Australian Government
Department of Agriculture, Fisheries and Forestry

Submission to the Rural and Regional Affairs and Transport References Committee:

Adequacy of Australia's biosecurity measures and response preparedness, in particular with respect to foot-and-mouth disease and Varroa mite

August 2022

Cataloguing data

This publication (and any material sourced from it) should be attributed as: DAFF 2022, *Submission to the Rural and Regional Affairs and Transport References Committee: Adequacy of Australia's biosecurity measures and response preparedness, in particular with respect to foot-and-mouth disease and Varroa mite*, Department of Agriculture, Fisheries and Forestry, Canberra, August. CC BY 4.0.

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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.

Terms and abbreviations

Term or Acronym	Definition or spelt out acronym
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ACDP	Australian Centre for Disease Preparedness
ACVO	Australian Chief Veterinary Officer
AGAGINPLAN	Australian Government Agricultural Incident Plan
AGCMF	Australian Government Crisis Management Framework
AGSOC	Agriculture Senior Officials Committee
AHA	Animal Health Australia
AHBIC	Australian Honey Bee Industry Council
AHS	African horse sickness
ALOP	Appropriate Level of Protection
AM	Member of the Order of Australia
ANAO	Australian National Audit Office
AO	Officer of the Order of Australia
ASF	African Swine Fever
AUSBIOAGPLAN	Australian Government Biosecurity and Agricultural Response Plan
AUSVETPLAN	Australian Veterinary Emergency Plan
AUSVETPLAN for FMD	Australian Veterinary Emergency Plan Foot-and Mouth Disease Response Strategy
AUSVETPLAN for LSD	Australian Veterinary Emergency Plan Lumpy Skin Disease Response Strategy
BAEN	Biosecurity and Agricultural Emergency Network
Biosecurity Act	*Commonwealth Biosecurity Act 2015*
BIMS	Biosecurity Incident Management System
BIRA	Biosecurity Import Risk Analysis
CCEAD	Consultative Committee on Emergency Animal Diseases
CEBRA	Centre of Excellence for Biosecurity Risk Analysis
CCEPP	Consultative Committee on Emergency Plant Pests
Codex	Codex Alimentarius Commission
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	The Australian Government Department of Agriculture, Fisheries and Forestry
DCVO	Deputy Chief Veterinary Officer
the department	The Australian Government Department of Agriculture, Fisheries and Forestry
Director of Biosecurity	The Secretary of the Australian Government Department of Agriculture, Fisheries and Forestry
EAD	Emergency Animal Disease
EADRA	Emergency Animal Disease Response Agreement
EHB	European Honey Bee
EMA	Emergency Management Australia

EPP	Emergency Plant Pest
EPPRD	Emergency Plant Pest Response Deed
FAO	United Nations Food and Agriculture Organization
FMD	Foot-and-Mouth Disease
FTSE	Fellow of the Australian Academy of Technology and Engineering
GPA	Grain Producers Australia
HIA	Horticultural Innovation Australia
HPAI	High Pathogenicity Avian Influenza
IAHER Arrangement	The International Animal Health Emergency Reserve Arrangement
IGAB	Intergovernmental Agreement on Biosecurity
IGB	Inspector-General of Biosecurity
IPPC	International Plant Protection Convention
IQI	Increased Quarantine Intervention
LSD	Lumpy Skin Disease
MAF	Timor-Leste Ministry of Agriculture and Fisheries
MLA	Meat and Livestock Australia
NAMP	National Arbovirus Monitoring Program
NAQIA	Papua New Guinea National Agriculture and Quarantine Inspection Authority
NAQS	Northern Australia Quarantine Strategy
NBBP	National Bee Biosecurity Program
NBC	National Biosecurity Committee
NBPSP	National Bee Pest Surveillance Program
NCC	National Coordination Centre
NEBRA	National Environmental Biosecurity Response Agreement
NIC	National Biosecurity Strategy Implementation Committee
NLIS	National Livestock Identification System
NMG	National Management Group
PHA	Plant Health Australia
PLANTPLAN	Australian Emergency Plant Pest Response Plan
Quarantine Act	Commonwealth *Quarantine Act 1908*
Regulatory Powers Act	Commonwealth *Regulatory Powers (Standard Provisions) Act 2014*
SEJ	Structured Expert Judgement
the SPS Agreement	The World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures
WHA	Wildlife Health Australia
WOAH	World Organisation for Animal Health (formerly the Office International des Epizooties)
WTO	World Trade Organization

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Introduction

The Department of Agriculture, Fisheries and Forestry (the department) welcomes the opportunity to make a submission to the Senate Standing References Committee on Rural and Regional Affairs and Transport's inquiry into the adequacy of Australia's biosecurity measures and response preparedness, in particular with respect to foot and mouth disease (FMD) and Varroa mite.

Australia has a world class biosecurity program, which is vital to strengthening and supporting our environment and economy, including tourism, trade and agriculture. Our biosecurity system has served Australia and Australians well – we remain free from a range of damaging pests and diseases. Australia is FMD free and has been for 150 years.

Australia's robust biosecurity system safeguards access to valuable export markets for our producers, growers and processors, protects our way of life, and underpins our status as a trading nation. Each year, it protects:

$251.5 billion (2021)
in assets

$83.1 billion (2021-22)
in annual agricultural production

$65.9 billion (2022-23)
forecasted exports in agriculture, forestry and fisheries products

Source: ABARES

Our freedom from many significant exotic pests and diseases supports our agricultural productivity and allows our producers, growers and processors to access valuable markets, and in some cases receive premium pricing for their products. In this way, our biosecurity system supports Australian jobs, particularly in regional and rural Australia.

Our national biosecurity system is greater than the sum of its individual parts. It is a multilayered, interconnected network of people, critical infrastructure and technology, partnerships, processes and regulatory activities that function cohesively overseas (pre border), at our border and within Australia (post border) to protect our national interests. The system relies heavily on the sharing of responsibility by all stakeholders, including governments, industry, research organisations, agriculture and environment groups, First Nations peoples, veterinarians, park rangers, landowners, farmers, entomologists and the broader Australian community.

The goal for the Australian Government's biosecurity system, as stated in *Commonwealth Biosecurity 2030*, is:

> *A risk based biosecurity system that effectively, efficiently and sustainably protects Australia's health, economic, environmental and national security interests against the threats of today and tomorrow, consistent with our Appropriate Level of Protection.*

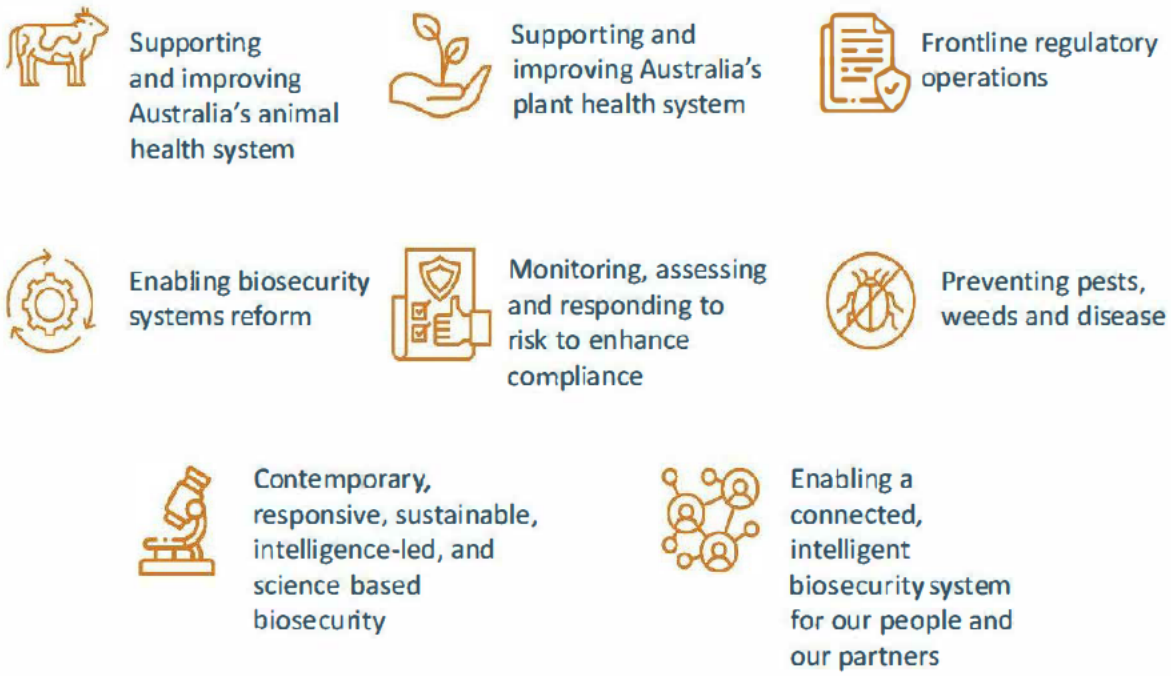
The Commonwealth *Biosecurity Act 2015* (Biosecurity Act) provides the primary legislative means for a modern regulatory framework allowing the Australian Government to manage the risk of pests and diseases entering Australian territory and causing harm to animal, plant and human health, the

environment and the economy. The 2008 Beale review recognised that zero biosecurity risk is both unattainable and undesirable, and the Biosecurity Act defines Australia's Appropriate Level of Protection (ALOP) as very low but not zero.

For the Commonwealth, the department plays a central role in managing biosecurity. The department works with importers, exporters, travellers, producers, supply chain and logistics businesses, and the community to protect Australia from biosecurity risks. The department works with the states, territories and other stakeholders on emergency response planning, coordination and preparedness. These aim to minimise the impact of pests and diseases on agriculture, the environment and human health.

The department undertakes a range of biosecurity functions including policy, response, compliance and enforcement, regulatory and operational activities.

Figure 1: Biosecurity intervention activities



Source: Department of Agriculture, Fisheries and Forestry

Our regulatory system is sophisticated, using risk based decision making and settings grounded in science to support the safe movement of goods and people across our border. It is a living system that is continuously assessing biosecurity risk and calibrating our efforts and resources accordingly. When pest and disease risks change, or new ones present, our biosecurity response is reviewed and changed in line with our ALOP.

Regardless of this strong system, we need to remain vigilant. We are not, and have not been, complacent. The biosecurity system is not static. It must and does respond to increasing risk factors such as climate change, changed patterns of international travel and global trade disruption and reduced biodiversity. We need to continue to adapt and evolve our system to focus on key threats as they emerge.

Comprehensive emergency animal disease (EAD) response arrangements are in place and at a high state of readiness across industry and at all levels of government.

These response arrangements have been tried and tested. Within Australia, the department is working closely with and across state and territory governments, agricultural and transport industries, and other participants in supply chains to respond to biosecurity risks, including with the use of the most accurate and current information and data.

Australia's long standing biosecurity frameworks and systems already comprehensively provide for scaled up responses through risk anticipation, preparedness, scenario planning and activation. We use intelligence and actively monitor for changes in risk profile. Data, analytics and intelligence are playing an increasingly critical role in managing risks proactively rather than reactively.

Since FMD was detected in Indonesia, a number of enhanced actions have been put in place at the border (including in the passenger, mail and cargo pathways). Australia values its close relationship with Indonesia greatly, and has provided financial and technical support to Indonesia's response to both FMD and lumpy skin disease (LSD), to help it contain and control its outbreaks of both diseases. Preparedness activities have also been escalated in Australia – through the establishment of an Exotic Animal Disease Preparedness Taskforce that has conducted exercises with the states and territories, the appointment of a national animal disease preparedness coordinator, completed trade impact analyses for FMD and LSD, and completing, in consultation with industry, a Draft National LSD Action Plan.

The response to the recent incursion of Varroa mite in New South Wales (NSW) is based on planning over many years by the Commonwealth, the states and territories, Plant Health Australia (PHA) and the bee industry. The National Bee Pest Surveillance Program has acted as designed as an early warning system to detect new incursions of exotic bee pests and pest bees. National response arrangements were activated to respond to the incursion on detection of Varroa mite in sentinel hives. The Australian Government has been actively supporting the NSW Government, which is the lead response jurisdiction, including through funding and other support under the Emergency Plant Pest Response Deed.

Australia's biosecurity framework

Our biosecurity system is built on the concept of a multilayered defence and the principle of shared responsibility. It includes a wide range of stakeholders, from the Commonwealth and state and territory governments, First Nations Traditional Owners, veterinarians, park rangers, landowners, farmers and agricultural workers, scientists, entomologists, pathologists, agronomists, biologists, importers and many more; as well as trained Commonwealth and state and territory biosecurity officers.

Figure 2: How our system works – roles and responsibilities

Source: National Biosecurity Strategy

Legislation

The Constitution of Australia provides the Commonwealth with the legislative power to make laws in relation to biosecurity.

Historical context - *Quarantine Act 1908*

The *Quarantine Act 1908* (Quarantine Act) was enacted on 20 March 1908. It enabled the Commonwealth to take protection and prevention measures to ensure that diseases and pests did not enter and proliferate in Australia. The Quarantine Act was amended by Parliament 60 times, largely in response to increasing trade, increasing travel, emerging technologies and emerging biosecurity threats.

Several reviews were conducted from the late 1990s to evaluate the efficiency and effectiveness of Australia's legislative and regulatory frameworks in relation to biosecurity, including the Quarantine Act.

The Quarantine Act was repealed on 16 June 2016 due to the enactment of the *Biosecurity Act 2015* (Biosecurity Act), which provides a modernised and more expansive framework for managing biosecurity risks.

Current legislative framework – *Biosecurity Act 2015*

The Biosecurity Act provides the primary legislative means and a modern regulatory framework for the Australian Government to manage the risk of pests and diseases entering Australian territory and causing harm to animal, plant and human health, the environment and the economy. Commencing in June 2016, it brought necessary changes and a new streamlined structure to what was an outdated regulatory system. It seeks to enable the management of biosecurity risks in a modern and responsive manner and enhance Australia's capacity to manage biosecurity risks into the future.

The Biosecurity Act reflects a number of key principles integral to achieving a strong, effective and efficient biosecurity system, including: clear legislative powers to assess and manage biosecurity risks; increasing efficiency and decreasing regulation; improving compliance; and meeting Australia's international obligations.

The Biosecurity Act provides for managing biosecurity risk, and responding to biosecurity emergencies and gives effect to Australia's international rights and obligations, including under the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).

It extends the previous coverage of powers from the Quarantine Act to ensure the risk posed by invasive pests and diseases can be more effectively managed. This is significant, as some invasive pests have the potential to cause severe and long lasting damage to Australia's agriculture sector, our valuable trade and market access and the natural environment. These additional powers complement current arrangements, such as the Emergency Animal Disease Response Agreement (EADRA), the Emergency Plant Pest Response Deed, and the National Environmental Biosecurity Response Agreement, with states, territories and industry to support the management of pest and disease incursions.

The Biosecurity Act is based on the premise that federal legislation will regulate goods and conveyances as they enter Australia, to effectively manage biosecurity risk to Australia's ALOP, while also having powers to assess, manage and identify pest or disease incursions within Australian territory.

The Commonwealth's biosecurity scheme operates concurrently with state and territory domestic controls, consistent with their own biosecurity legislation. Between the Commonwealth, states and territories, and industry measures, Australia manages a world class biosecurity system. States and territories manage biosecurity concerns within their respective jurisdictions and enforce a range of biosecurity related statutes to address biosecurity concerns.

The Biosecurity Act creates the positions of the Director of Biosecurity and the Director of Human Biosecurity, biosecurity officers, biosecurity enforcement officers and human biosecurity officers, and assigns powers and functions to each of these positions.

The Biosecurity Act also creates the position of the Inspector General of Biosecurity. This role is provided with information gathering powers for the purposes of undertaking reviews of the biosecurity system, and requires a report be published on each review that has been undertaken. This helps to ensure that the biosecurity system is robust and that the assessment and management of biosecurity risk is subject to regular independent review and continual improvement.

The Biosecurity Act provides powers for managing post border activities, with biosecurity officers able to order biosecurity measures to manage risks on goods or conveyances no longer subject to biosecurity control. The Director of Biosecurity can also declare biosecurity zones and apply biosecurity measures within these zones. The Biosecurity Act provides the Australian Government with powers to manage incursions and respond to emergencies.

The Biosecurity Act provides for certain matters to be dealt with in more detail in subordinate legislation, including through the Biosecurity Regulation 2016 and a range of determinations and other legislative instruments. It also outlines the role of the Agriculture Minister in directing the Director of Biosecurity to commence a Biosecurity Import Risk Analysis (BIRA). The Biosecurity Act and regulations also outline offences and penalties that apply if regulations are not complied with.

Governance and partnerships

Australian Government

The Biosecurity Act is administered by two Commonwealth departments: the Department of Agriculture, Fisheries and Forestry and the Department of Health and Aged Care. Under the Biosecurity Act, powers and responsibilities are conferred on the Director of Biosecurity for meeting Australia's ALOP for imports.

At the border, the Department of Agriculture, Fisheries and Forestry works in close partnership with the Department of Home Affairs, which is responsible for non biosecurity aspects of international goods and entities entering Australia. The Department of Agriculture, Fisheries and Forestry also collaborates with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to maximise our scientific input into the biosecurity system.

AUSBIOAGPLAN

The Australian Government Biosecurity and Agricultural Response Plan (AUSBIOAGPLAN)—previously titled the Australian Government Agricultural Incident Plan (AGAGINPLAN)—is maintained by the department in consultation with relevant Australian Government agencies.

The AUSBIOAGPLAN provides a mechanism for Australian Government coordination in response to plant and animal biosecurity and agricultural incidents. AUSBIOAGPLAN outlines the arrangements by which the department fulfills its role and responsibilities as the lead agency for plant and animal biosecurity crises under the Australian Government Crisis Management Framework (AGCMF). It describes the coordination mechanisms between Australian Government agencies, which may be engaged during a response to plant and animal biosecurity incidents and agricultural incidents, together with respective agency roles and responsibilities (**Appendix C: National Biosecurity System linkage to Australian Government Crisis Management Framework**).

The AGCMF outlines the Australian Government's approach to preparing for, responding to and recovering from crises.

The AGCMF provides ministers and senior officials with guidance on their respective roles and responsibilities. It also sets out the arrangements that link ministerial responsibility to the work of key officials, committees and facilities.

National arrangements

The Australian Government works with the states and territories to assess and manage biosecurity risks. It collaborates with state and territory governments to harmonise the application of laws and regulations in the event of an animal or plant disease outbreak. A series of biosecurity roundtables are hosted by the Australian and state and territory governments each year on behalf of the National Biosecurity Committee (NBC). Outcomes of these roundtables then feed into the annual National Biosecurity Forum. The roundtables are an opportunity for participants to discuss biosecurity issues with government, industry, producers, environmental and community groups.

Intergovernmental Agreement on Biosecurity

The Intergovernmental Agreement on Biosecurity (IGAB) is an agreement between all Australian governments. The agreement:

- sets out commitments for the Australian Government, and state and territory governments
- outlines the agreed national goals and objectives

- clarifies roles, responsibilities and governance arrangements.

The original IGAB, which came into effect in January 2012, strengthened the working partnership between governments to deliver a national biosecurity system and allowed for improvements that minimise the impact of pests and diseases on Australia's economy, environment and the community. A 2017 independent review of the IGAB led by Dr Wendy Craik AM FTSE reaffirmed the value of the IGAB but proposed amendments to re prioritise areas for collaboration between governments.

Following the release of the Craik review report, a revised IGAB (IGAB2) was negotiated with the states and territories and came into effect on 3 January 2019.

National Biosecurity Committee
The NBC—formally established under IGAB—provides advice to the Agriculture Senior Officials Committee (AGSOC) on national biosecurity, and on progress in implementing the IGAB.

