reviews and maturing our regulatory performance and culture. We continue to look for best practice examples in Australia and abroad to help inform future advancement.



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# Appendix A. Initial steps

Under *Commonwealth Biosecurity 2030* we committed to delivering sixteen initial steps in 2021 to commence our journey to meet our strategic goals. We have delivered on a number of these commitments and work is well underway to progress the remaining items.

## Progress of initial steps:

**National biosecurity strategy** - *Progress a national biosecurity strategy with states, territories, industry and the community.*

The work is being driven through the National Biosecurity Committee. A consultation draft was released in February 2022, with the strategy expected to be finalised in 2022.

**Commonwealth Biosecurity 2030 action plan** - *Finalise our first annual action plan to deliver against this roadmap following consultation with key partners.*

This document forms the first annual action plan against our *Commonwealth Biosecurity 2030* strategic roadmap.

**IGB implementation report** - *Deliver our first annual report on our progress implementing the IGBs recommendations to enhance our risk-based biosecurity approach.*

A report on the department's efforts to address systemic issues underlying recommendations made by the Inspector-General of Biosecurity and the Commonwealth Auditor General is included in this action plan.

**Pacific strategy** - *Develop a strategy to support our Pacific Island biosecurity partnerships and engage two dedicated engagement officers.*

Consultation on a draft *Pacific Biosecurity Strategy 2021-2026* is underway. A dedicated pacific engagement officer has been employed in the offices of the Chief Veterinary Officer and Chief Plant Protection Officer to support this work.

**Northern Australia strategy** - *Work with states and territories to implement the Northern Australia Biosecurity Strategy.*

The Northern Australian Biosecurity Strategy and implementation plan have been agreed. A governance/reporting framework is in place to coordinate delivery efforts and funding for identified projects.

**National exercise** - *Co-design national preparedness exercises and commence workshops to agree on critical national practices.*

The Northern Australian Biosecurity Strategy and implementation plan have been agreed. A governance/reporting framework is in place to coordinate delivery efforts and funding for identified projects.

**Genetics preservation arrangements** - *Undertake assessment of the need for a livestock genetics preservation arrangement.*

In 2021, CSIRO provided an initial report describing the preservation of livestock genetic resources. This report highlighted the rationale for the preservation of livestock genetic resources, the risks associated with not undertaking preservation activities, the approach being undertaken by several of Australia's agricultural competitors international, and the options that may be most appropriate for Australia. Consultation with key stakeholders in industry and research organisations is ongoing and will inform final report recommendations. The final report is expected in mid- 2022.

**Design and develop up to three pilots with the import sector** - *to test streamlined clearance arrangements with a view to reducing regulatory costs for compliant importers and producers.*

Seven pilots are currently progressing with separate importers across a varied supply chain/ commodity base and cargo flow method for importation. Pilots are running in parallel to existing biosecurity controls and arrangements. All are expected to be completed in the first half of 2022.

## Introduce 3D x-ray machines into international mail centres

There are currently two 3D x-ray units operational at international mail centres. A feasibility study was completed in December 2021 to inform the installation of an additional three 3D x-ray units, planned for installation during 2022-23. The first of these has been allocated to the Sydney Gateway Facility and will be operational in the first half of 2022. The location and timeline for installation of the remaining two units will shortly be determined.

## Pilot offshore remote screening of international passenger luggage

A multi-stream proof-of-concept trial has been designed to use new 3D x-ray technology images and biosecurity algorithms to screen aircraft passengers' bags prior to their collection on arrival. The department is currently working with New Zealand and Australian Border Force to test how outbound baggage information from aviation security screening in the departing country can be used to risk assess inbound passengers' hold baggage whilst inflight. Operational trials are commencing in 2022 to test how hold baggage can be screened after arrival but before the passenger collects their baggage. 3D X-ray units will be installed inline into airports existing baggage handling systems to support this trial.

**Progress an integrated biosecurity clearance assurance and response model** - *for Australian port precincts involving government and industry starting with case studies in key sea and airports.*

Initial consideration has commenced with states and territories, with agreement by the National Biosecurity Committee to establish a multi-jurisdictional working group with ports expertise. A proof-of-concept trial is underway with the Port of Melbourne to consider new ways to achieve biosecurity outcomes at ports. The Port of Melbourne will work with its port operators, stevedores, importers and shipping lines to achieve the required biosecurity outcomes with the department by providing verification and assurance.