The NBC is also responsible for managing a national, strategic approach to biosecurity threats relating to plant and animal pests and diseases, marine pests and aquatics, and the impact of these on agricultural production, the environment, community well being and social amenity. A core objective of the committee is to promote cooperation, coordination, consistency, and synergies across and between Australian governments. This includes exploring measures to:


provide **assurance** that the system is working


better **connect** the biosecurity rationale to market access and trade

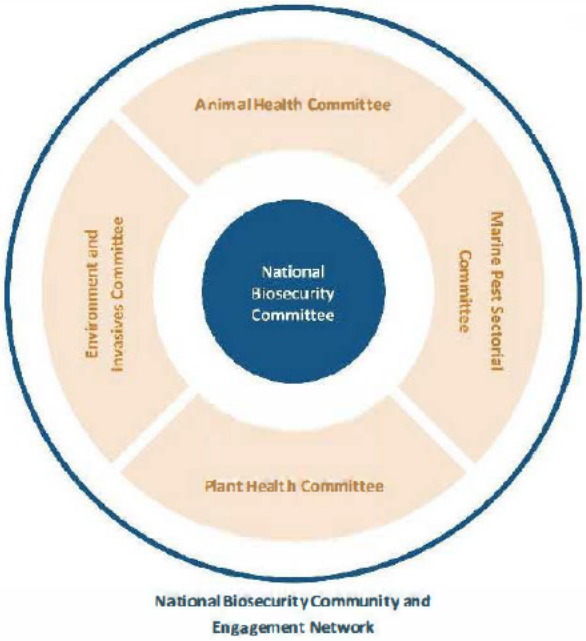

increase **visibility** and **engagement** with sectoral committees


engage, **partner**, and **communicate** with relevant stakeholders, as required, and


coordinate biosecurity **investment** in the national interest.

The NBC is supported by four sectoral committees and a communications and engagement network. These provide policy, technical and scientific advice on matters affecting their sector, covering all pests and disease risks to the terrestrial and aquatic (inland water and marine) animals and plants, and the environment. Working Groups under sectoral committees also do significant collaborative work on preparedness – for example, national diagnostic protocol development and surveillance planning.

Figure 3: National Biosecurity Committee's relationship with supporting committees and network



Source: Department of Agriculture, Fisheries and Forestry

The NBC meets face to face twice yearly, generally in March and September, and by videoconference as required. The Deputy Secretary of the department's Biosecurity and Compliance Group currently chairs the NBC. Membership comprises senior officials from the Australian Government, state and territory governments, primary industry and/or environment agencies. Animal Health Australia, Plant Health Australia, the Australian Local Government Association, and the New Zealand Government may be invited as observers.

The Biosecurity and Agricultural Emergency Network (BAEN) (formerly known as the National Biosecurity Emergency Preparedness Expert Group) provides guidance to the NBC on emergency management matters and ensures a nationally coordinated and consistent approach to the management of biosecurity and agricultural emergencies.

The network's membership is comprised of emergency response specialists from each jurisdiction, Animal Health Australia and Plant Health Australia.

The BAEN is responsible for providing a strategic, national approach to prepare for biosecurity and agricultural emergency responses. Jurisdictions, working with industry, undertake biosecurity response activities across plant, animal, marine, aquatic, and environmental pests.

The BAEN does this by:

- enhancing nationally consistent agricultural and biosecurity emergency policy, programs, strategies, and arrangements; and
- providing a forum for strategic collaboration between jurisdictional agencies to share learnings, experiences, and build an interjurisdictional support network.

Animal Health Australia (AHA) and Plant Health Australia (PHA)

AHA and PHA are not for profit companies created to coordinate the government industry partnership for animal and plant biosecurity in Australia to minimise animal disease and plant pest impacts on Australia, boost industry productivity and profitability and enhance market access.

Both AHA's and PHA's memberships include the Australian Government and all state and territory governments. AHA members also include 14 animal industry members. PHA members include 39 plant industry organisations.

AHA and PHA are core funded by member subscriptions. The Australian Government pays one third of the membership subscriptions, with state and territory governments and combined industry parties each collectively funding the remaining two thirds.

Each company also serves as the custodian for an emergency response deed: AHA for the EADRA and PHA for the Emergency Plant Pest Response Deed (EPPRD).

As custodians for the EADRA and EPPRD, AHA and PHA's role is to manage the agreement/deed on behalf of the parties, including conducting training, response debriefs, executing variations and assisting parties to understand their obligations. They also verify eligible cost claims for eradication responses under those deeds.

AHA and PHA also manage the development and review of AUSVETPLAN and PLANTPLAN respectively which provide the nationally consistent approach for responding to incursions.

Wildlife Health Australia (WHA)

WHA is the coordinating body for wildlife health in Australia. It aims to protect and enhance the natural environment. WHA's activities include managing national wildlife disease surveillance programs, facilitating investigations of disease incidents and emerging wildlife health issues, and providing input into national and regional strategies for wildlife health and exotic disease emergency preparedness.

Emergency Animal Disease Response Agreement (EADRA)

The EADRA outlines industry and government obligations (including cost sharing) in the event of a disease incursion (such as FMD) in Australian animals.

AHA manages the EADRA, which was signed in 2002. The EADRA is a legally binding arrangement that brings together the Australian and state and territory governments, and livestock industry groups to collectively increase Australia's capacity to prepare for and respond to EAD incursions.

The EADRA covers 66 categorised animal diseases, including FMD, and lays out agreed cost sharing arrangements to ensure that funds are available to combat an EAD and the costs are shared among the beneficiaries of the response. Diseases are categorised according to their impact on human health, the environment, and trade and production. For the purposes of EADRA, FMD is a Category 2 EAD (that could potentially cause "major national socio economic consequences and very severe production losses") and LSD is a Category 3 disease (that has the potential to cause "significant (but generally moderate) national socio economic consequences and severe production losses").

The EADRA also commits parties to take all reasonable steps to minimise the risk of an EAD incursion in the first place (for example, through the development and implementation of biosecurity plans).

Emergency Plant Pest Response Deed (EPPRD)

PHA manages the EPPRD. This is a legally binding agreement between PHA, the Australian and state and territory governments, and the national plant industry body. It covers the management and

funding of responses to emergency plant pest (EPP) incidents. The ratification of the EPPRD in 2005 significantly increased Australia's capacity to respond to emergency plant pest incursions. Varroa mite (*Varroa destructor*) is a Category 3 EPP under Schedule 13 of the EPPRD.

National Environmental Biosecurity Response Agreement (NEBRA)

The NEBRA establishes the national arrangements for responding to an incursion of exotic pests and diseases that impact on the environment and our way of life. The NEBRA is an agreement between the Australian Government and all state and territory governments that aims to reduce the impacts of pests and diseases on Australia's environment and social amenity. The agreement establishes national response arrangements, including for cost sharing, to be applied by agreement of the parties where there are no existing arrangements.

International framework and Australia's obligations

Australia is a party to several international treaties relating to the trade of goods that confer rights and obligations.

World Trade Organization

As a member of the World Trade Organization (WTO), and a signatory to the SPS Agreement, Australia is entitled to maintain a level of protection it considers appropriate to protect human, animal or plant life or health (called Appropriate Level of Protection or ALOP). This is achieved through applying sanitary (relating to human and animal health) and phytosanitary (relating to plant health) measures on the international movement of goods. Each WTO member has the right to determine their own ALOP. However, in determining their ALOP, WTO members must consider the objective of minimising negative trade effects.

The approach set out in Article 5 of the SPS Agreement requires members to base their assessments of risk on the available scientific evidence—taking into account risk assessment techniques developed by international organisations. This is incorporated in section 174(1) of the Biosecurity Act—allowing the Director of Biosecurity and the Director of Human Biosecurity to set conditions on the import of specified goods and entry of international travellers into Australia, respectively.

The department works closely with state and territory governments and industry to implement sanitary and phytosanitary measures to protect Australia from harmful exotic pests and diseases.

World Organisation for Animal Health

Australia is a member of the World Organisation for Animal Health (WOAH, formerly the OIE). WOAH's objective is to improve animal health and welfare worldwide, regardless of socio economic, religious or cultural context. Australia is a strong contributor to WOAH processes to support our trade in animals and animal products and protect our animal health status through preventing the spread of global transboundary animal diseases.

Australia contributes to WOAH standards to ensure the standards are science based and achieve their purpose without undue burden on Australian producers. The Office of the Chief Veterinary Officer coordinates this work and draws on expertise across the Australian Government, industry bodies and other experts on the issues under consideration. The Australian Chief Veterinary Officer is also Australia's delegate to the WOAH. Australia has a long history of international leadership and influence through the WOAH, including through Australia's presidency of the organisation (2018–2021) and membership of the WOAH Council.

Australia also provides voluntary contributions to the WOAH World Fund to support the organisation's mandate and delivery of programs that align with Australia's biosecurity and offshore capacity building interests.

The department is responsible for official reporting to WOAH and advising trading partners about Australia's animal health status.

International Plant Protection Convention

The International Plant Protection Convention (IPPC) is a multilateral treaty for cooperation in plant health and protection within the remit of the United Nations Food and Agriculture Organization (FAO). The IPPC aims to protect the world's cultivated and natural plant resources from the introduction and spread of plant pests and diseases while minimising restrictions to the international movement of goods and people.

As a member of the IPPC, Australia is entitled to apply phytosanitary measures to regulate the import of plants, plant products and objects that may harbour plant pests. In doing so, Australia must comply with the IPPC's principles of necessity, scientific justification, and transparency in regulating imports. The department's Chief Plant Protection Officer is Australia's delegate to the IPPC. Australia contributes to IPPC standards to ensure they are science based and achieve their purpose without undue burden on Australian producers and currently chairs the IPPC's Standards Committee. The Office of the Chief Plant Protection Officer coordinates this work and draws on expertise across the Australian Government, industry bodies and other experts on the issues under consideration.

The department is responsible for official reporting to IPPC and advising trading partners about Australia's plant health status.

Codex Alimentarius (Codex)

The Codex Alimentarius Commission (Codex) is the international food standards setting body established by the United Nations Food and Agriculture Organization and the World Health Organization. Codex, which coordinates input from 188 member countries and the European Union, aims to protect the health of consumers; ensure fair international food trade; and develop standards based on sound scientific principles.

Codex standards are recognised by the WTO. As a WTO member, Australia is obliged, where possible, to harmonise its domestic regulations with Codex standards, such as for food additives, pesticide residues and veterinary medicines. Australia provides input into Codex work, including representing the interests of consumers, farmers, agribusinesses and the food industry.

The department's First Assistant Secretary of the Exports and Veterinary Services Division is Australia's delegate to Codex.

Convention on Biological Diversity

The Convention on Biological Diversity is the international legal instrument for the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.

The Biosecurity Continuum

Biosecurity threats are ever present, however the concurrence of multiple drivers of pest and disease emergence and spread in the global environment is changing our biosecurity risk landscape, meaning the threats have been increasing in both number and complexity.

These global drivers include:

- **Changes in land use and decreasing biodiversity** which can change our ecosystems and interfaces, and the risk of diseases or pests being introduced, spilling over or spreading.
- **Climate change** changes in weather patterns and extreme weather events can alter the distribution of disease agents and pests.
- **Shifting trade and travel patterns** increasingly complex supply chains and changing movements of people and goods altering biosecurity threats.
- **Major global disruptions** such as the COVID 19 pandemic and international conflicts, which can shift behaviours and supply chains amongst other things, and therefore biosecurity threats.
- **Illegal activities** and the increasing sophistication of criminal syndicates.
- **Increasing presence of significant exotic plant, environment and animal pests and diseases on our doorstep**, such as FMD, LSD, Asian citrus psyllid and exotic fruit flies.

Australia's biosecurity framework is often considered as a continuum that traverses three key elements.

Figure 4: Three elements within the Biosecurity Framework

Source: Department of Agriculture, Fisheries and Forestry

Across each part of the continuum, the department undertakes a range of policy, operational and compliance functions, supported by a series of third party arrangements, authorisations and programs, together with research, intelligence and data analytics, and a range of education, awareness and communication campaigns.

Pre-border

The department undertakes a range of offshore biosecurity related activities and operations to prevent biosecurity risks from reaching Australia. A core part of these efforts is to provide ongoing assurance for Australia's community and producers that imported goods conform to Australia's ALOP and do not create additional or new biosecurity risks. This work focuses on minimising the likelihood of exotic pests and diseases reaching Australia's border, while enabling the movement of people, plants, animals and goods. In addition, the department's overseas Counsellor network provides regular reporting on emerging risks in key markets.

Detection and management of biosecurity risks offshore

The department undertakes a range of activities to detect and manage biosecurity risks offshore. These include:

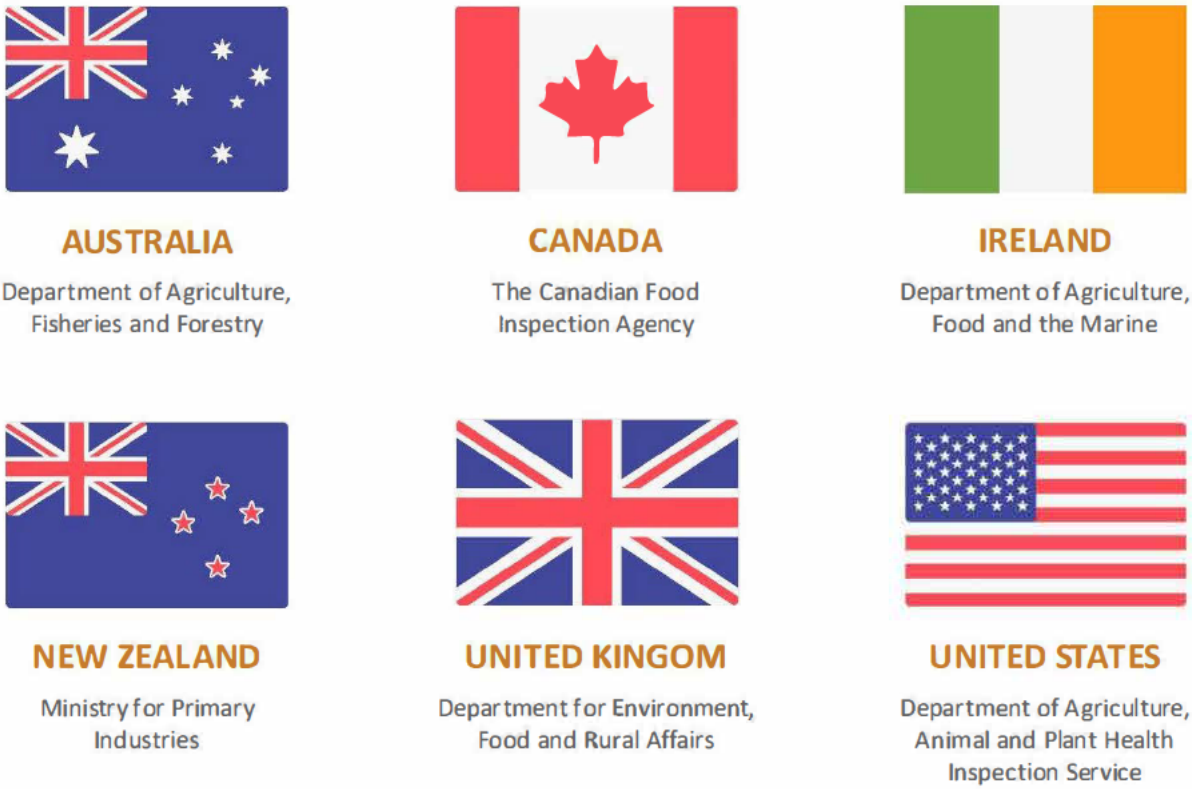
- Undertaking strategic intelligence gathering and horizon scanning activities to better anticipate, identify and analyse potential/emerging biosecurity risks, including monitoring the disease and pest status of trading partners.
- Regularly working with stakeholders to share information about issues and risks, biosecurity import conditions, and international standards.
- Working with neighbouring countries to build regional capacity to detect and identify exotic pests and diseases crossing their borders and supporting them to limit further spread if such incursions have occurred.
- Providing financial assistance to and sharing information with neighbouring countries to strengthen their biosecurity management systems.
- Responding to animal and plant disease outbreaks in other countries through funding and provision of expert assistance—for example, outbreak of FMD in Indonesia and the United Kingdom (UK), *Mycoplasma bovis* in New Zealand, and high pathogenicity avian influenza in the UK.
- Working with international standard setting bodies to minimise the biosecurity risk associated with trade, support global control efforts, and to present Australia's animal and plant health status to the international community.
- Conducting assessments to consider the level of biosecurity risk that may be associated with imports of commodities, identifying and applying risk management measures and applying appropriate conditions to allow safe imports.
- Developing and enacting offshore biosecurity arrangements, including approving systems used by exporting countries, industry schemes or individual importers (such as through Trusted Trader arrangements).
- Conducting offshore verifications, inspections, and audits of offshore arrangements and manufacturers of goods destined for Australian markets.

International Animal Health Emergency Reserve (IAHER) Arrangement

This is an arrangement that facilitates signatory countries to share personnel in the event of an EAD outbreak, to supplement their domestic emergency response capabilities.

The IAHER Arrangement is designed to provide mutual benefit to participating countries, valuable practice and experience in EAD management and response for Donor Country personnel, and the provision of skilled assistance to countries experiencing an EAD event. The IAHER Operations Manual provides policies and procedures for the practical deployment of personnel across jurisdictions. The Arrangement was first signed by the Chief Veterinary Officers of signatory countries in 2004.

Figure 5: Current signatory countries to the IAHER



Source: Department of Agriculture, Fisheries and Forestry

IAHER Activations

In October 2021, the UK confirmed a case of high pathogenicity avian influenza (HPAI) in poultry. After spreading to over 60

different properties, this outbreak became one of the largest emergency animal responses managed by the UK in recent years. The Chief Veterinary Officers of IAHER signatory countries were contacted by the UK on 23 December 2021, and Australia coordinated approximately twelve veterinarians and epidemiologists to provide remote support for the HPAI response efforts.

Similarly, between August and November 2017, Australia provided 15 staff to New Zealand to assist with the *Mycoplasma bovis* response. Deployed staff included veterinary epidemiologists and senior laboratory scientists from the former Department of Agriculture and Water Resources and the former Australian Animal Health Laboratory (now the Australian Centre for Disease Preparedness).

Support to neighbouring countries

As part of offshore capacity building work, the department has supported Timor Leste and Papua New Guinea (PNG) in their response to African Swine Fever (ASF). This has been through a combination of technical and financial support. Additional work on FMD and LSD preparedness is occurring with these countries.

The department has a long history of working with PNG's National Agriculture and Quarantine Inspection Authority (NAQIA) and Timor Leste's Ministry of Agriculture and Fisheries (MAF) on collaborative animal health surveys and capacity building for animal health services.

Australia and PNG continue to collaborate on biosecurity threats to both countries, including PNG's response to ASF and the recent spread of FMD and LSD to Indonesia.

The department continues to provide financial and technical support for PNG's NAQIA in its response to ASF including:

- the department's membership in NAQIA's ASF Taskforce and ASF Technical Working Group
- financial and technical support for ASF containment, disease investigations and community awareness campaigns
- support for ASF laboratory diagnostics, in collaboration with the Australian Centre for Disease Preparedness (ACDP)
- development and delivery of a national animal health information system.

The department and other Australian partners are working to support NAQIA's and MAF's preparedness and response capabilities for FMD and LSD, including:

- In PNG and Timor Leste:
    - rapid risk assessments with NAQIA and MAF to identify risk pathways for FMD and LSD entry, to inform awareness and surveillance programs
    - laboratory diagnostic capability (led by the ACDP).
- In PNG, training animal health officers in FMD and LSD awareness, appropriate biosecurity and diagnostic sampling techniques
- In PNG, supporting general surveillance for FMD and LSD, as well as ASF to detect ASF spread into currently unaffected provinces
- In Timor Leste, supporting development of community awareness materials for FMD and LSD
- A joint NAQIA/DAFF animal health survey focusing on ASF, FMD and LSD is planned for October 2022 in PNG.

Further details on the specific provision of Australian Government support to Indonesia's current FMD response are outlined in the FMD section below.

Approval of exporting countries and their systems

When responding to requests from trading countries to export goods to Australia, the department responds by using several risk based policies and procedures to determine whether the goods would pose unacceptable risks to Australia's biosecurity.

In addition, the department reviews the effectiveness of overseas veterinary services and relevant certifying authorities (for endorsement of exported goods). Similarly, for several high risk goods,

departmental officers periodically undertake in-country audits of processes and systems of manufacturing facilities within approved exporting countries.

Biosecurity Import Risk Analysis (BIRA)

The department publishes guidelines for undertaking risk analyses to consider the level of biosecurity risk that may be associated with the importation of a good and identifies appropriate ways to manage these risks. Known as the Biosecurity Import Risk Analysis (BIRA) guidelines, they describe a structured approach for conducting BIRAs that are consistent with Australian Government policy, legislation and international obligations.

The current BIRA guidelines were published in 2016 and are considered a living document, allowing for responsiveness and flexibility when required.

At the border

Australia's biosecurity activities and operations at the border are both significant and sophisticated.

Figure 6: Pathways for pest and disease transmission

There are five main pathways through which a pest or disease can reach Australia

Cargo – a complex pathway involving commercial and non commercial imports, with numerous transport modes and commodity groups including (but not limited to) live animals, fresh produce and machinery.

Sea vessels and aircraft – a conveyance pathway that can harbour 'hitchhiker' pests and diseases within cargo containers and the vessel itself.

International travellers – goods and personal effects carried by travellers who enter Australia by sea or air.

Post and mail – articles sent through the international postal system which carry a wide range of goods and risk.

Natural pathways – involve harmful pests and diseases entering Australia through the natural environment without human involvement, such as wind and sea currents or the migration of birds.

Source: Department of Agriculture, Fisheries and Forestry

Figure 7: Trade and export into Australia in 2020

Note: Traveller, mail and cruise vessel arrival numbers have been negatively impacted by the pandemic. Traveller volumes dropped over 95 per cent in 2020. Volumes are expected to return to pre-pandemic levels in the next few years. For some countries and pathways this will be much sooner. Traveller arrivals from Indonesia, Australia's second most popular tourist destination, are close to 2019 volumes.
Source: Department of Agriculture, Fisheries and Forestry, Department of Home Affairs and Australia Post

Australia's approach to responding to biosecurity issues at the border is constantly evolving. There is no such thing as zero biosecurity risk. Biosecurity risks are increasing due to factors such as climate change, changed patterns of international travel and global trade disruption and reduced biodiversity. We need to continue to adapt and evolve our system to focus on key threats as they emerge.

The department remains agile and alert to changes in biosecurity risks. Actions include revising operational frameworks and procedures, improving screening and diagnostic technology, designing and deploying co-designed (with industry) regulatory systems, upgrading data and information management systems, and investing in the capability of our people for efficient delivery of biosecurity activities across the country.

Operations and activities at Australia's borders are further strengthened by investing and partnering across supply chains. This includes working in partnership with industry, state and territory governments, research organisations and the broader community on preparedness, prevention, response and recovery efforts. Notably, as part of the Travellers and Cargo Reform Projects, a number of innovative pilots are currently in train to manage and streamline incoming cargo and passengers.

Approach and powers

As the volume of international travel and global trade increases, effective detection of biosecurity threats and risks at the border is critical to Australia's biosecurity system.

Preventative biosecurity activities at the border are risk based, informed by evidence and subject to review and continual improvement. Activities seek to verify that imports meet the required biosecurity conditions and intercept biosecurity risks that may be present in live animals and plants, cargo, mail and with passengers.

The department's activities at the border include:

- profiling, screening and inspection of international vessels, passengers (and their baggage), cargo containers, goods, mail articles, plants and animals arriving in Australia by trained biosecurity officers, and approved industry systems
- assessing import documentation, and directing the inspection, treatment and/or release of goods and conveyances of biosecurity concern
- managing the high biosecurity risks of imported live plants and animals through containment, observation and/or treatment at post entry quarantine facilities
- identifying and evaluating the specific biosecurity risks facing northern Australia through the Northern Australia Quarantine Strategy (NAQS)
- education and awareness raising for travellers, importers and industry operators of Australia's biosecurity requirements.

Targeted intervention strategy

Since the independent review into Australia's quarantine and biosecurity arrangements led by Mr Roger Beale AO in 2008, the department has, the department has continually reformed its business model from the one focused on mandatory 100 per cent intervention for specific imports at the border to targeted intervention (a 'risk return' approach) across the whole biosecurity continuum. A risk based approach to biosecurity operations, grounded in a long term partnership with the Centre of Excellence for Biosecurity Risk Management (CEBRA), offers multiple benefits, as it:

- allows the department's resources to be better utilised in containing the risks of the highest biosecurity concern while maintaining assurance on lower risk items and pathways
- reduces the overall intensity of intervention, based on good compliance resulting in reduced audit rates and inspections for imported commodities
- rewards compliant importers with a history of good performance and allows for faster clearance at the border.

Compliance activities and application of sanctions

Compliance is an important element of our regulatory system and helps to ensure our laws are achieving the outcomes they were designed to deliver. The key regulatory powers underpinning measures to minimise biosecurity risks entering Australia are contained within the Biosecurity Act.

The Biosecurity Act and the *Regulatory Powers (Standard Provisions) Act 2014* provide biosecurity officers appropriate regulatory powers to:

- enter premises to monitor and investigate compliance, and enforce regulations
- inspect goods and premises
- take samples of imported goods
- apply infringement penalties
- investigate non compliance and issue infringement notices, civil penalties, enforceable undertakings and injunctions.

Powers vested in the Biosecurity Act enable the Director of Biosecurity to prohibit the introduction or importation of goods that pose a risk of introduction of pest or disease into Australia. In addition, food (including animal products) entering Australia is subject to the *Imported Food Control Act 1992*, the Imported Food Control Regulations 1993 and the Australia New Zealand Food Standards Code.

The department has an operational policy framework for the issuing of infringement notices and civil penalties in various import pathways including airports, seaports and cargo. The policy provides comprehensive powers to prevent pest and disease risk material entering Australia, and to apply regulatory penalties to those involved. International travellers can avoid penalties at the border by declaring any animal, plant or food products they are carrying into Australia.

Post-border

Despite all the precautions in place, some imported goods may still contain a pest or disease of biosecurity concern after they enter Australia. In addition, some pests and diseases arrive through illegal activity or via natural pathways such as the winds and tides. The 2008 Beale review recognised that zero biosecurity risk is both unattainable and undesirable, and the Biosecurity Act further defines Australia's ALOP as very low but not zero. The department contributes to a range of measures in close collaboration with stakeholders that are aimed at limiting the impact of a pest or disease, should it be detected within Australia's borders.

Activities within Australia are delivered in partnership with state and territory governments, industry and other stakeholders. Under programs operated by AHA, jurisdictions and industry jointly fund policies and programs to monitor Australia's current animal health status and coordinate emergency response arrangements. Some examples of such programs include: the national arbovirus monitoring program (NAMP); the screw worm fly surveillance and preparedness program; the national avian influenza wild bird surveillance program; and the transmissible spongiform encephalopathies freedom assurance program. Results from these programs are reported annually through the Animal Health in Australia report. AHA programs:

- deliver biosecurity outcomes in the national interest
- coordinate national surveillance and diagnostic capability to assess and monitor Australia's pest and disease status

- prepare for and respond to exotic pest and disease incursions
- contribute to national biosecurity research
- work with biosecurity partners to build a shared understanding of biosecurity.

Northern Australia—a high-risk zone

Northern Australia—a high risk zone for entry of biosecurity threats due to its proximity to near neighbours (Indonesia, Timor Leste and PNG) and its vast and sparsely populated coastline—plays a key role in preventing the entry and establishment of exotic pests and diseases into Australia.

Our northern neighbouring countries are hosts to several endemic pests and diseases. The current key biosecurity threats include LSD, FMD, Asian citrus psyllid, banana diseases and a suite of marine invasive species, which, if established in Australia, could adversely impact our agricultural production and export opportunities.

Australia remains vulnerable owing to a range of several non conventional pathways for entry of biosecurity threats. These include migratory birds, flying insects, monsoonal winds, ocean currents and tides, and the movement of people and goods between PNG, the islands of Torres Strait and the Australian mainland.

Northern Australia Quarantine Strategy (NAQS)

In 1989, the Australian Government established the Northern Australia Quarantine Strategy (NAQS). Until 2000, the Queensland, Western Australian and Northern Territory governments jointly operated the program. The Australian Government has managed the NAQS program since 2000. The role of NAQS is to:

- manage the biosecurity aspects of border movements through Torres Strait
- identify and evaluate the unique biosecurity risks facing Northern Australia
- develop and implement measures for early detection of targeted pests and diseases, and
- contribute to collaborative surveillance and capacity building in northern Australia (principally through Indigenous Ranger Groups) and in neighbouring countries.

NAQS covers almost 10,000 km of coastline from Broome in Western Australia to Cairns in Queensland (including the Torres Strait). It has 95 employees, including 19 contractors, delivering a range of services such as specialist science supporting animal, plant and aquatic health surveillance, biosecurity regulation and community liaison functions.

NAQS targets more than 100 insect species (including limited monitoring for Varroa mite), 50 plant diseases (including citrus canker, banana freckle, black sigatoka) and 40 weed species, and conducts about 18 surveys each year for early detection of exotic plants. It also monitors animal health through sampling sentinel cattle and pig populations for a range of animal diseases (including FMD and LSD) and monitoring of biting midge vectors for arboviruses.

NAQS is increasingly involved in preparedness and response activities. Over the last 12 months, it has contributed to preparedness and response activities relating to Japanese Encephalitis virus, LSD, FMD, ASF, banana freckle and a range of other plant and aquatic pests/diseases.

Aboriginal and Torres Strait Islander partnerships are critical for successful biosecurity outcomes in Northern Australia. As at 22 August 2022, about 34 per cent of the NAQS workforce (excluding contractors) identify as Aboriginal and Torres Strait Islander people.

Torres Strait and Northern Peninsula Area Biosecurity Strategy
The Torres Strait and Northern Peninsula Area Biosecurity Strategy was established in 2018 to provide a framework for collaboration between local, state and Commonwealth government agencies, community and traditional owner representatives on measures to enhance biosecurity and environmental protections in the region. Recent achievements through the strategy include:

- the development of agreed protocols to facilitate the movement of abandoned vehicles by local governments and addressing associated biosecurity threats
- implementation of improved Queensland Government regulations targeting northward movements of threat species into Torres Strait
- investigation of the feasibility of black sigatoka disease suppression/eradication in target locations in Torres Strait and
- improvement of biosecurity communications including community engagement to raise biosecurity awareness.

Northern Australia Biosecurity Strategy 2030
In March 2022, the Australian Government approved $38 million to support the Northern Australia Biosecurity Strategy 2030 (NABS). NABS sets a framework for northern jurisdictional collaboration and aims to minimise the threat and impact of plant, animal, aquatic and environmental pests and diseases in northern Australia over the next ten years—through building an integrated, strong, and coordinated northern Australia biosecurity system.

Traceability

Enhanced traceability enables tracing of animals susceptible to exotic diseases (such as FMD and LSD) in an emergency incident. This is crucial for our livestock and associated industries as well as for maintaining market access.

The National Livestock Identification System (NLIS) is Australia's scheme for the identification and tracing of livestock. Currently, the Australian cattle population is individually identified. However, individual electronic identification is not uniformly applied across jurisdictions. In July Australian Agriculture Ministers agreed in principle to develop a national approach to electronic tagging of individual sheep and goats and continue to work on other aspects of traceability. Ministers directed officials to progress a proposal with industry, including proposed implementation and funding arrangements. The National Biosecurity Committee, at its August 2022 meeting, agreed to implement a multi jurisdictional Sheep and Goats Traceability Taskforce, to provide oversight of a national implementation program and advice on funding arrangements.

Emergency response

Effective biosecurity, preparedness and early detection and reporting arrangements are extremely important in mitigating the risk of emergency pests and diseases establishing and spreading.

National responsibilities

The department has developed arrangements for managing its responsibilities during the response to biosecurity incidents. These arrangements include an Incident Management Framework, well practiced structures and procedures and work to develop a Biosecurity Incident Management

System. The department ensures a nationally coordinated and consistent approach to the management of biosecurity incidents.

Jurisdictional responsibilities

Under the Australian Veterinary Emergency Plan (AUSVETPLAN), and the Australian Emergency Plant Pest Response Plan (PLANTPLAN), each state and territory has statutory responsibility for the management of animal diseases and plant pests and diseases—endemic, emerging or exotic—within its borders. Each state and territory therefore administers its own legislation, which is supported by other all hazard emergency management legislation and arrangements.

Inspectors and authorised officers are appointed under the relevant jurisdictional legislation, ensuring that those who are required to implement the legislation (for example, movement controls, imposition of quarantine) have the legal authority to do so. All officers need a clear understanding of the legislation, as it frequently informs policy and critical decision making.

In all jurisdictions, legislation provides adequate powers for essential control measures.

The Australian Government may support the jurisdictions with its powers under Commonwealth legislation.

Responding to pest and disease incursions

The department works with state and territory governments, including through the NBC, National Management Group, and Animal and Plant Health Committees on post border measures and programs. AHA and PHA play key roles in post border preparedness and response in the event of an exotic pest or disease incursion into Australia.

AHA or PHA (as the case may be) provide:

- national coordination of government–industry partnerships for animal (AHA) and plant biosecurity (PHA), and
- support Australia's preparedness for pest and disease incursions through biosecurity training and running biosecurity emergency response simulation exercises.

Industry bodies that have signed EADRA and EPPRD are also formally involved in managing post border biosecurity and emergency response, acting as advisors to the response planning group and participating in decision making about funding the response.

National Management Group

Emergency pest and disease control requires a coordinated response and draws on significant resources and input from all tiers of government and a range of industry groups. In the event of an emergency outbreak, a high level committee of government officials and senior livestock industry personnel is convened to manage response plans and budgets. This committee, the National Management Group (NMG), is also responsible for decision making on policy and resource allocation issues.

For an EAD outbreak, this committee is advised by the Consultative Committee on Emergency Animal Diseases (CCEAD), which includes state Chief Veterinary Officers and other personnel with relevant technical expertise, including industry representatives. The committee is chaired by the Australian Chief Veterinary Officer.

Similarly, in the event of an EPP outbreak, a high level committee of government officials and senior plant/agriculture industry personnel is formed to manage response plans and budgets. The National

Emergency Plant Pest NMG is advised by the Consultative Committee on Emergency Plant Pest (CCEPP), which comprises technical representatives including state Chief Plant Protection Officers, a Commonwealth representative, and industry representatives from affected industry parties who are signatories to the EPPRD. It is chaired by the Australian Chief Plant Protection Officer.

Emergency response deeds

Emergency response deeds are legally binding agreements between the Australian Government, state and territory governments, AHA or PHA, and representatives from plant and animal industries. These deeds cover the management and funding of responses to pest and disease incursions. They provide a formal role for industry to participate and assume a greater responsibility in decision making in relation to emergency pest and disease responses.

There are three formal agreements that set out emergency response arrangements for pest and disease incursions across the animal, plant and environmental sectors:

- EADRA—for incursions that primarily impact animals. There are currently 23 signatories to the EADRA.
- EPPRD—for incursions that primarily impact plants. There are currently 47 signatories to the EPPRD.
- NEBRA—for incursions that primarily impact the environment and/or social amenity (including marine). The Commonwealth and the states and territories are signatories to the NEBRA.

AUSVETPLAN

The Australian Veterinary Emergency Plan (AUSVETPLAN):

- is a coordinated national response plan for the management and, where possible, the eradication of exotic disease incursions and outbreaks of certain emerging or endemic animal diseases
- covers animal diseases and pests, and its use is mandated within the EADRA
- provides nationally agreed policy, information and guidelines for consistent management of EAD responses.

While AHA is specifically accountable for the management of AUSVETPLAN, the department, state and territory colleagues and industry experts provide the scientific, technical and operational input into the disease response, enterprise and operational manuals. The plans are publicly available at the AHA website.

The department represents the Australian Government through the AUSVETPLAN Technical Review Group. The department funds AHA based on a pre agreed formula applicable to all members. A portion of this funding is used to develop and maintain the AUSVETPLAN.

PLANTPLAN

The Australian Emergency Plant Pest Response Plan (PLANTPLAN), issued on 8 December 2021 provides nationally consistent guidelines for managing a response to an incident at national, state/territory and local levels, describing the national procedures, management structures and information flow systems. Each phase of the response (investigation and alert, operational, stand down and transition to management phase) and key roles and responsibilities of Industry and government parties during each of these phases are specified (see Appendix B for phases of an emergency plant pest response).

PLANTPLAN documentation includes guidelines, job cards, procedures, and forms/templates, which provide more detailed nationally consistent guidance on response procedures, roles/responsibilities in an Incident or address national gaps in operational response elements.

PLANTPLAN incorporates best practice in Emergency Plant Pest (EPP) responses and is consistent with contemporary incident management systems, which are widely recognised and used throughout Australia for managing incidents. This includes the approach under the Biosecurity Incident Management System, endorsed by the NBC for use when responding to biosecurity incidents.

Table 1: Emergency response programs currently underway for some emergency plant pests

Scientific name	Common name	Jurisdiction	Phase
Phyllosticta cavendishii	Banana freckle	NT	Eradication
Varroa destructor	Varroa mite	NSW	Eradication
Zeugodacus cucurbitae, *Bactrocera dorsalis* and *B. trivialis*	Exotic fruit fly	Torres Strait, Qld	Seasonal eradication (to conclude in June 2026)

Cost sharing arrangements for the EADRA and EPPRD

The EADRA and EPPRD set out cost sharing and other responsibilities of the government and relevant industry parties in an emergency response. The agreements are supported in most cases by statutory levy arrangements, which enable livestock and plant industries to fund their share of costs of emergency responses (Table 2).

Table 2: Cost sharing arrangements between the government and participating industries

Pest or Disease category	Funding	
	Government	Industry
Category 1 (Very high public impact)	100%	0%
Category 2 (High public impact)	80%	20%
Category 3 (Moderate public impact)	50%	50%
Category 4 (Mostly if not wholly private impact)	20%	80%

Source: Animal Health Australia and Plant Health Australia

Each party that would be subject to cost sharing for an emergency response has a vote on the NMG.

EADRA and the EPPRD allow for the Australian Government, on request, to underwrite an industry's response contribution, which is then repaid within ten years (often sooner). To access underwriting, the industry must have an established repayment method. Most industries have established an emergency response levy for this purpose. These levies are usually introduced at a nil rate and activated to a positive rate when required. Some industries elect to have an active response levy to fund preparatory response activities or to build a reserve for future responses.

The NEBRA allows non government entities to participate in decision making if they contribute a minimum of 2.5 per cent.

Emergency preparedness and response training exercises

It is essential that government and industry have trained personnel to respond to emergency animal and plant pests and diseases according to their specific roles and responsibilities. Discussion based exercises and workshops provide an opportunity for responsible officers to familiarise themselves with their roles, responsibilities, arrangements and resources that activate during an EAD/EPP response. Exercises also assists with exploring and identifying ways to strengthen Australia's animal and plant health systems.

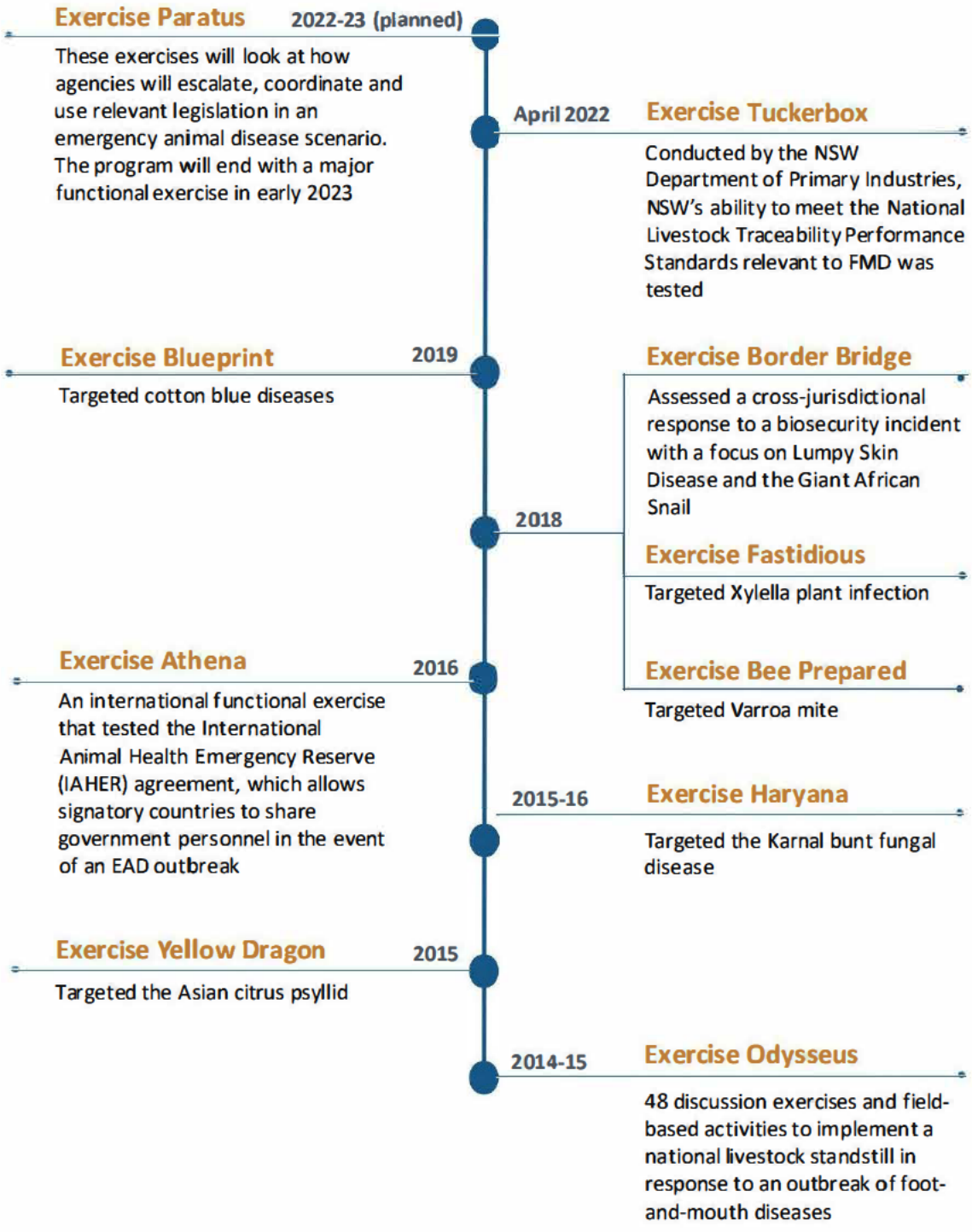
The department participates in emergency animal and plant pest/disease preparedness and response training exercises. When an exercise is undertaken, it is usually specific to an emergency animal or plant disease.