**Agree on early regulatory changes to biosecurity and imported food control legislation** - *to remove unwarranted legislated constraints and administrative burden for government and industry.*

A dedicated team has commenced scoping work for a full fit for purpose review of the *Imported Food Control Act 1992*. This will examine the policy objectives together with the efficiency and effectiveness of the underpinning regulation and business practices. This legislation was also considered in the context of the 2021 simplified trade system regulatory review process. Public consultation is expected to commence in 2022. The *Biosecurity Act 2015* has been amended to better manage risks, create efficiencies and share information through the *Enhanced Risk Management Bill* and the *Enhanced Compliance Bill package*. Amendments to the *Biosecurity (Conditionally Non-prohibited Goods) Determination 2021* are also underway to provide legislative powers related to automated decision making.



**Release an updated regulatory practice statement and compliance policy** - together with tailored legal training to support our staff in their regulatory role.

An updated regulatory practice statement was published on 25 June 2021. A compliance policy to support this statement was published on 19 January 2022. To support delivery of the statement and improve our regulatory practices we have established a community of practice. A tailored training program, Building Legal Organisational Capability is being rolled out to operational staff ahead of being made available to a broader staff cohort.

**Refresh the national biosecurity website** - to improve awareness and information sharing.

The national biosecurity website was launched from its beta site in June 2021. Further refinements to the site are also being progressed.

**Review our existing biosecurity cost recovery arrangements**

The review of existing biosecurity cost recovery arrangements commenced in 2021 and is being undertaken in two parts. Part 1 is a review of existing fees and charges against a refreshed cost base and revenue estimates. Following work to confirm our forward revenue estimates, the 2021-22 Biosecurity Cost Recovery Implementation Statement was released in March 2022. Efforts for the 2022 year are reflected against Strategic Action 9.

**Scope the critical elements of an integrated biosecurity import system** - which is interoperable with government and industry systems

Our Simplified Trade and Enhanced Processing System (STEPS) program is intended to provide an approach for a digitised, integrated, continuous risk assessment model for the imported cargo process, involving early access to data and ongoing assessment as goods move through the import supply chain. Funding toward a detailed business case, supported by three proof-of-concept trials, was secured in the MYEFO 2022-23. Work is also underway to secure an integrated risk assessment for containerised cargo in the context of hitchhiker pests. An online biosecurity portal that provides industry with the ability to book and manage biosecurity inspections in the first instance has been fully tested with industry and will come online in 2022. The department has worked closely with relevant agencies to explore opportunities to better integrate border systems to reduce costs to importers and government, as part of work to consider a single trade system.

## Appendix B. Status of IGB and ABAO reports (Dec 2017 to Dec 2021)

### Status summary of ANAO audit recommendations

ANAO audit title	ANAO publish date	Total number	Number closed	Number in progress
Responding to Non-Compliance with Biosecurity Requirements	June 2021	8	0	8
<b>Totals</b>		<b>8</b>	<b>0</b>	<b>8</b>

### Status summary of Inspectors-General review recommendations December 2017 to December 2021

Inspector-General review title	IGB Signature date	Total number	Number closed	Number in progress*
Robustness of biosecurity measures to prevent entry of khapra beetle into Australia	December 2021	13	0	13
Accountable implementation of Inspectors-General recommendations (2015–2021) and developing a framework for future implementation accountability	November 2021	10	0	10
Confidence testing for at-border delivery of critical human biosecurity functions – Ruby Princess cruise ship incident	April 2021	42	20	22
Adequacy of department's operational model to effectively mitigate biosecurity risks in evolving risk and business environments	February 2021	19	0	19
Biosecurity risk management of international express airfreight pathway for non-commercial consignments	July 2020	25	11	14
Adequacy of preventative border measures to mitigate the risk of African swine fever	March 2020	13	13	0
Effectiveness of Approved Arrangements in managing biosecurity risks in Australia	August 2019	13	8	5
Implementation of Inspector-General of Biosecurity recommendations (2019–20)	July 2019	3	3	0
Pest and disease interceptions and incursions in Australia	May 2019	5	3	2
Effectiveness of biosecurity measures to manage the risks of brown marmorated stink bugs entering Australia	May 2019	14	14	0
Environmental biosecurity risk management in Australia	April 2019	7	7	0
Implementation of Interim Inspector-General of Biosecurity recommendations (2018–19)	September 2018	1	1	0
Horse importation biosecurity risk management	September 2018	4	4	0
Military biosecurity risk management in Australia	July 2018	5	3	2
Hitchhiker pest and contaminant biosecurity risk management in Australia	July 2018	9	5	4
Uncooked prawn imports: effectiveness of biosecurity controls	December 2017	22	18	4
<b>Totals</b>		<b>205</b>	<b>110</b>	<b>95</b>