The department prepares for its role in these exercises and other incident responses by:

1. developing internal response plans and arrangements
2. establishing resources and logistics
3. conducting training and education activities
4. designing, conducting and evaluating exercises
5. evaluating activities.

Since 2014, a number of animal and plant pest and disease simulation exercises have been undertaken across jurisdictions (Figure 8).

Figure 8: Australia-wide emergency animal and plant preparedness and response training exercises and workshops, completed and planned, 2014 to 2022–23



Source: Department of Agriculture, Fisheries and Forestry and Animal Health Australia

Research and development

Research and development play an important role in protecting our borders and safeguarding Australia's favourable animal and plant health status.

It is focused on finding science based solutions to strengthen our biosecurity system by helping to identify and understand risks and offer solutions for improvement. Researchers are continually investigating emerging technologies and approaches such as computer learning, robotics, next generation sequencing, new biological controls and alternative border intervention management approaches to improve the effectiveness and efficiency of our biosecurity system.

Centre of Excellence for Biosecurity Risk Analysis

The Centre of Excellence for Biosecurity Risk Analysis (CEBRA), based in the University of Melbourne, supports the Australian and New Zealand governments in protecting agriculture, natural environments and human health from biosecurity threats. CEBRA's body of work spans statistics, ecology, mathematics, economics, veterinary science, human medicine and sociology, involving collaborators across government, academia, CSIRO and the private sector. Through targeted research and the development of risk analysis tools, CEBRA assists the department to implement a risk based approach to biosecurity regulation across the continuum of pre border, border, and post border activities.

Commonwealth Scientific and Industrial Research Organisation

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) undertakes work to protect Australia from biosecurity threats arising from global travel and trade and exacerbated by urbanisation and climate change. It seeks to deliver solutions that ensure Australia is prepared and ready to respond to existing and emerging risks to protect our environment, our agricultural industry and our way of life. Research on biosecurity seeks to address the complex challenges arising from the interactions of human, animal and environmental health, to provide benefits to Australia and the world.

Australian Centre for Disease Preparedness

The Australian Centre for Disease Preparedness (ACDP) (formerly known as the Australian Animal Health Laboratory) is a part of the CSIRO. It helps protect the general public and Australia's multi billion dollar livestock and aquaculture industries from emerging threats from infectious diseases. The facility is designed to allow scientific research into the most dangerous infectious agents in the world. The ACDP undertakes quality assured diagnostic tests which are critical to the success of Australia's surveillance program. This includes the accurate diagnosis and control of outbreaks in order to rapidly respond to disease outbreaks of national impact.

The ACDP is a vital part of Australia's biosecurity infrastructure and works closely with veterinary and human health agencies globally. It provides the Australian Government and industry groups with advice on exotic and emerging disease issues and advice in the general areas of biosecurity and counter bioterrorism. It has a strong tradition of strengthening animal health laboratory capacity in detecting, preventing and controlling existing and emerging diseases throughout the Asia Pacific region. For example, the ACDP is working with the Indonesian Ministry of Agriculture to provide

technical laboratory support and the supply of essential materials to underpin the testing of FMD and LSD during the current outbreaks.

ACDP is a high containment facility designed to allow scientific research into the most dangerous infectious agents in the world. ACDP has recently been assessed as being suitable to hold LSD virus, which will enable the laboratory to develop diagnostic tests that are cost effective and can be used by our near neighbours should the disease find its way into Timor Leste or PNG.

CSIRO was involved in a very successful multi year project funded by the department that ran between 2017 and 2021, undertaking research to understand the impact of different response strategies in different types of FMD outbreaks through modelling, developing new ways of sampling animals for FMD, examining the effectiveness of different FMD vaccines, and creating pilot producer groups to explore ways to assist farmers to understand new variants of diseases and access best advice and management plans.

Australian Bureau of Agricultural and Resource Economics and Sciences

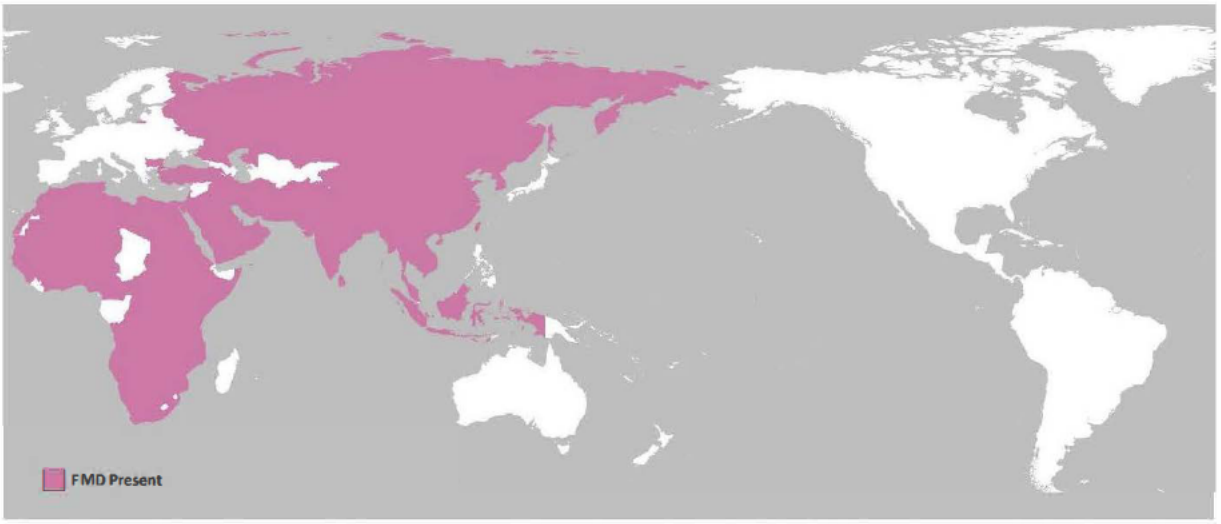
The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) undertakes applied social research and analysis, including Biosecurity research. It prepares reports for the department, other government agencies, research and development corporations, and industry bodies.

Foot-and-Mouth Disease

Australia is officially free from Foot-and-Mouth Disease (FMD).

There is no threat to human health or food safety from FMD. It is not the same as hand-foot-and-mouth disease, which is a common human disease in children. Approximately 70 countries are known to have FMD in animals. Indonesia became the most recent country to experience an FMD outbreak after 30 years of having a disease-free status.

Map 1: WOAH reports of FMD by country (as at 18 July 2022)



Note: This map is based on countries' most recent self-reporting to the WOAH. As this is based on countries' self-reporting, it does not mean that countries not shown as having FMD in the map are officially recognised by WOAH as free from FMD.
Source: Department of Agriculture, Fisheries and Forestry

FMD is a highly contagious viral disease affecting cloven hoofed animals: cattle, buffalo, pigs, sheep, deer, camelids and goats. The virus can be transmitted by live animals and in meat and dairy products. It can also be present in soil, bones, untreated hides, vehicles and equipment used with these animals as well as on clothing and footwear.

FMD could enter Australia through illegally imported food products, or through contaminated footwear, clothing and equipment. The virus spreads rapidly through close contact between animals due to it being excreted in breath, saliva, mucous, milk and faeces. The virus can survive in frozen, chilled and freeze-dried foods.

Potential impact of an FMD outbreak in Australia

Australia has close to 100 million head of livestock (cattle, sheep, goats and pigs). In 2022–23, the value of this livestock is estimated to be $30 billion. While the probability of an outbreak impacting Australia's livestock is low, the consequences would be significant.

While FMD is not a food safety issue, an FMD outbreak in Australia will have major trade impacts across many animal products including meat, dairy, animal by-products, live animal and reproductive material exports for affected species, as the products exported may be a vector for the transmission of disease.

Australia currently exports about 70 per cent of its annual agriculture production. In 2022, ABARES estimated that a large FMD incursion across multiple states could have a direct economic impact of around $80 billion over 10 years.

Due to its severe impact on the productivity of affected animals and its potential for spread FMD has long been classified as the most important transboundary animal disease of trade concern. It was the first disease for which an official list of disease free countries was established by the World Organisation for Animal Health (WOAH).

The WOAH Terrestrial Animal Health Code recommends that importing countries have controls in place to prevent movement from affected countries or zones of potentially infected animals, animal products or fomites that can become contaminated with infectious agents and contribute to their transmission.

There is a significant global price premium for live ungulate animals and related animal products from FMD free (without vaccination) countries or zones, compared to those from FMD infected countries or zones and also those that are FMD free (with vaccination). The WOAH performs evaluations and produces a list of its Member Countries that it officially recognises as countries or zones that are FMD free with or without vaccination. Australia is officially recognised by WOAH as a country that is free from FMD (without vaccination). Trading partners may also undertake their own risk assessments for imported commodities and evaluations of countries' FMD status to satisfy their own appropriate level of protection.

An incursion of FMD into Australia would have a major impact on exports of animals and animal products. The likely impact of an FMD outbreak on affected animal and animal products across our top 10 export markets is estimated to be $16.1 billion annually. This figure is also likely to be an underestimate as trading partners may impose import bans following an outbreak, despite agreed export certification not requiring freedom from the disease, resulting in the trade of most susceptible animal products ceasing.

In short, Australian exports of live animals, meat and meat products and animal by products (including wool, dairy products, pet food, rendered products, skins and hides) from FMD susceptible animals would immediately cease due to Australia's inability to meet existing export certification requirements.

In addition, trading partners are likely to respond to any Australian FMD incursion with bans on imported product from Australia in line with or possibly beyond the recommendations of WOAH standards. This would likely result in bans and cessation of trade for the majority of ruminant and porcine products, except for some highly processed goods to manage the risk of importing FMD affected product. This is due to a number of Australia's major export markets being FMD free and most other countries with FMD having control plans in place or will seek to avoid being affected by a different FMD serotype. At the time of an outbreak, these bans would be nation wide.

Further, many countries are likely to take a similar approach to Australia, which only allows importation of animal products from FMD susceptible species from countries or zones that Australia has assessed as free from FMD without vaccination, where other measures have not been assessed to adequately manage the risks.

Australia does permit import of products that have been treated to appropriately mitigate the risk of FMD such as canned (retorted) meat. Under Australia's established import policy, official recognition

from WOAH of FMD freedom is a prerequisite for further assessment required by the department as a basis for trade in goods that may pose a risk from susceptible species, noting that commodity specific import policies may also apply.

There are two main avenues for the cessation or banning of Australian susceptible ungulate animals and animal product exports following a FMD incursion:

1. Australia is unable to meet existing agreed certification and/or import requirements with our trading partners. Most of Australia's agreed health certification includes attestation that Australia is free from FMD. The department, as Australia's competent authority for agricultural exports, could not issue any certification with these 'country freedom' attestations following an incursion.
2. A trading partner may implement an emergency measure in response to an incursion in Australia which bans imports of certain products. In this case, even if Australia was able to certify and export safe products, they may be banned by trading partners. Such bans or trading limitations may persist even after Australia regains freedom status through the WOAH. This may occur by WTO notification or direct notification to the department and removal of Australia from respective lists of approved countries for import. This may or may not be in line with WOAH standards, and may include non susceptible species, as well as products deemed safe under WOAH standards.

It is difficult to confirm a potential timeframe for the lifting of trade restrictions following an incursion of FMD. The timeframe for recommencement of trade will be dependent on the nature of the outbreak, the eradication/control program deployed, whether vaccination was used, the response of Australia's animal health systems, recognition of freedom by the World Organisation for Animal Health (WOAH) and by an importing country's own FMD freedom recognition guidelines.

To recommence trade, the department will need to submit for the consideration of a trading partner, a comprehensive submission outlining all actions taken as part of a response, including but not limited to, surveillance and other animal health data, traceability information and national systems controls. This will require time to prepare and significant internal, state and territory representative and industry engagement.

The department anticipates that recommencement of trade to some markets will be a protracted process, and, pending the circumstances surrounding an FMD detection, may take several years to resolve after the disease has been controlled.

The department will continue to look to appropriate opportunities with key trading partners to discuss possible scenarios permitting the recommencement of trade and their requirements. The department will also consider early negotiation of export conditions for live animals into Indonesia and other potential markets in the early stage of any response should FMD be detected in Australia. Pre emptive negotiations may not be possible, as information specific to the variant of FMD detected will be needed, even in countries where FMD is present.

Historical analysis of international FMD outbreaks, suggest that even if an FMD outbreak is controlled quickly (within 2 days, (Ireland)), the fastest anticipated FMD freedom recognition by a trading partner (the US) was 228 days. The longest time taken to recommence trade after an outbreak was in Japan, where trade to the US did not recommence for 774 days. The US has a well established FMD freedom recognition process and as such, this is likely to be a best case estimate for

recommencement of trade for Australia, noting that some major trading partners require country freedom for twelve months before FMD freedom will be considered.

An outbreak of FMD would not just be a threat to the Australian livestock sector. It would impact other agricultural industries, particularly through supply chain demand. It could be felt well beyond farming communities, including having impacts on hospitality and tourism, and the domestic supply of food products. Significant impacts on the wellbeing and mental health of affected communities could also be expected.

The United Kingdom's experience of FMD in 2001

The UK's experience of a FMD outbreak in 2001 goes some way to illustrate the potential impacts of an outbreak in Australia. When the FMD outbreak occurred in 2001, it resulted in the destruction of over 6 million animals. The economic cost was in excess of £8 billion.

The impacts of the FMD outbreak were felt way beyond livestock owners. Significant impacts were felt across the UK's tourism, small business and education sectors. The psychological impact of the outbreak was deeply felt across the entire UK population, not just in farming communities, contributing to a significant impact on mental health in the short, medium and long terms.

The UK was successfully declared FMD free in January 2002, 11 months after the first detection of FMD. It is also important to note that not all outbreaks of FMD are large. The UK experienced a much smaller outbreak of FMD in 2007 but its impacts were still significant.

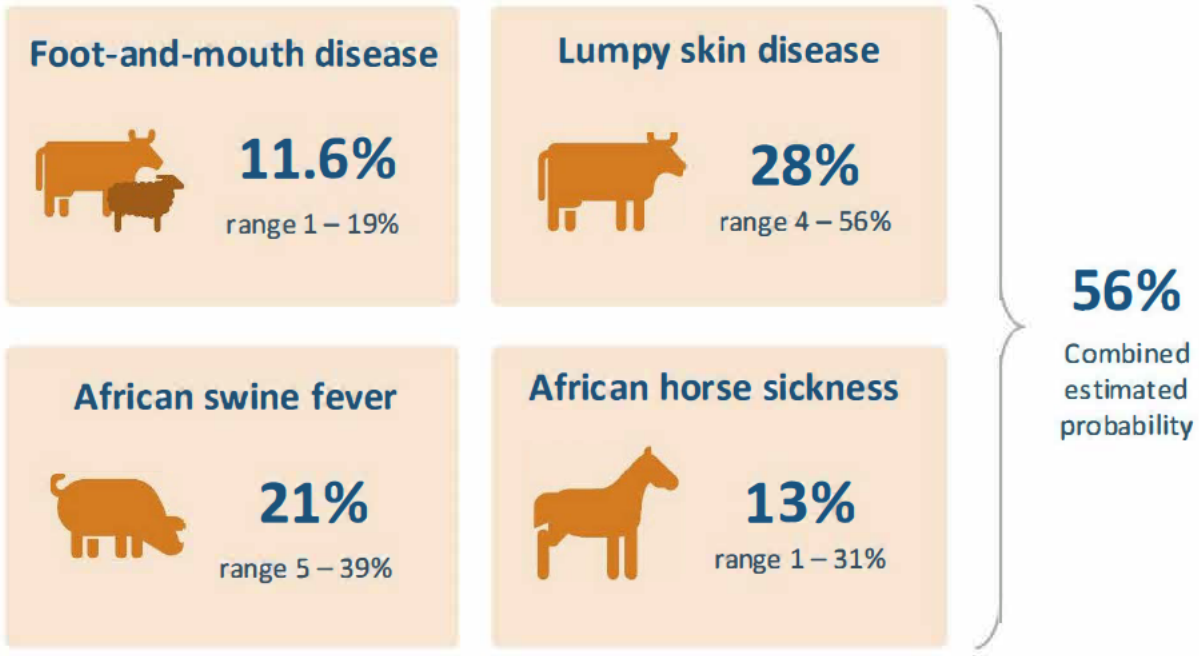
Estimating the probability of an outbreak in Australia

While LSD and FMD are now present in many of Australia's closest neighbours and trading partners, Australia is free of these diseases.

Over the last 18 months, the department worked with CEBRA which undertook three rapid structured expert judgement (SEJ) exercises. These exercises helped to characterise the threat Australia faces from specified EADs, with participants estimating the probabilities of an outbreak of FMD, LSD, African horse sickness (AHS) and ASF in Australia over the following five years.

Earlier in 2022, SEJ workshops assessed the risk of a FMD incursion occurring in Australia in the next five years as 11.6 per cent and 28 per cent for LSD. These assessments took into account the occurrence of an outbreak of FMD and LSD in all provinces of Indonesia, including Bali. This was an increase from 9 per cent and 8 per cent for FMD and LSD respectively from the 2021 estimates, which was prior to either disease being detected in Indonesia. The combined estimated probability of an outbreak in Australia of any one of FMD, LSD, AHS or ASF was 56 per cent (Figure 9) over a five year period.

Figure 9: CEBRA estimated probability of an internationally notifiable EAD incursion in the 5 years from 2022



Note: Values are from the CEBRA's rapid structured expert judgement exercises:
1 All percentage probabilities denotes the mean of participant estimates between the 0.1 quantile and 0.9 quantile
2 All estimated ranges denote the 0.1 quantile and 0.9 quantile – providing an 80 per cent coverage interval.

Source: Department of Agriculture, Fisheries and Forestry

Estimates from structured expert judgement exercises should be interpreted with care. They are not based on modelling. Instead, they use an internationally recognised process to make evaluative judgements based on expert opinion on scenarios involving a range of complex and uncertain systems.

It is important to also note that a variety of views can be expressed by participants during these exercises. This is an important part of these exercises, and is reflected in the estimated range of probabilities.

Results of SEJ exercises can also be impacted by factors such as the rapidity of the exercise, the diversity of participants, and the level of uncertainty expressed during the exercise.

SEJ exercises are one of the tools that the department has used to help characterise the potential threat, and complement other risk assessment activities that may provide further in-depth or sensitive assessments on specific risks or risk pathways.

The department seeks to emphasise that estimating biosecurity risks is a function of both the probability of an event and its consequences. The estimated probability of a FMD outbreak from these recent SEJ workshops should be considered in concert with the significant consequences that would be associated with a FMD outbreak in Australia.

Past FMD outbreaks in Australia

Australia's risk and science-based biosecurity controls have successfully prevented the introduction and subsequent exposure of Australian animals to FMD. The last outbreak of FMD is believed to have occurred 150 years ago in Werribee, Victoria in 1872.

Risk prevention activities for FMD in Australia

Australia has strong and longstanding risk and science based processes in place to prevent incursions of FMD.

The most significant risk of FMD entering Australia is through the illegal importation of meat and dairy products from infected animals that is then fed to pigs (known as swill feeding). The Australian Government has worked with states, territories and industry to establish nationally agreed definitions of swill feeding and to improve compliance with a ban on swill feeding.

Government and industry preparedness

Australian, state and territory governments are working closely with our livestock industries to stay up to date on the situation in Indonesia, and to highlight the need for vigilance and prevention activities.

Australia, like most of our trading partners, applies risk management for all goods that may pose a transmission risk of FMD. For high risk goods, import is only permitted from countries (or zones) that Australia has assessed are free from FMD (without vaccination). Other lower risk goods may be permitted from countries where FMD is endemic but such goods need to have been processed in a way to manage the FMD risk.

Response plans and a comprehensive whole of government approach are in place to manage animal health emergencies, including through the EADRA and an Australian Veterinary Emergency Plan (AUSVETPLAN) for each of the diseases listed in the EADRA, including FMD.

The department also employs official Government on plant veterinarians who work at export listed meat processing establishment. These veterinarians are also trained in the recognition of an EAD and have established reporting and testing arrangements in place.

Australian Veterinary Emergency Plan FMD Response Strategy

The Australian Veterinary Emergency Plan (AUSVETPLAN) response strategy for FMD sets out the nationally agreed approach that would be taken to respond to FMD if it occurs in Australia. The AUSVETPLAN for FMD includes an immediate national livestock standstill for at least 72 hours, followed by implementation of legislated declared areas and quarantine and movement controls over animals, animal products and fomites in declared areas, to minimise spread of infection.

AUSVETPLAN for FMD states that:

> *Australia's policy is to eradicate FMD in the shortest possible time, while minimising economic impact, using stamping out supported by a combination of strategies.*
>
> *Initially, the response to FMD consists of:*

- *an immediate assessment of the epidemiological situation*
- *rapid recognition and laboratory confirmation of cases*
- *an immediate national livestock standstill following diagnosis or strong suspicion of FMD, so that epidemiological information can be gathered and collated, and the potential extent and possible impacts of the outbreak can be assessed*
- *implementation of legislated declared areas for disease control purposes*
- *quarantine and movement controls over animals, animal products and fomites in declared areas, to minimise spread of infection*
- *typing of the outbreak strain of virus and ordering of appropriate vaccine*

- *tracing and surveillance to determine the source and extent of infection (including, as necessary, in feral animals)*
- *valuation and destruction of animals on infected premises and potentially on dangerous contact premises*
- *disposal of destroyed animals and infected animal products, and decontamination of infected premises and dangerous contact premises*
- *decontamination and/or disposal of fomites to eliminate the pathogen*
- *recall of animal products [including for human and animal consumption] (including dairy products for animal consumption, etc.) likely to be contaminated (unless deemed unnecessary by a risk assessment)*
- *relief and recovery programs to minimise animal and human welfare issues that could inhibit the effectiveness of the response*
- *a public awareness campaign*
- *industry support to improve understanding of the issues, facilitate cooperation and address animal welfare issues*

Additional measures may be taken if authorities consider that they would be beneficial in containing and managing the outbreak, including:

- *vaccination to reduce susceptibility of animals to infection and clinical disease, and potentially reduce virus excretion*
- *pre emptive destruction of susceptible animals to minimise spread of infection*
- *zoning and/or compartmentalisation (where appropriate)*
- *risk based movement controls (for example, extending to [raw] milk and other commodities).*

Decision making process to determine if Australian animals need FMD vaccinations

Currently Australia is recognised as: '*free from FMD, without vaccination*'.

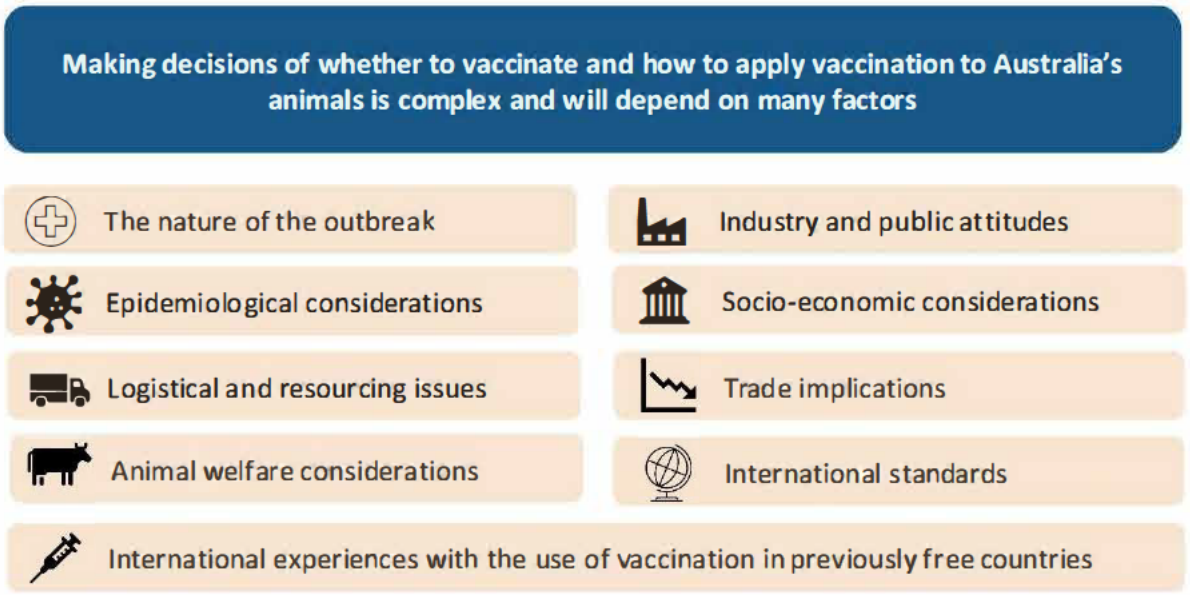
AUSVETPLAN recognises that Australia's response policy for FMD is for containment and eradication as rapidly as possible to minimise the impacts. Vaccination may be considered if the disease spreads beyond the limit of available resources to contain it, to protect areas of high animal concentrations, and to limit infection and minimise virus excretion. FMD vaccines will protect animals against clinical disease. Although vaccination may not entirely prevent infection, effective vaccines reduce susceptibility to infection. If infection does occur, vaccination reduces the amount of virus shed into the environment. These two factors mean that vaccination may be a valuable tool to assist with eradication of FMD in Australia under some circumstances.

Australia's national FMD vaccination policy states that CCEAD will provide the first meeting of NMG with advice on the potential role of vaccination as a control strategy, based on what is known about the unique epidemiology of the outbreak at the time. Decision makers acknowledge that the decision to vaccinate will likely need to be taken in the absence of all desired information. This decision taken should be regularly reviewed.

Whether to vaccinate and how to apply vaccination are complex decisions that will depend on many factors (Figure 10).

Figure 10: Complexities for vaccinations in Australia

Source: Department of Agriculture, Fisheries and Forestry



Australia has a FMD vaccine bank that is stored offshore, and is managed by AHA under a national program co-funded by states/territories, industry and the Commonwealth. The FMD vaccine bank contains an appropriate strain for the current FMD outbreak in Indonesia.

Response to FMD outbreak in Indonesia

The current outbreak of FMD in Indonesian cattle was reported in May 2022. First cases were detected in April and the disease was reported to have spread to Bali, Indonesia in July 2022. Until 22 August 2022, FMD had been detected in 24 of 37 Indonesian provinces. The Indonesian Government is reporting 7 provinces with no active cases, including Bali, however this does not necessarily mean that infection is not present.

The emergence and rapid spread of FMD in Indonesia has changed risk profiles. In response, the department has heightened its border activities according to well-established procedures and protocols. The department has also relied on insights obtained from meetings between Australian and Indonesian chief veterinary officers and other high-level officials, as well as our Jakarta based Counsellors to support Australia's assistance to Indonesia. To further support their work in-country, the department has also deployed an additional veterinary officer to boost our government-to-government engagement, as well as providing technical expertise to support Indonesia's vaccination strategy.

The Australian Government has and is providing support and assistance to Indonesia in order to best respond to this devastating outbreak of FMD. Assistance includes technical advice from the Australian Animal Health Committee Vaccine Expert Advisory Group, supply of vaccines and offers of financial support.

The Australian Government has established the position of an Animal Disease Preparedness Coordinator to coordinate and oversee the department's FMD and LSD preparedness activities and communications.

Changes to import conditions for Indonesian dairy and dried meat products, and peat

On 11 May 2022, the department issued Import Advisory Notice 74 2022 advising of enhancements of biosecurity restrictions and controls in response to the situation in Indonesia. The department varied Australia's FMD free Country List, removing Indonesia. The notice also advised of changed import conditions for Indonesian dairy and dried meat products, and peat. These measures built upon measures already applied after Indonesia's declaration of LSD in February 2022. Biosecurity measures were strengthened to manage the potential of contaminated goods arriving in mail or on passengers entering Australia.

Changes to import conditions for plant-based pathways

As a result of the FMD outbreak reported in Indonesia, the department reviewed plant based stockfeed and fertiliser permits to ensure production methods sufficiently managed risk in accordance with ALOP. Import permits were varied to require onshore radiation or moist heat treatment, and to update the FMD country free list.

Initial vaccine assistance

The Australian Government provided $1.5 million to purchase 1 million doses of FMD vaccine for Indonesia. The vaccines arrived in Jakarta on 21 August 2022. This followed careful discussion with the Indonesian government on timing of that delivery in order to best fit their operational response. The Indonesian government had already purchased 3 million FMD vaccines and have been administering those vaccines into livestock across the archipelago since June 2022.

Indonesia Biosecurity Support Project led by Meat and Livestock Australia

Meat and Livestock Australia (MLA) has been provided $550,000 for the Indonesia Biosecurity Support Project. The Project will enhance the biosecurity capacity in Indonesia's commercial feedlot sector to curb the spread of FMD and LSD. The total cost of the project is estimated to be $2.08 million. The Australian Government's initial contribution will fund an in country risk assessment and mitigation plan, development of feedlot manuals, and delivering training on biosecurity and emergency response in Indonesia.

$14 million in immediate funding to support and respond to biosecurity risks

Following official confirmation from Indonesian authorities that FMD had spread to Bali, new measures were immediately imposed to protect Australia from an FMD incursion. This is due to the high number of people who travel between Bali and Australia.

On 15 July 2022, the Australian Government announced $14 million in immediate funding to manage the increased threat of FMD and LSD.

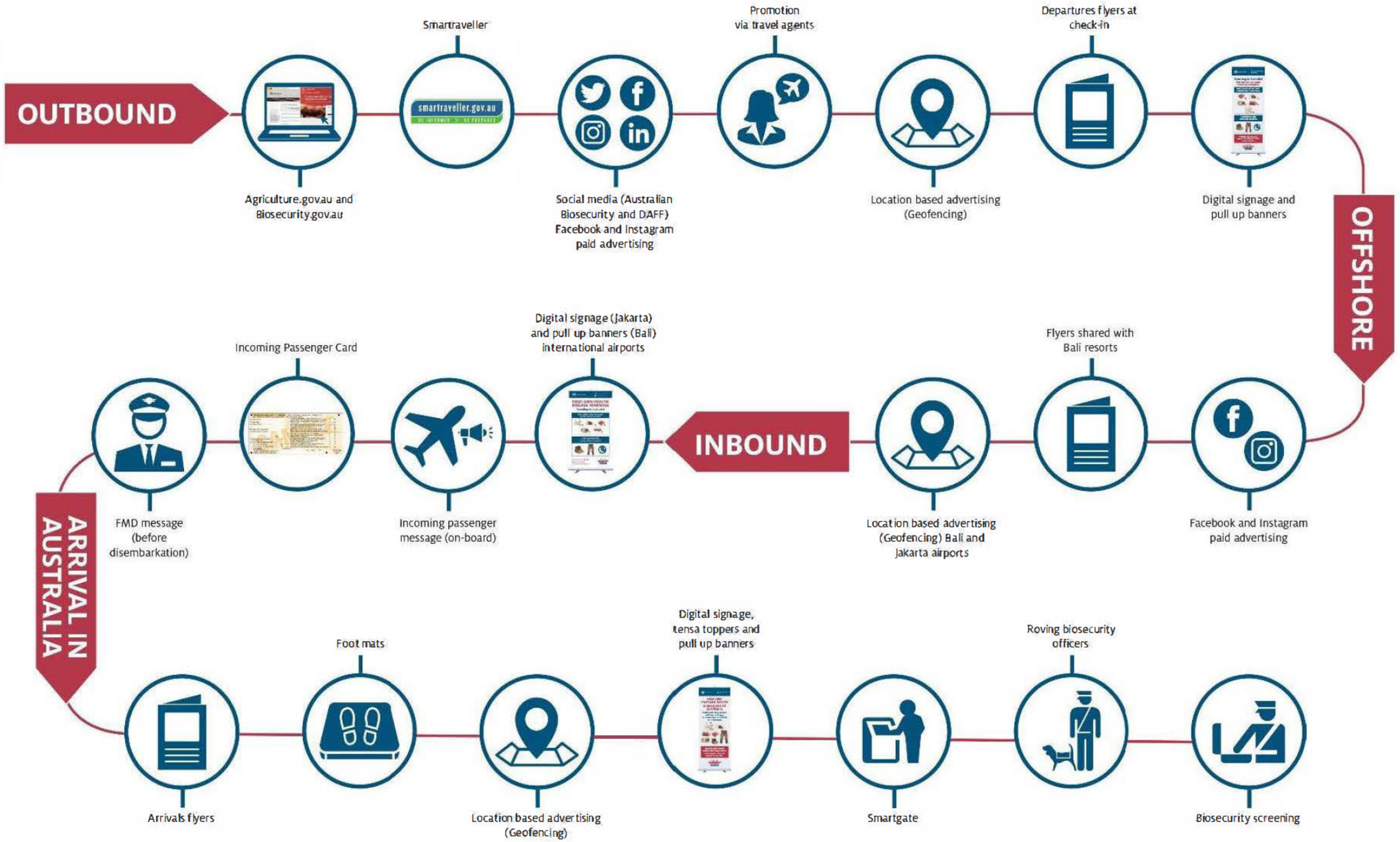
As a part of this announcement, $5 million is being used to provide immediate support for Indonesia, Timor Leste and PNG including:

- support for FMD and LSD vaccine distribution
- technical expertise to support and strengthen laboratory capacity
- technical assistance to support on ground control efforts in Indonesia and epidemiological support.

The remaining $9 million of the immediate funding will support prevention and preparedness activities for LSD and FMD in Australia. These measures include:

- Extra powers granted to biosecurity officers under the Biosecurity Act to implement Biosecurity Response Zones at Australia's international airports that receive direct flights from Indonesia to comply with additional measures implemented to protect Australia from the entry of FMD.
- The Biosecurity Response Zones at Australia's international airports enable the deployment of sanitisation foot mats for travellers arriving into Australia directly from Indonesia. The sanitisation foot mats were fully operational in Sydney, Melbourne, Adelaide, Perth, Darwin, Brisbane, and Cairns airports on 27 July 2022. These mats help to sanitise the footwear of arriving passengers using a 3 per cent citric acid solution. As at 22 August, 85,000 passengers arriving from Indonesia have been directed to use the mats.
- Deploying around 45 new contract staff to assist with treating footwear and maintaining the effectiveness of sanitisation foot mats.
- Implemented new SmartGate travel history questions to identify travellers who have been in Indonesia in the past seven days, including additional referral to biosecurity officials for further assessment and screening.
- Redeployed biosecurity detector dogs at Darwin and Cairns airports to increase opportunities to detect risks from passengers entering Australia from Indonesia.
- Additional signage and information flyers being distributed to returning travellers at major airports informing travellers of FMD risk and precautions.
- Additional training of airport biosecurity staff.
- Recruitment and deployment of 18 new and additional biosecurity officers in airports and mail centres.
- Rolling out of new targeted diagnostic and surveillance programs.
- Implemented 100 per cent inspections of all non letter class mail arriving from Indonesia.
- On arrival FMD messaging delivered by a biosecurity officer for flights arriving from Indonesia to inform travellers of biosecurity requirements.
- Increased messaging about the biosecurity risks of FMD on all inbound flights from Indonesia to reinforce Australia's strict biosecurity measures.
- Direct announcements about FMD are being broadcast at Australia's international airports.
- 100 per cent of travellers arriving into Australia from Indonesia are profiled for biosecurity risks.
- Strengthened requirements by expanding the use of foot baths on vessels carrying livestock when they are docked at Australian ports.

Figure 11: Travellers journey map from Bali to Australia



Note: This document illustrates opportunities for travellers to see and hear biosecurity information and may vary depending on the traveller's actions. Paid advertising elements may vary over time.
Source: Department of Agriculture, Fisheries and Forestry

$10 million in additional funding to support Indonesia

On 9 August 2022, the Australian Government announced a further $10 million to assist Indonesia as it responds to the outbreaks of both FMD and LSD.

Under the package Australia will supply 3 million additional vaccines, bringing the total number of FMD doses provided to Indonesia to 4 million. Australia will also provide personal protective equipment and disinfectants, training for staff on the ground and biosecurity expertise to tackle these outbreaks.

Communications

Following the outbreak in Indonesia, public communication, engagement and awareness raising activities have been increased.

Paid advertising on Facebook and Instagram commenced on 14 July 2022 and involves sponsored (paid) posts that are targeted to Australians travelling and returning to Australia, and off-shore audiences travelling to Australia.

The advertising complements frequent social media posts (organic) released on the department's platforms – Facebook and Instagram (DAFF and Biosecurity), LinkedIn and Twitter (DAFF), and social media by state and territory agriculture departments and industry. The smarttraveller.gov.au website also highlights FMD travel advice.

The department has also put in place other paid advertising elements including location based advertising (geofencing) to mobile phone users in Australian international airports, Jakarta and Bali airports.

Signage/pull up banners are displayed at Australian International airports and flyers are being distributed to travellers as they depart and arrive in Australia about FMD (activity supported by airlines at check in).

All communication on paid and departmental channels points readers to the department's website which is frequently updated with current information including downloadable resources such as factsheets. An information kit has been shared with state and territory agriculture departments and industry, for sharing through their own channels.

The national Emergency Animal Disease Preparedness Coordinator, and other senior departmental representatives including the Chief Veterinary Officer and the First Assistant Secretary of the Exports and Veterinary Services Division have been participating in webinars and meetings for industry and government stakeholders to improve understanding of Australia's FMD and LSD response measures and potential impacts.

In addition, the department's experts including the Chief Veterinary Officer and their deputy and other senior officials have conducted multiple media interviews to ensure accurate and timely information is available to the media, affected industries and the public.

Proactive assurance of imported food for sale in supermarkets across Australia

The department undertakes assurance activities to test and measure the practical effectiveness of Australia's biosecurity operations.

A purchasing and testing campaign of food for sale in supermarkets around Australia was recently undertaken by the department. One sample tested positive for DNA fragments of FMD and ASF. The

food sample was pork floss offered for sale in Melbourne, Victoria. Pork floss is a highly processed, dried meat product that can be legally imported into Australia if it meets strict import conditions. Further investigations by the department found that, while the product was processed, there was insufficient evidence to determine that the product had been processed in accordance with Australia's strict import requirements. The department seeks to emphasise that, while this sample contained DNA fragments of FMD and ASF, this does not mean that viable virus was present. This finding also does not affect Australia's free status for these diseases as there are no cases in animals. Australia is and remains free from FMD and ASF. This result does not change Australia's disease status.

In another recent incident, a passenger was intercepted from Indonesia with a beef product that contained FMD viral fragments. While this shows that Australia's biosecurity system is effective, the department continues with its efforts and responsibility to prevent an incursion, including testing meat products seized at the border from travellers and through the mail.

Foot-and-Mouth Disease Regulatory Assurance Activity

The department undertakes regulatory assurance activities across the biosecurity regulatory system to provide confidence about how effectively and efficiently measures and controls are managing risks.