\* A large number of open recommendations involve work to fundamentally shift and improve regulatory practice which will take some time to complete.

Note: The figures for the recommendations are recorded as of March 2022



# Case studies

## Pacific Biosecurity Partnerships program

The Pacific Biosecurity Partnerships Program was established in 2019 in response to growing biosecurity threats in the Pacific and to enhance Australia's contribution to Pacific agricultural sector growth and improve food security through better market access and biosecurity outcomes. The program is delivered by the department and the Department of Foreign Affairs and Trade and focuses on the Pacific Island countries and territories (PICTs) of Papua New Guinea, Fiji, Solomon Islands, Vanuatu, Tonga, Samoa and Timor-Leste. In these countries, agriculture is the main source of livelihood for communities and a major export earner. The program helps protect Australia's biosecurity status; protect PICTs' agriculture and food sectors; limit the spread of pests and diseases; maintain market access; and safeguard the environment and way of life of PICTs.

The department is implementing two streams of work in 2021-2022. These streams will build on existing work to support PICTs with stronger trade and market access opportunities; provide advice and assistance on meeting Australia's biosecurity requirements; strengthen the Solomon Islands biosecurity system; build capacity to harmonise regional imports and exports; and improve regional communication.

## eDNA

The department is investing in the use of innovative technology to better manage harmful hitchhiker pests at the Australian border. Hitchhiker pests can arrive in Australia on almost any commodity – plastic goods, food, cars or even the container itself – as the small pests hide while looking for shelter during the overseas winter months. Many pests capable of hitchhiking are of considerable biosecurity concern; if they managed to escape into the environment, they could severely damage Australia's agriculture, environment and our social amenity.

Working with the University of Canberra, the department is developing a new National Environmental DNA (eDNA) Reference Centre that will provide essential support to the department's work in cutting-edge eDNA research.

Environmental DNA technology can detect biosecurity pests and pathogens from samples of air, waterways, or the environment on-site within an hour. This technology avoids the traditional need to locate a tiny insect in a cargo container, and then have an entomologist identify it at a laboratory. By providing eDNA testing kits as a portable tool to our frontline officers and scientists, it means they can take samples from shipping containers, out in the field, and quickly confirm the presence of biosecurity threats via target DNA in the air, waterways and environment. The tool will enable officers to improve detection outcomes on invasive pests such as khapra beetle, or BMSB arriving via sea cargo.



## Biosecurity portal

The department is improving the way industry stakeholders book biosecurity inspections. Currently the process is manual, paper-based and labour intensive. An individual completes a PDF form, scans and then emails it to the department to request a booking, which in turn prompts our staff to enter information manually into our systems before we can schedule inspectors to jobs, and confirm the appointment via return email. This current process means it can take up to three days for a booking to be completed and confirmed. The process is repeated if someone needs to change their booking – which isn't unusual given sometimes unavoidable delays in shipping or due to other clearance processes.

This process has been identified as a pain point by industry stakeholders, including through the Simplified Trade System (STS) reform agenda discovery processes. As a result, the department has received funding to implement a biosecurity portal to allow the import industry to perform self-service functions – initially, booking and managing biosecurity inspection of cargo.

An initial version of the biosecurity portal has been beta tested by industry and the department in Queensland, Northern Territory and South Australia. System enhancements are underway and a progressive public rollout across the country will occur from March 2022.

This initiative supports the STS reform agenda by delivering easy to use, fit for purpose digital services informed by Australian importers' business needs, replacing manual, paper-based processes. We estimate tangible business benefits at \$4 million per annum and expect government benefits in streamlining the rostering and scheduling of departmental staff to improve efficiency and service levels.