In response to the reported FMD outbreak in Indonesia in April 2022, the department has conducted a short and sharp assurance activity into the current state of our biosecurity regulatory system in managing the risks associated with the disease.

The purpose of the activity was to provide confidence in the effectiveness of the department's controls and risk mitigation measures in place for the prevention of FMD, and to identify any real or potential gaps or weaknesses within the system across the various pathways.

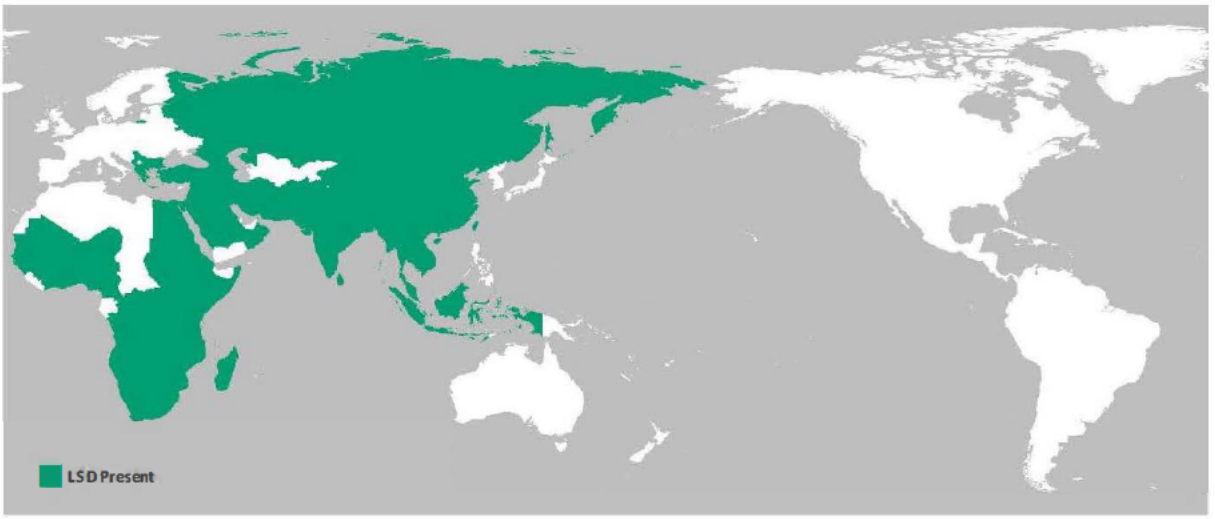
Work is now underway to disseminate each of the findings to relevant areas for further exploration and action.

Lumpy Skin Disease

Australia has no reported cases of Lumpy Skin Disease (LSD).

There is no threat to human health from LSD but it is an emerging and serious threat to Australia's cattle and water buffalo industries. This is due its recent and rapid spread throughout Asia and also its ability to be transmitted to animals by wind borne insects.

Map 2: WOAH reports of LSD by country (as at 18 July 2022)



Note: This map is based on countries' most recent self-reporting to the WOAH. As this is based on countries' self-reporting, it does not mean that countries not present in the map are officially recognised by WOAH as free from LSD.
Source: Department of Agriculture, Fisheries and Forestry

LSD is a viral disease of cattle and water buffalo and is classified as a notifiable disease by the WOAH. LSD has a relatively low mortality but can result in significant illness in infected animals, causing acute disease with fever, depression, and characteristic skin nodules. This commonly results in production losses such as infertility, abortion and low milk yield, and animal welfare issues. The death rate from LSD is usually low but can be variable between outbreaks.

LSD is vector-borne and spreads primarily by biting insects such as certain species of flies, mosquitoes and ticks. It is possible the disease may be spread by fomites (such as contaminated equipment or animal feed) or directly from animal to animal, but this is much less common. The LSD virus is highly resistant to environmental degradation. The time taken for an animal to develop LSD (the incubation period) varies between 4 days and 4 weeks.

Originally limited to Africa, the recent and rapid global spread of LSD is increasing the incursion risk to Australia. Since 2019, the disease has spread through China and Southeast Asia. In 2021, the disease was confirmed in Vietnam, Thailand and Malaysia. In March 2022, the Indonesian government reported that it has now reached the island of Sumatra.

Potential impact of an LSD outbreak in Australia

An outbreak of LSD in Australia would have significant impacts on both domestic and international trade. It is predicted to cause severe economic losses for Australia's cattle and water buffalo industries across animal product, live animal and reproductive material exports. If wild buffalo

populations and cattle in northern Australia's extensive rangelands were exposed to LSD, reservoirs of the virus could establish, making eradication extremely difficult.

The department has completed an initial analysis of the impacts on Australia's animal and animal product exports (via certification) should an LSD outbreak occur. It is currently estimated that an outbreak in Australia could result in the loss of approximately $7.39 billion worth of exports per annum across 23 countries and multiple commodities. Given this estimate is based on certification, it is likely to underestimate the impact, particularly for animal products, given some trading partners may impose import bans following an outbreak despite a lack of LSD certification requirements.

The impact of an outbreak on Australia's exports may be reduced through trade preparedness activities, which the department has agreed, with industry, through the development of the Draft National LSD Action Plan. The department has identified a number of trading partners where negotiation of new trade conditions, in the event of an LSD outbreak, may be possible. This work has commenced.

Risk prevention activities for LSD in Australia

The department is working closely with state and territory governments and across supply chains with the aim of preventing and responding to an outbreak of LSD.

Current efforts focus on preparing for a potential incursion arriving in northern Australia. Activities include enhanced surveillance activities with states and territories under the NAQS, dedicated public awareness campaigns, and delivering training for producers and Indigenous and park rangers. Animal inspections have been increased. Engagement with Indigenous landowners has also increased through closer partnerships.

AUSVETPLAN LSD Response Strategy

After approval by Animal Health Committee, AHA published an updated version of the AUSVETPLAN Response Strategy Manual for LSD on 10 August 2022. The new manual is a complete revision of the previous Response Strategy and follows the current 5th edition formatting. The plan was finalised after AHA held an exercise on 18 July 2022 with the AUSVETPLAN technical review group and relevant industry organisations to test the revised response policy.

Draft National LSD Action Plan

The Draft National LSD Action Plan (the Draft Action Plan) has been developed through a series of high level workshops hosted by the Commonwealth. The Draft Action Plan sets out national priorities for actions to strengthen Australia's preparedness for an outbreak of LSD. These actions are critically important to protect Australia's cattle and other livestock industries from the growing threat of LSD.

Global and domestic trends in trade and animal production indicate that Australia requires increasingly strong and resilient systems to effectively manage animal disease risks and provide proof of disease freedom. The Draft Action Plan outlines systems that need to be established or strengthened to support Australia's cattle industries to effectively manage the risk of LSD. It sets out eight objectives:

- international engagement
- border biosecurity and trade
- diagnostic capability
- surveillance

- preparedness and response
- awareness and communications
- research and innovation
- resilience and recovery.

Government and industry organisations already have strategic animal health plans that broadly cover components included in the Draft Action Plan. The intent is not to duplicate activities, but rather to create links between plans to make the best use of resources.

This Draft Action Plan is being finalised, aiming to be completed in 2022, and will be implemented through ongoing collaboration among industry and government parties.

Response to LSD outbreak in Indonesia

The Australian Government is supporting our near neighbours in their ongoing efforts to prevent and control the spread of LSD within the region.

As at August 2022, the Australian Government has provided a total of 435,000 LSD vaccine doses to assist Indonesia with its vaccination campaign. To date, a total of $0.9 million in funding has been provided to Indonesia to assist with purchasing LSD vaccines for Indonesia's animals. The department is also providing technical support to manage outbreaks of LSD in Indonesia.

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*, is a parasite of the European honey bee (EHB) and the Asian honey bee. It weakens and eventually kills EHB (*Apis mellifera*). Untreated hives of EHB infested with Varroa mite are likely to die within 3 to 4 years. It is the most serious global pest of honey bees. Drone bees can move Varroa mites from hive to hive and even between apiaries. Mites are agile, move into hives quickly and transfer through contact between bees. In Australia, significant pollination of crops also occurs from the large populations of wild EHB found throughout Australia and Varroa mite, if allowed to spread, is expected to progressively kill 95–100 per cent of Australia's wild honey bee population. *Varroa destructor* does not affect native bee species.

Potential impact of Varroa mite in Australia

Honey bees are critical for the production of many crops, pollinating around 65 per cent of agricultural and horticultural crops in Australia. Their contribution to the Australian economy through pollination services and products was estimated in 2014 to be $14.2 billion per annum (Karasiński 2018).

If varroa mite were to establish in Australia, EHB and the pollination services provided could be reduced significantly due to the loss of feral/wild EHB nests and impact on managed hives.

An outbreak, like the June 2022 detection in Newcastle, NSW, could have significant repercussions for our economy. It has the potential to cost producers and consumers of pollination dependent crops, like almonds and pears. ABARES estimated the cost to producers and consumers over 30 years of an incursion at the port of Sydney is calculated to be $5.2 billion without containment and about $3.8 billion with containment.

Impact of Varroa mite in New Zealand

The arrival of the Varroa mite, *Varroa destructor*, in New Zealand has had far reaching consequences for honey bee populations and pastoral agriculture. Following its detection near Auckland in 2000 it has spread throughout both main islands of New Zealand (Iwasaki et al 2015). The impact of this invasion and concurrent commercial costs is estimated to be between NZ$365 million and NZ$661 million over 35 years. Pastoral impacts (for example, increased need for fertilizer, production losses) were estimated to account for 78% of costs, horticultural and arable (for example, increases in pollination charges and decreases in crop yields) 15%, and beekeeping approximately 7%.

Previous Australian detections

Australia is currently the only inhabited continent and last major bee keeping country to successfully prevent Varroa mite from establishing. There are strict quarantine requirements in place to protect the Australian honey bee industry. *Varroa jacobsoni,* a species closely related to *Varroa destructor*, has previously been detected on newly arrived bee swarms several times at the Port of Townsville, Queensland (2016, 2019, 2020 – *Varroa jacobsoni*) and been successfully eradicated as a result of national cost shared eradication programs under the EPPRD. *Varroa destructor* has also been previously detected on machinery parts as they were unloaded from a vessel at the Port of Melbourne, Victoria (2018 – *Varroa destructor*), in this instance, it was successfully destroyed on detection. The success of these efforts is due to strong partnerships, robust surveillance methods

and coordinated preparedness activities across the system. In the case of the current 2022 outbreak in NSW, national response arrangements are in place with the objective of eradicating the outbreak.

National Varroa mite Eradication Program

The National Varroa Mite Eradication Program was established in 2016 after Varroa mite (*Varroa jacobsoni*) was detected on exotic Asian honey bee swarms in Townsville, Queensland. It was extended twice to support responses to further detections in 2019 and 2020. The eradication program led by the Queensland Government was co funded by industry, including the Australian Honey Bee Industry Council (AHBIC), state and territory governments and the Australian Government under national response arrangements under the EPPRD.

The program covered surveillance, destruction and community awareness campaigns. *Varroa jacobsoni* was declared eradicated in 2021 following the success of these three eradication programs.

Bee biosecurity

In collaboration with industry and state and territory governments, the department is well prepared for any bee pest or pest bee incursions with effective biosecurity measures in place to mitigate such incursions. These include regulatory measures, awareness, prevention, preparedness, surveillance/detection, response, and research and development activities.

All vessels and imported cargo must adhere to strict biosecurity conditions (for example, pre arrival reporting for insect presence, including bees) followed by thorough inspection processes at the Australian border to manage pest and disease risks. Any detections of suspect bee pests, bee diseases or pest bees must be reported to the Australian Chief Plant Protection Office through established national reporting procedures and trigger consideration of a national response.

Australian governments and industry implement various programs to improve bee biosecurity and health in Australia including surveillance and public awareness programs.

The National Bee Pest Surveillance Program (NBPSP), is an integrated early warning system enabling detection of high priority bee pests and diseases which may enter through high risk entry pathways at international ports (mites, beetles and viruses), or pest invertebrates (bees, hornets or wasps) that could either carry hitchhiking parasites. The program also collates crucial evidence of Australia's pest free status to support trade and market access.

The NBPSP is administered and coordinated by PHA at national level. The program is delivered by state and territory departments of primary industries in respective jurisdictions by undertaking relevant surveillance and diagnostic activities through contractual arrangements with significant in kind contributions. The NBPSP has been an ongoing industry government partnership since 2012. Horticulture Innovation Australia (HIA) has been the major funder of the NBPSP and leverages funds from horticulture industries, grains and the Australian government.

On 21 December 2021, HIA and PHA announced a three year funding program for the NBPSP until 2024 with the levy contribution from the horticultural industry and support from Australian Honey Bee Industry Council (AHBIC) and Grain Producers Australia (GPA) as well as in kind contribution from state and territory governments.

The Australian Government and PHA are actively seeking to establish a partnership arrangement with the bee industry to sustain the program into the future.

The National Bee Biosecurity Program (NBBP) was established in 2014 to ensure the future sustainability and viability of the honey bee industry in Australia. It improves the management of

established pests and diseases, such as the bacterial disease American foulbrood, and increases the preparedness for and surveillance of exotic bee pest threats. It also helps maintain and improve bee biosecurity status through promoting bee biosecurity awareness and thus enhancing the public reporting of exotic bee pests and diseases.

NBBP activities are guided by industry and government endorsed *Australian Honey bee Industry Biosecurity Code of Practice (2016)* (the Code) which provides a clear framework for beekeepers to engage in best practice biosecurity. Specific elements of the Code apply to commercial beekeepers (that is, those operating ≥ 50 hives), and in some jurisdictions, components of the Code have been incorporated into biosecurity legislation.

The NBBP is an industry and government collaborative partnership. PHA provides national management and governance, the honey bee industry provides funding resources, and state governments deliver activities and provide regulatory support which includes significant in kind and financial support. The honey bee industry significantly invests in the coordination and co funding of the NBBP through the AHBIC.

Current Varroa mite outbreak and response

Across Australia, the close collaboration between governments, industry and the community has allowed for the rapid and transparent sharing of resources and information to effectively prepare for and eradicate this pest. The current NSW outbreak has highlighted how important relationships are when responding to and addressing the potential impacts to commercial industries, recreational beekeepers and the environment. The department, through the agreed response arrangements set out in the EPPRD, is supporting NSW to undertake the national Varroa mite eradication program.

Varroa mite was detected in two of six sentinel hives at the Port of Newcastle on 22 June 2022. The detection was the result of routine surveillance on sentinel hives by NSW Bee Biosecurity Officers.

A response plan has been approved under the EPPRD to co fund the response activities in NSW. The Commonwealth will meet 25 per cent of the costs. This includes an $18 million compensation package for affected registered beekeepers for reimbursement for all equipment, hives and bees. State and territories as well as affected industry parties are also contributing financially to the response plan.

Varroa mite Regulatory Assurance Activity

In response to the Varroa mite incursion at the Port of Newcastle on 22 June 2022, the department has conducted a short and sharp assurance activity into the current state of our biosecurity regulatory system in managing the risks and controls associated with Varroa mite at the border.

The purpose of this activity was to provide an increased level of confidence in the department's biosecurity system to manage the risks associated with Varroa mite and to provide insight into any gaps or controls that are inadequate in avoiding any further outbreaks from occurring in Australia.

Proactive *Varroa destructor* surveillance at Commonwealth ports

To check for the presence of Varroa mites at seaports considered at high risk of European honey bees arriving, the department conducted proactive surveillance at ports in Newcastle, Adelaide, Fremantle, Brisbane and Sydney (on Commonwealth land) searching for feral bee nests and inspecting them for Varroa. Surveillance was conducted from late June and through July 2022. Surveillance will also be conducted in Melbourne when the weather warms and bees become active.

Samples were inspected using morphological techniques and environmental DNA analysis, with no Varroa detected.

Varroa mite and WOAH reporting

Infestation of honey bees with Varroa spp. (Varroosis) is listed by the World Organisation for Animal Health (WOAH).

International reporting obligations require Australia to inform WOAH within 24 hours of initial detection and submit weekly follow up reports until the situation has stabilised.

Australia provided an immediate notification of Varroa being present in NSW on 24 June 2022 and follow up reports on 8 July 2022 and 2 August 2022.

WOAH's Terrestrial Animal Health Code provides the requirements to achieve free status as a result of an eradication program. If surveillance and other technical requirements are met, this can be achieved three years after the last report of the presence of Varroa.

Response to and implementation of previous reviews and reports into biosecurity

Response to and implementation of previous reviews and reports into biosecurity

As biosecurity risks continue to evolve with changes to climate, the trading environment, international travel and globalisation, so must Australia's biosecurity system. Our modern biosecurity system has evolved and developed over time, including following a range of external or independent reviews by eminent Australians. Such system wide reviews continue to strengthen our national biosecurity system, supporting and driving change, highlighting risks, and identifying improvements to be made by system participants and beneficiaries. A summary of the key Australian Government level reviews and their outcomes are outlined below. We continually draw upon lessons learned from a range of independent reviews by eminent people, as well as international examples, internal reviews and simulations and exercises that seek to improve aspects of our system or the system as a whole.

Nairn 1996

In 1996, Professor Malcolm Nairn AM, as Chair of the Australian Quarantine Review Committee, led an independent review of Australia's then quarantine system. The review's broad terms of reference included all aspects of quarantine policies and procedures. The review report, 'Australian Quarantine – a shared responsibility', was provided to the then Minister for Primary Industries and Energy in October 1996 after a comprehensive review consultation process.

The review's recommendations sought to lead to a more efficient and effective quarantine service, as well as set the foundation for a partnership approach to underpin the quarantine system. This principle, known as shared responsibility, recognised the role that all stakeholders – industry, the community and governments – played in keeping Australia free of exotic pests and diseases. The report provided a blueprint for a fresh approach to Australian quarantine. This included a vision covering both the benefits and responsibilities of effective and efficient quarantine, reflecting the realistic requirements of the Australian community while fulfilling Australia's international obligations.

The Nairn review also sought to move away from quarantine's past focus on a border or 'barrier' approach, noting the system was much broader than this. The review emphasised the 'quarantine continuum', encompassing pre border, border and post border activities. While maintaining the importance of keeping unwanted diseases and pests offshore, this approach sought to place more attention on the value of both monitoring and surveillance within Australia and on national preparedness for and response to incursions.

Other key themes and recommendations arising from the review focused on: the importance of maintaining Australia's unique natural environment and the role of effective quarantine policy to achieve this; increasing the profile of plant quarantine through establishing an 'Australian Plant Health Council' and a Chief Plant Protection Officer position; improved transparency and consultation in the process for carrying out risk analyses for imports; and considering the broad range of views from industry and the general public in quarantine matters.

The government provided a comprehensive response to the Nairn review in 1997, accepting or accepting in principle most recommendations. The response outlined the government's commitment to overhaul the quarantine system to adequately protect Australia's multi billion dollar agricultural, fishing and forestry industries and the environment.

Beale 2008

In 2008, a comprehensive, independent review into Australia's quarantine and biosecurity systems was led by Mr Roger Beale AO. The independent panel's report, found that Australia's biosecurity system was comprehensive, transparent and underpinned by scientific rigour, but could be improved. The review proposed moving from 'quarantine' to the broader concept of 'biosecurity' with an emphasis on managed, but not zero, risk. The review endorsed and sought further strengthening of the three core principles articulated in the Nairn Report – biosecurity continuum, science based assessments and shared responsibility – with the aim being a seamless biosecurity system involving all appropriate players in government, business and the community.

The review found that Australia's biosecurity system would be most effective if resources are directed to areas of greatest return from a risk management perspective. It recommended the mandatory Increased Quarantine Intervention (IQI) targets be replaced by a system based on risk return, with comprehensive quality management, verification and audit. It also highlighted the need to adequately resource the system.

Other key recommendations included negotiation of a National Agreement on Biosecurity with the states and territories to underpin a partnership approach, development of a new Biosecurity Act, and a new statutory office of Inspector General of Biosecurity with broad powers of audit and investigation in relation to biosecurity programs and systems.

In December 2008, the Australian Government agreed in principle to the recommendations outlined in the report and directed the department to commence some reforms, including a move away from the mandatory IQI targets introduced in 2001 following the outbreak of FMD in the UK.

Matthews 2011

In 2011, the department engaged Mr Ken Matthews AO to provide an independent assessment of Australia's biosecurity continuum to assess the department's and Australia's current level of preparedness and capacity to prevent and respond to an outbreak of FMD.

In response to the Matthews report, which identified 11 issues and a number of specific recommendations, a dedicated FMD Taskforce was established in the department from 2012 2014 to lead work with jurisdictions and stakeholders and fast track improvements across the biosecurity system.

The FMD Taskforce led the development of a National FMD Action Plan, which took into account the recommendations raised by Matthews, as well as other action against the 11 issues. The implementation of the Action Plan was overseen by the NBC. The Action Plan was endorsed by the then Primary Industries Standing Council and Primary Industries Ministerial Council. Progress against the National FMD Action Plan was reported to the NBC. The Action Plan was concluded in 2014. Since then, further actions against the issues identified by Matthews have been led by the department in collaboration with state and territory governments and peak industry groups. The department is doing an internal review to ensure that the preparedness objectives previously represented by the plan have been updated in accordance with collective progress made and the current risk environment.

Reform of Australia's biosecurity system 2012

In March 2012, the department released '*Reform of Australia's biosecurity system: An update since the publication of One Biosecurity: a working partnership*'. This report outlined progress the department was making in implementing the substantial reform program to continue to deliver a modern biosecurity system that is responsive and targeted in a changing global trading environment, as well as effective and sustainable into the future. The report noted the significant reforms proposed in the Beale review to strengthen Australia's biosecurity system by: revising legislation; targeting resources to the areas of greatest return from a risk management perspective; sharing responsibility between government, businesses and the community; and improving transparency, timeliness and operations across the continuum.

The report outlined five key underpinning principles, consistent with the themes outlined in the Beale review and informed by previous reviews and stakeholder needs:

3. Implementing a risk based approach to biosecurity management
4. Managing biosecurity risk across the continuum – offshore, at the border and onshore
5. Strengthening partnerships with stakeholders
6. Being intelligence led and evidence based

Supported by modern legislation, technology, funding and business systems. The report outlined progress made against the five key principles; linked to the applicable recommendations of the Beale review. It outlined how efforts were focused across the biosecurity continuum on activities that are based on risk, science and an effective regulatory framework to deliver a more efficient and effective biosecurity system.

Key reform activities and achievements under the five principles included: introducing risk based intervention methodologies to optimise the interception of material that poses a high biosecurity risk, with advice from the former Australian Centre of Excellence for Risk Analysis (now CEBRA); conducting a number of pre border, offshore activities with international stakeholders to reduce the likelihood of exotic pests and diseases reaching Australia; negotiating an Intergovernmental Agreement on Biosecurity to strengthen the collaborative approach between the Commonwealth and state and territory governments in addressing Australia's biosecurity issues; working in partnership with the former Australian Customs and Border Protection Service to improve its intelligence and targeting capability; working on a new biosecurity bill; and appointing an Interim Inspector General of Biosecurity in July 2009 to conduct independent audits of Australia's biosecurity systems.

Safe Keeping Inquiry into the biosecurity of Australian honey bees

On 20 October 2016, the House of Representatives Standing Committee on Agriculture and Water Resources decided to conduct an inquiry into the biosecurity of the Australian honey bee industry. This issue arose from the 2014 15 annual report of the former Department of Agriculture. The Committee held a roundtable discussion on honey bees and biosecurity on 24 November 2016, attended by the former Department of Agriculture and Water Resources, CSIRO, the AHBIC, and PHA.

The roundtable identified other issues:

- smuggling mainly through mail and other cargo of bees as this circumvents all surveillance efforts which assume entry at a port
- pre embarkation inspection – before goods are loaded in source country
- resistance breeding for bees resistant to pests (for example, Varroa) and diseases (viruses).

Following this inquiry, six recommendations were tabled in a report: 'Safekeeping: Inquiry into the biosecurity of Australian honey bees', March 2017.

- A government response was tabled on 15 August 2017, and where identified, work with PHA was well advanced to address the recommendations. On 6 September 2019, a status report of the six recommendations contained in the report was provided to the committee.
- Work has been progressing to support implementation of the 6 recommendations. Five Recommendations are complete and one remains ongoing.

Craik 2017

The original Intergovernmental Agreement on Biosecurity (IGAB) commenced in 2012. It was an agreement between the Commonwealth, state and territory governments (except Tasmania) to strengthen the national biosecurity system. The IGAB defined the roles and responsibilities of governments and outlined the priority areas for collaboration to minimise the impact of pests and diseases on Australia's economy, environment and community.

Following agreement by Australian Agriculture Ministers to initiate a review of the national biosecurity system and underpinning IGAB, a review was announced in 2016. This review was undertaken by an independent panel, led by Dr Wendy Craik AM FTSE, and examined the capacity of the national biosecurity system and implementation and effectiveness of the IGAB and its schedules. In July 2017, the independent panel presented its final report, '*Priorities for Australia's biosecurity system*: an independent review of the capacity of the national biosecurity system and its underpinning intergovernmental agreement', to the then Agriculture Ministers' Forum. The report made a number of recommendations for strengthening Australia's national biosecurity system over the following 5–10 year period.

As noted by the report, this review of Australia's biosecurity system and the underpinning 2012 IGAB was another step in the continuous improvement process. It was viewed as essential for maintaining the strength of the national system, including the system's focus on priorities and its ability to address areas of emerging need and concern. The review's key areas of focus included national priority pests and diseases, resourcing, research and innovation priorities, shared responsibility, and community and environmental biosecurity.

The report noted the IGAB had provided a significant foundation for further developing the national biosecurity system and the intergovernmental cooperation and relationships that underpin it. That said, the review recommended a refreshed intergovernmental agreement, including to reflect the strengthened relationships and substantial achievements since its first signing.

In November 2018, Australian Agriculture Ministers (including Tasmania) provided a response to the Craik Review. Ministers acknowledged that the challenges facing our national biosecurity system continue to grow as the volume and complexity of global trade and travel increases and committed to building a smarter biosecurity system together. The government response identified 5 key areas of focus: biosecurity awareness across the community; sustainable funding of the biosecurity system;

managing risk through research and innovation; our capability to manage biosecurity across all sectors; and monitoring system performance.

As part of the response to the Craik Review, a new IGAB agreed between all Australian governments came into effect in January 2019, replacing the previous 2012 IGAB. The agreement sets out commitments for the Australian Government, and state and territory governments; outlines the agreed national goals and objectives; and clarifies roles, responsibilities and governance arrangements.

In addition, as recommended by the review, a National Biosecurity Statement was developed in collaboration with key system participants, including to provide clarity on roles and responsibilities in support of realising shared responsibility across the system.

Inspector-General of Biosecurity reviews

Further biosecurity related reviews and reports that have, over time, contributed to the continuously evolving, adapting and improving biosecurity system include those of the Inspector General of Biosecurity (IGB). The IGB was established under the Biosecurity Act and has powers to review the performance of functions or exercise of powers by biosecurity officials under the Act. The IGB is appointed by the Minister for Agriculture.

The IGB's role seeks to enhance the integrity of Australia's biosecurity system through independently evaluating and verifying the performance of relevant government programs across the biosecurity continuum. The IGB does this by making recommendations for system improvements and providing an assurance framework for stakeholders. The IGB has authority to review biosecurity risk management measures and systems that are: prescribed under the *Biosecurity Act 2015* and are the responsibility of the Department of Agriculture, Fisheries and Forestry; and relate to human health and are undertaken by the department on behalf of the Department of Health and Aged Care.

The IGB is independent of the Minister and the Director of Biosecurity. However, the IGB may:

- consider the Minister's request for a review; and/or
- seek immediate action from the Director of Biosecurity (or senior departmental executives) and the Minister to protect or enhance the integrity of Australia's biosecurity systems

The IGB, in consultation with the Director of Biosecurity and the Minister for Agriculture, Fisheries and Forestry, sets an annual review program which is published on the IGB's website. The IGB provides reports to the Minister, which are also published unless they contain information that is considered prejudicial to the public interest. These reports include the department's response to the recommendations

The current IGB is Dr Lloyd Klumpp who commenced in the role on 25 July 2022 for a three year term.

Assessments undertaken by the IGB provide an important contribution to efforts to ensure Australia has a robust, risk based biosecurity system that is able to meet current and future challenges. The department continues to make meaningful progress addressing recommendations made by the IGB. Since commencement of the Biosecurity Act, the IGB has made 246 recommendations across 20 IGB reviews. As at 12 August 2022, 137 recommendations have been actioned and closed with 109 recommendations remaining open (see Appendix D: Status of implementation of IGB and ANAO recommendations for further details).

Australian National Audit Office reviews

The department is also addressing recommendations made by the Australian National Audit Office (ANAO) in relation to our biosecurity system. The department has received 11 recommendations from two ANAO audits since December 2017. A summary of progress in implementing the recommendations of each ANAO report is at Appendix D: Status of implementation of IGB and ANAO recommendations.

The department, as part of business as usual activities, has an ongoing program of work to address all agreed IGB and ANAO recommendations.

Progress in addressing systemic issues

As recognised by the IGB, and noted in the Commonwealth Biosecurity 2030 – 2022 Action Plan, a range of recommendations reflect matters very specific to the area under review. However, many relate to the underlying system with similar root causes emerging across issues and time. Systemic issues underpinning IGB and other independent reports over recent years can be broadly grouped 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.

Implementing meaningful change in response to such findings is not always 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.

The department recognises independent reviews provide an important external assessment of capacity and capability. This supports lasting improvements to ensure the biosecurity system remains fit for purpose. Progress the department has made in addressing key systemic issues underlying recommendations made by the IGB and the ANAO are outlined in Commonwealth Biosecurity Action Plan 2022.

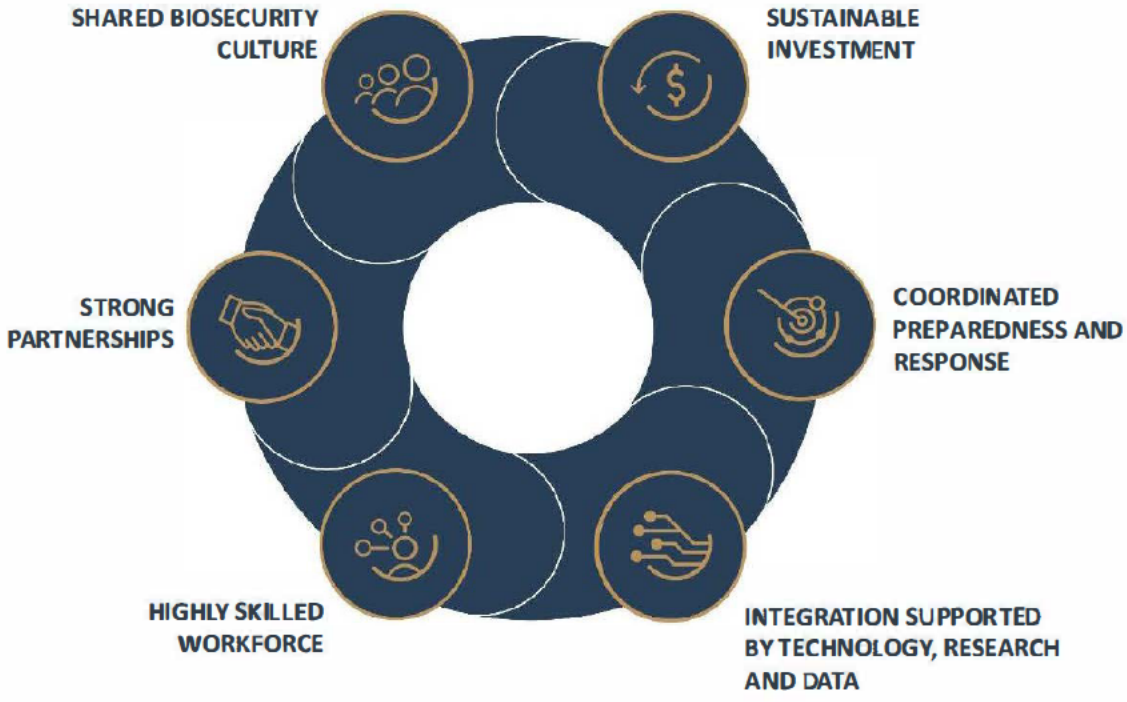
Plans to improve the system

Australia has a robust and mature biosecurity system, but there can be no 'set and forget' given the important role biosecurity plays in protecting our way of life and facilitating Australia's $65.9 billion in agricultural exports (ABARES 2022 23 forecast). Risks evolve over time and require a flexible and adaptable response. As noted in the Craik Review, Australia's biosecurity system has continuously evolved and adapted to address emerging challenges and opportunities and to reflect changing risks, priorities and circumstances. This evolution and adaptation will continue over the years to come, supported by strategic direction and leadership, genuine and comprehensive consultation, clear planning and action.

Australia's first National Biosecurity Strategy

As part of this evolving system, Australian Agriculture Ministers recently released Australia's first National Biosecurity Strategy – a strategic roadmap for Australia's biosecurity system over the next 10 years. This national strategy recognises that our system – collectively – needs to be continually strengthened so challenges can be better addressed as they emerge. As a product of the combined thinking of government, industry and the community, the strategy provides the path ahead, guided by six priority areas to coordinate effort in the areas with the biggest impact.

Figure 12: Six priority areas within the National Biosecurity Strategy



Source: Department of Agriculture, Fisheries and Forestry

The strategy outlines the current and future biosecurity environment and includes initial actions under the priority areas. It also outlines the approach for working together to develop additional actions, drive implementation and monitor progress. Key next steps included in the strategy are: identifying initial actions for immediate implementation, designing a national implementation plan,

and developing a national action plan that builds upon initial actions and establishes a framework for monitoring and evaluation to ensure accountability.

Reflecting the evolving nature of biosecurity, the 10 year strategy is a living document that will be reviewed every five years, or sooner if there is a significant change to risks, challenges and/or opportunities.

National Biosecurity Strategy Implementation Committee (NIC)

To support the achievement of the strategy's vision and priorities, a diverse range of stakeholders will be involved in implementation, underpinned by an inclusive governance approach.

A National Biosecurity Strategy Implementation Committee (NIC) is being established to help drive coordinated and collaborative activity across Australia. The committee will comprise biosecurity stakeholders, including representatives from plant and animal industries, freight and logistics, aquatic industries, environmental groups, research organisations and Indigenous stakeholders. The NIC will work together with the NBC to develop, oversee, implement, monitor and review the national implementation plan and the national action plan.

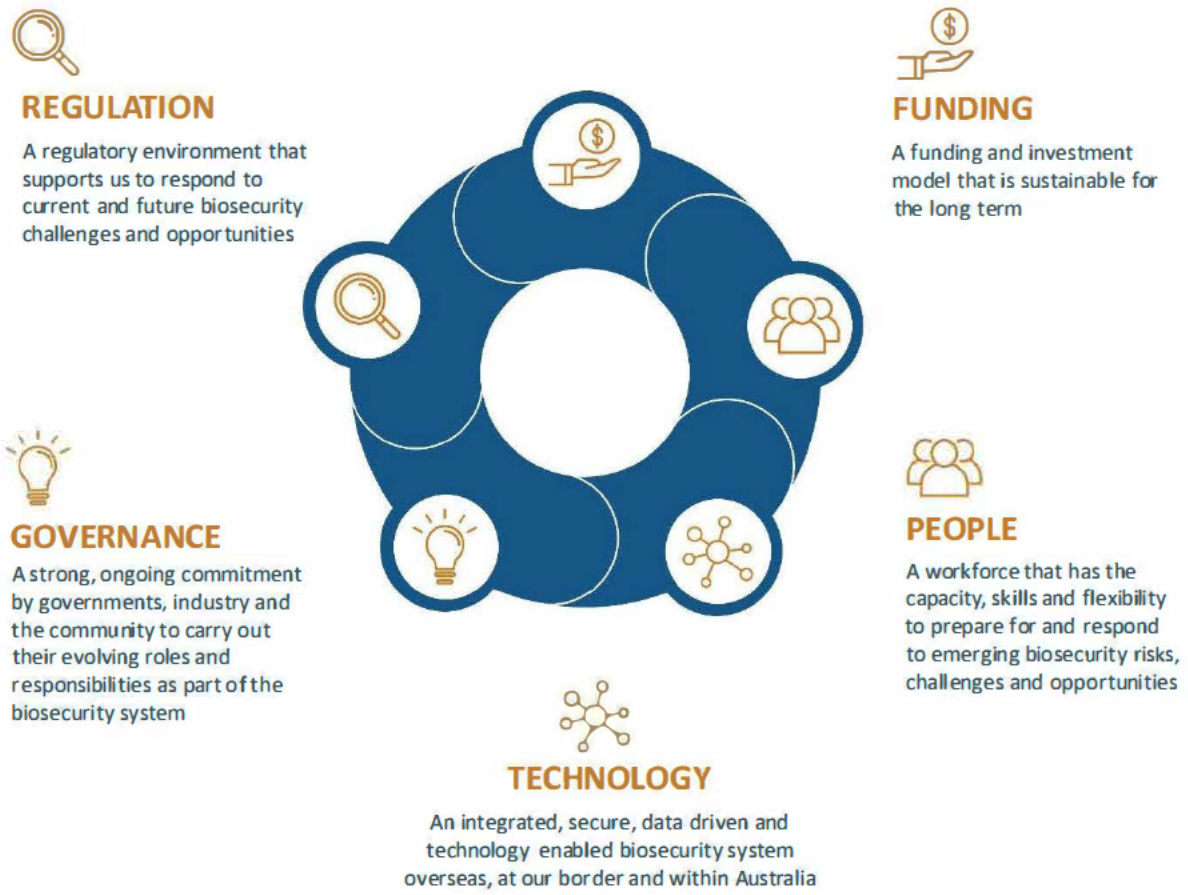
Commonwealth Biosecurity 2030 and annual action plans

Commonwealth Biosecurity 2030 was released in May 2021, providing a strategic roadmap for protecting Australia's environment, economy and way of life. It builds on live strategies, plans, reviews and other documents to inform strategic actions and key priority areas, providing a clear and practical roadmap to direct and guide projects, initiatives and investments associated with the Australian Government's biosecurity remit. In addition (but not limited) to the IGAB, *National Biosecurity Statement*, CSIRO's *Australia's Biosecurity Future* report and major reviews such as Craik, Beale and Nairn, strategic actions in *Commonwealth Biosecurity 2030* were informed by findings of the IGB and ANAO.

Commonwealth Biosecurity 2030 identifies five enablers as the focus for realising the Australian Government's biosecurity system goal of:

> *"A risk based biosecurity system that effectively, efficiently and sustainably protects Australia's health, economic, environmental and national security interests against the threats of today and tomorrow, consistent with our Appropriate Level of Protection."*

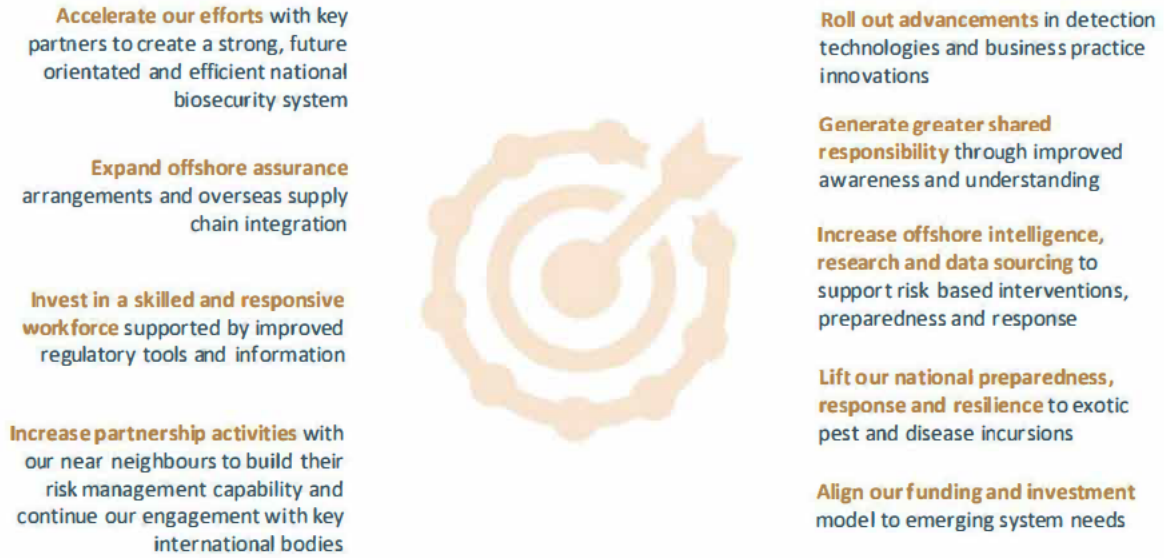
Figure 13: Commonwealth Biosecurity 2030 – Enablers



Source: Department of Agriculture, Fisheries and Forestry

Commonwealth Biosecurity 2030 includes nine strategic actions that will be undertaken to realise the goal.