Over time, the portal design and workforce management system will support further enhancements to add more online biosecurity and other departmental services, while being able to integrate with the future 'tell us once' digital model for government-business trade interactions.

## Proof-of-concept trial for new importer supply chain arrangements

Addressing biosecurity risks before they reach Australian shores is a strong mitigant to preventing incursions and to minimising the scale and cost of border interventions.

One such initiative is the development of a proof-of-concept trial with compliant import industry businesses to test if equal or better biosecurity outcomes can be achieved by using their own business assurance systems to manage biosecurity risk across their supply chains.

Seven pilots are taking place with importers across different sectors and supply chains as part of a co-design process. The trial is expected to finish by June 2022 and is already informing the establishment of more permanent 'green lane' biosecurity management arrangements.

The new arrangements will be a gamechanger for both the department and industry. While import conditions will not be altered, there will be fewer hoops for participating importers to jump through when their consignments reach the border. Taking highly compliant importers out of the border entry system will also reduce congestion and allow our biosecurity officers to focus their attention on higher risk activities and business reform.

Another initiative is a proof-of-concept trial with the Port of Melbourne which aims to re-imagine and transform the way we achieve biosecurity outcomes at ports using the Port of Melbourne as a trial site. The Port of Melbourne will work with its ecosystem (including port operators, stevedores, importers and shipping lines) to achieve the required biosecurity outcomes with the department by providing verification and assurance. This represents strong partnership with industry to shape the future of biosecurity activities at the Port of Melbourne and eventually the rest of Australia.



## Seasonal Pest System for brown marmorated stink bug (BMSB)

To manage the ongoing risk of hitchhiker pests, the Seasonal Pest Management System (SeaPest) was developed to provide better oversight of offshore treatments for BMSB. This system is used by recognised offshore treatment providers and manages goods at the container level for BMSB. It also provides the department a verification tool for frontline officers to validate assessment activities.

Since its implementation, SeaPest has successfully allowed goods with BMSB risk to be cleared earlier, reducing the potential for congestion at the border. For example, for the 2020-21 BMSB season, we received 82,977 offshore treatment certificates and were able to release 73,149 consignments without the need for biosecurity intervention.

The SeaPest system is now being upgraded to allow the offshore treatment provider function to accept treatments for other risks such as khapra beetle. This will provide the department greater flexibility to manage biosecurity risk offshore with increased confidence.

## Digital capability in traveller and mail pathways

The Traveller and Mail Modernisation (TMM) program will deliver systems support to improve policy and processes in the mail and traveller pathways. As part of this program, the Traveller and Mail System (TAMS) will provide a digitised workflow to improve our ability to manage biosecurity risks efficiently and effectively at the border.

The program also includes the department's delivery components for the Department of Home Affairs' Digital Passenger Declaration (DPD) and supports the implementation of a digitised declaration solution to replace the current paper-based Incoming Passenger Card and Australia Travel Declaration. This integration will support more effective automated risk assessment capabilities via the TAMS risk engine for travellers. A like platform will also service the mail pathway to enhance mail profiling and intervention.

TMM has already delivered mobile capability, passport scanning and a human health app, meaning we are well positioned to integrate and implement the DPD. The first iteration of TAMS has been delivered at Sydney Airport, and we expect to be piloting an end-to-end TAMS system for the travellers' pathway by July 2022. Proof-of-concept trials of TAMS (assessment function) in the mail pathway is set for April 2022. A key outcome from TMM program will be decommissioning the current Mail and Passenger System by 2023.

## Rural tailgate inspections

The department has developed a new approved arrangement that authorises accredited individuals to undertake rural tailgate inspections on behalf of the department. This arrangement, when partnered with an existing approved arrangement, Automatic Entry Processing (class 19.1), will streamline the border process for a number of imports. With the assistance of our clients and stakeholders, this will enable most of the biosecurity controls related to impediment-free containers destined for rural areas to be managed by approved biosecurity industry participants.

The approved arrangement provides industry with the opportunity to undertake the inspection of some 41,000 containers annually, accelerating the movement of containers across the border. It will also enable the department to recover some 6,800 hours of biosecurity officer inspection effort – meaning we can redirect those inspectors to other higher risk areas and activities.

## A national agreement for plant health surveillance

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