Figure 14: Commonwealth Biosecurity 2030 – Strategic Actions



Source: Department of Agriculture, Fisheries and Forestry

Commonwealth Biosecurity 2030 committed the department to developing annual action plans to guide its delivery and ensure transparency. The first annual action plan for *Commonwealth Biosecurity 2030* was released in May 2022. It outlines the unprecedented changes to the way we work, due to the COVID 19 pandemic and changing threat landscape, including how the department has adapted, deploying its resources to target the areas of highest risk and demand. The plan outlines the operating environment through to 2023 24, highlighting the increasing threat posed by the global spread of pest and diseases, particularly from the north, requiring an increased focus on preparedness. The plan also notes that the opportunities to realise the benefits of our efforts in areas such as better information management, intelligence and risk assessment systems have never been better. Further, the need and desire to mobilise meaningful partnerships, including with industry, states and territories and other border agencies, has never been stronger. The plan concludes that this emerging threat environment, together with stronger community awareness of biosecurity, will drive broader engagement and commitment to evolving the national biosecurity system.

The plan outlines the priority activities the department will undertake in 2022 under each of the 9 strategic actions and provides an overview of key work undertaken in 2021. Annual action plans will continue to be released in support of achieving the strategic actions outlined in *Commonwealth Biosecurity 2030*.

Exotic Animal Disease Preparedness Joint Interagency Taskforce

To ensure Australia is fully prepared to respond swiftly to growing biosecurity threats, including FMD and LSD, on 4 August 2022 the Minister for Agriculture, Fisheries and Forestry announced the establishment of a new Commonwealth taskforce.

The *Exotic Animal Disease Preparedness Joint Interagency Taskforce* is co chaired by a senior official from the department and the Director General of Emergency Management Australia (EMA). It includes officials from the Australian Defence Force, Australian Border Force and AHA.

The taskforce brings together experts in biosecurity and animal health, along with experts in disaster management, to work with states, territories and industry.

The taskforce was established on 5 August and will report to the Minister by 5 September 2022, providing advice on any additional measures that need to be taken to strengthen our biosecurity response.

In addition to the Joint Interagency Taskforce, in August 2022 the department established the Agriculture Policy Taskforce to advise the Secretary regarding preparedness for a nationally significant exotic animal disease outbreak, while not detracting from the surge of frontline biosecurity services to address current risks.

Conclusion

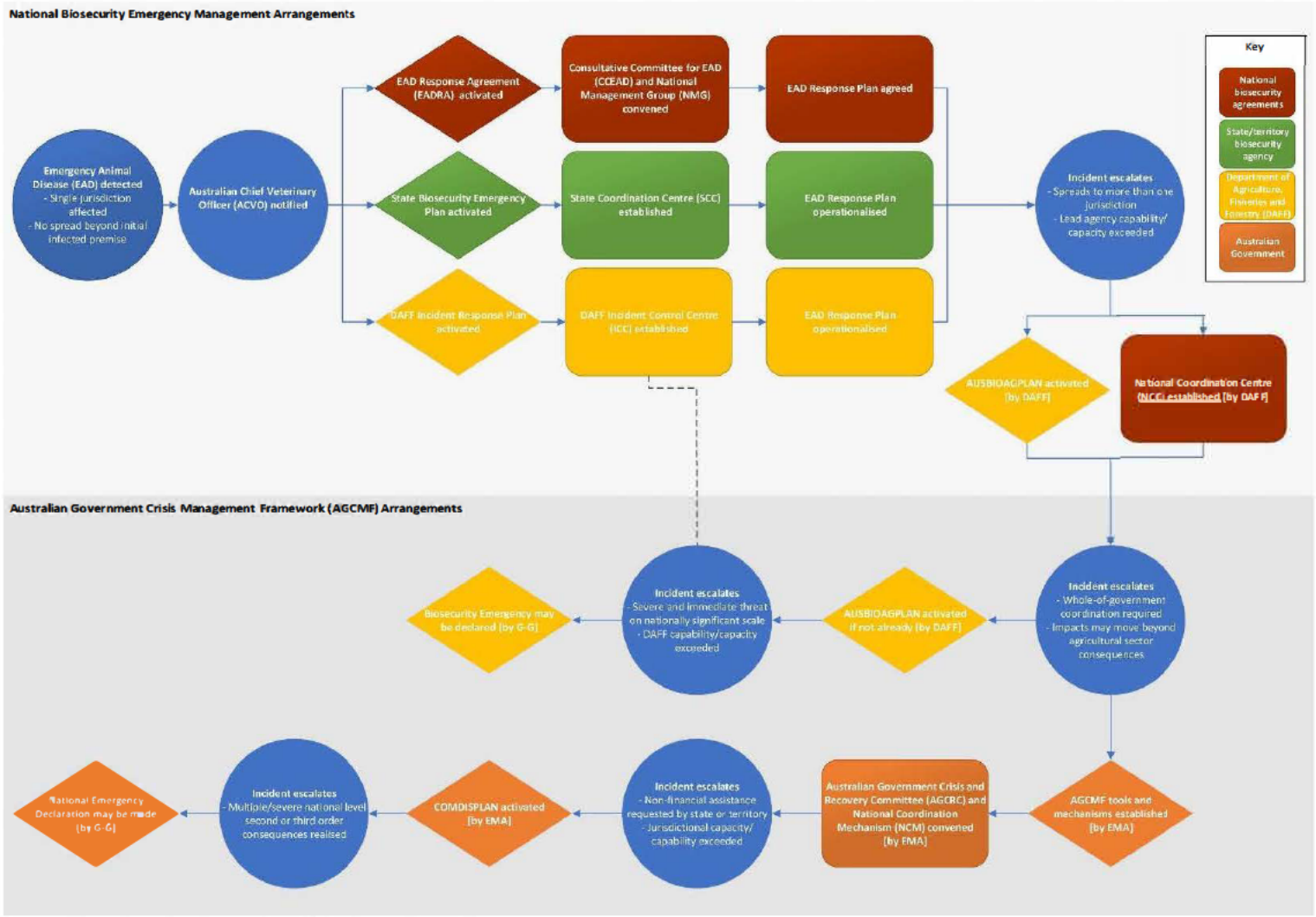
Australia has a world leading biosecurity system that has kept our country free from many of the pests and diseases that are impacting other countries, including FMD and LSD. It is a system that has been built on the foundations established from its formalisation in the Constitution, the introduction of the Quarantine Act in 1908 and through to the commencement of the more recent Biosecurity Act in June 2016. It is a system that is constantly evolving and adapting to changing risks that threaten our $83.1 billion in annual agricultural production (2021–22) and $65.9 billion in agricultural exports (2022–23 forecast).

Our biosecurity system takes a multilayered defence approach that creates a net which seeks to keep out harmful pests and diseases whilst allowing for the safe movement of goods and people across our border. Although the Commonwealth plays a central role in managing biosecurity, the strength of the system is based on the principle of shared responsibility. The Commonwealth works closely with state and territory governments, importers, exporters, producers, supply chain and logistics businesses, First Nations Traditional Owners, veterinarians, park rangers, landowners, farmers, entomologists, travellers and the broader community. All of these stakeholders are the beneficiaries of a strong system and play a role in protecting Australia from biosecurity risks.

The recent measures introduced by the government in response to the increased risk of FMD and LSD are a demonstration of the agility and responsiveness of the system we have in place. The actions taken in response to the unfortunate incursion of Varroa mite in NSW demonstrates the ability of governments and industry to quickly agree and implement appropriate plans in response to an outbreak.

The department is alert to the fact that Australia's biosecurity risk profile is continuing to change as our world faces the challenges of climate change and the increased movement of goods and people. The Australian Government's commitment to implement a sustainable funding mechanism will go directly to strengthening Australia's biosecurity system and allow it to continue to evolve to support our trade and protect our animals, plants, environment and the Australian community.

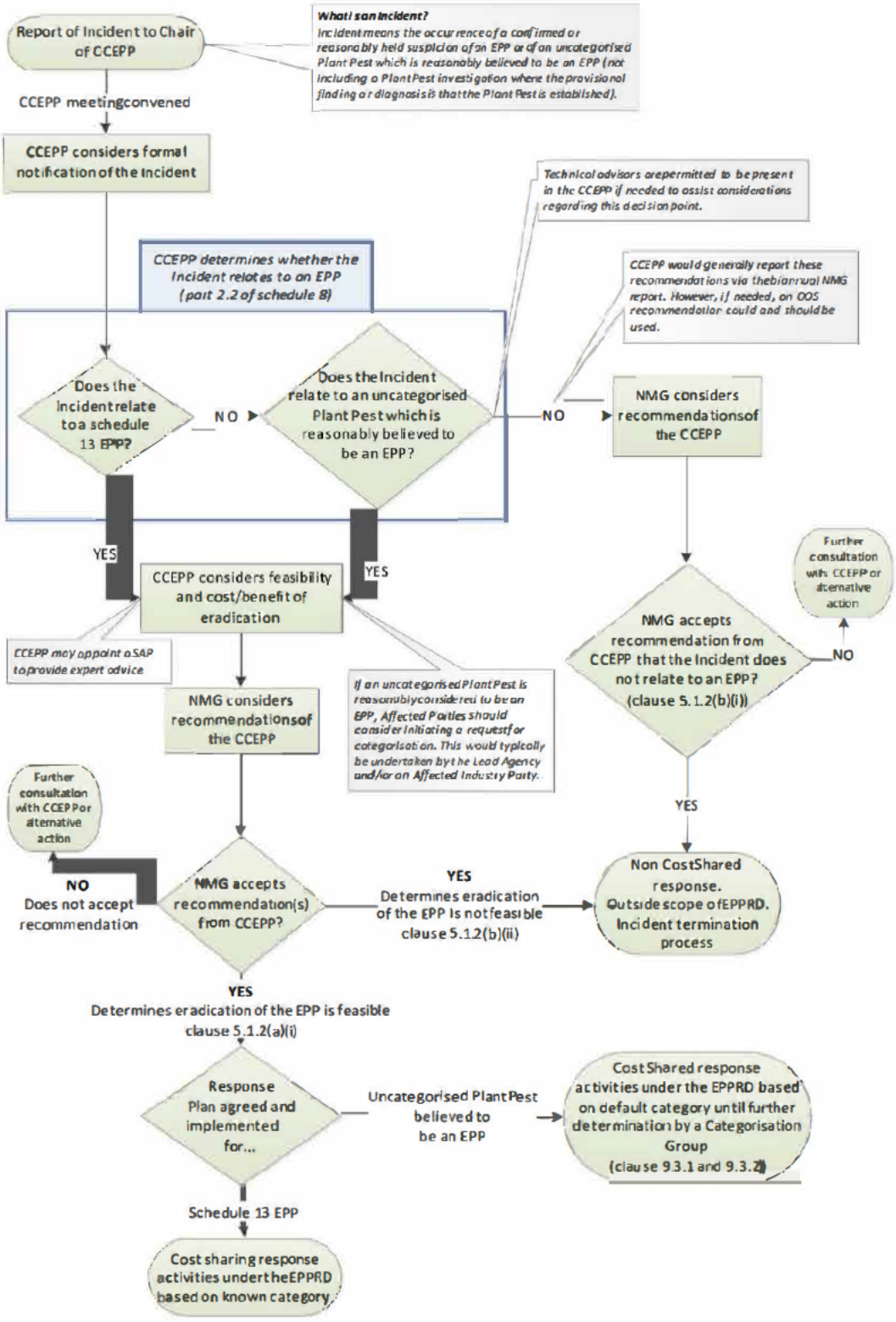
Appendix A: Emergency Animal Disease Response Activation



Source: Department of Agriculture, Fisheries and Forestry

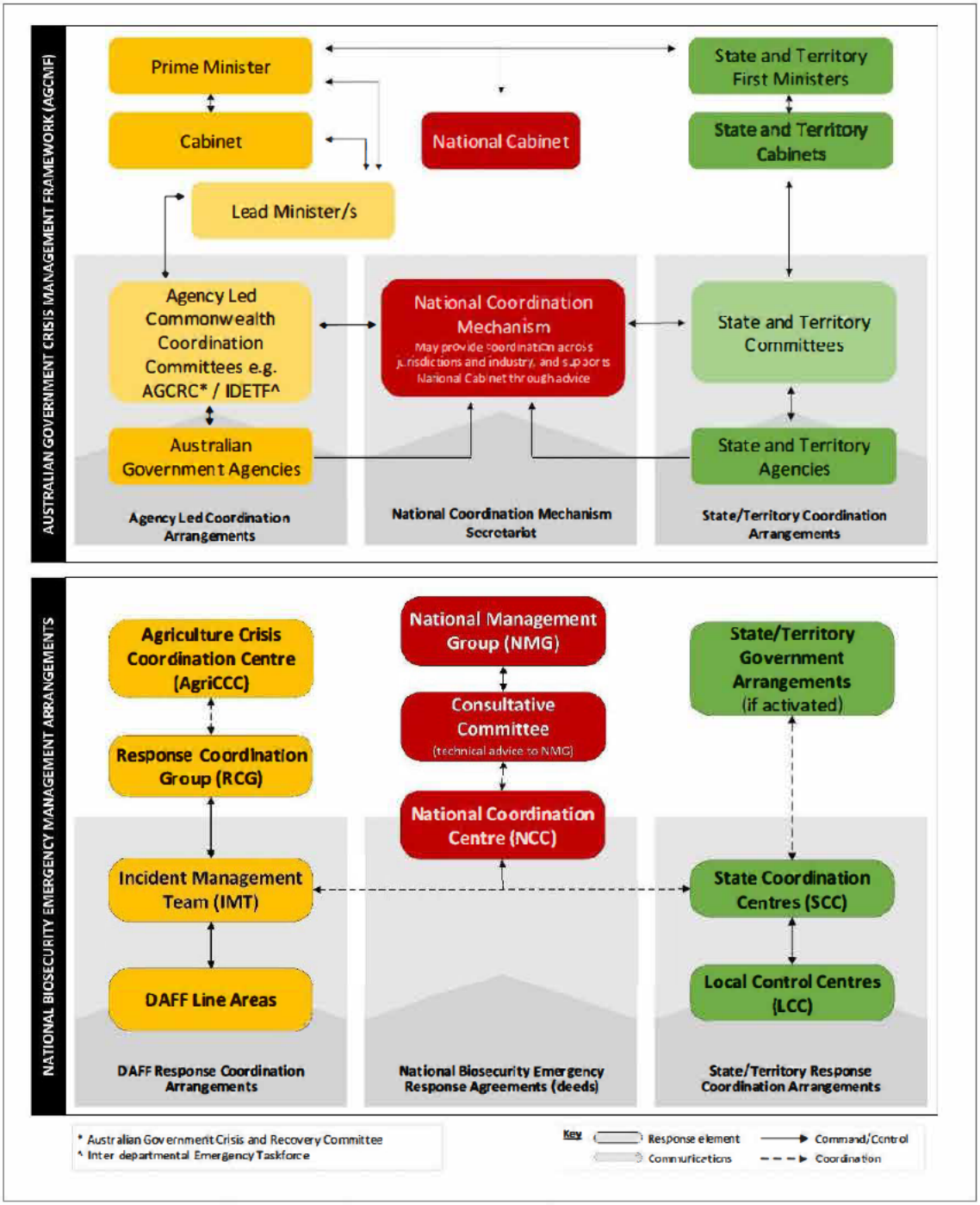
Appendix B: Phases of an EPP response

The key decision points for the Consultative Committee on Emergency Plant Pests (CCEPP) and the National Emergency Plant Pest Management Group (NMG) during the investigation and alert phase of a response to an incident.



Source: Australian Emergency Plant Pest Response Plan (PLANTPLAN)

Appendix C: National Biosecurity System linkage to Australian Government Crisis Management Framework



Source: Australian Government Biosecurity and Agricultural Response Plan

Appendix D: Status of implementation of IGB and ANAO report recommendations

Status summary of Inspectors-General review recommendations

(reviews conducted since 2016 IGB establishment under Biosecurity legislation)

Inspector-General review title	IGB Signature date	Total number	Number closed	Number in progress*
Efficacy and adequacy of department's X-ray scanning and detector dog screening techniques to prevent entry of biosecurity risk material into Australia	July 2022	14	0	14
Assurance review for arrangements to import live lumpy skin disease virus to CSIRO's Australian Centre for Disease Preparedness. **(Both recommendations for noting only)**	July 2022	2	2	0
Effectiveness of preventive biosecurity arrangements to mitigate the risk of entry into Australia of the serious plant pest *Xylella fastidiosa*	June 2022	14	0	14
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	22	20
Adequacy of department's operational model to effectively mitigate biosecurity risks in evolving risk and business environments	February 2021	19	1**	18
Biosecurity risk management of international express airfreight pathway for non-commercial consignments	July 2020	25	17	8
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	9	4
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	8	1
Uncooked prawn imports: effectiveness of biosecurity controls	December 2017	22	19	3
Review of DAWR management of biosecurity risks posed by invasive vector mosquitoes	July 2016	11	11	0
Totals		**246**	**137**	**109**

Note: The figures for the recommendations are recorded as at 12 August 2022.

* A large number of open recommendations involve work to fundamentally shift and improve regulatory practice which will take some time to complete.
** This recommendation was directed to the IGB rather than the department.

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 (42 of 2020-21)	June 2021	8***	0	8
Human Biosecurity for International Air Travellers during COVID-19 (20 of 2021-22)	March 2022	3	0	3
Totals		**11**	**0**	**11**

*** Four recommendations are in the final stages of closure.

Appendix E: Australian Government response to outbreaks of FMD and LSD in Indonesia and Varroa mite within Australia in 2022

2022

March

- **2** ✓ Indonesia notifies World Organisation for Animal Health (WOAH) of **outbreak of LSD** in Riau province, Sumatra
  ✓ Indonesia writes to Australia Indonesia Health Security Partnership **seeking general assistance** with LSD outbreak
- **15** ✓ ACVO virtual meeting with Indonesian Ministry of Agriculture
- **23** ✓ ACVO visit to Indonesia

April

- **7** ✓ DFAT (AIHSP) letter to Indonesia offering to purchase LSD vaccine and provide communications support

May

- **6** ✓ **Informal reports** of FMD in Indonesia: Department notified MO, AHC, NBC; industry elevated preparedness
- **9** ✓ Indonesia **officially notifies WOAH** of FMD outbreak
  ✓ Minister and Shadow Minister for Agriculture briefed by the Department
  ✓ Department-issued media release of FMD in Indonesia
- **11** ✓ Letter from ACVO to Indonesia **offering support**
  ✓ Department issues **import advisory notice** for changes to import conditions for dairy products, dried meat products and peat from Indonesia
- **12** ✓ Secretary phone call with the Indonesian Ambassador
- **16** ✓ Letter from Minister Littleproud to Indonesian Minister Limpo
- **30** ✓ ACVO / DCVO visit Indonesia

June

- **1** ✓ Minister Watt sworn in and briefed on biosecurity
- **2** ✓ ACVO briefs Minister Watt on FMD/LSD threats and outcomes of visit to Indonesia
- **6** ✓ **PM in Indonesia** for leaders meeting
- **22** ✓ **Suspect Varroa mites detected** in sentinel beehives at the Port of Newcastle
  ✓ NSW activates State Control Centre and notifies Consultative Committee on Emergency Plant Pests. Emergency Plant Pest Response Deed triggered.
- **24** ✓ The **WOAH is notified** of the Varroa mite detection
  ✓ An Emergency Order by NSW establishes quarantine zones around infested premises
- **28 – 30** ✓ SA, QLD and VIC put in movement control orders for bees and bee materials
- **29** ✓ A/g ACVO letter to Indonesia confirming expert for vaccines and offer of deployment of Australian vets

July

- **4** ✓ **Confirmation** of FMD in Bali
- **6** ✓ Ministerial media release announcing FMD in Bali
  ✓ ACVO letter to Indonesia confirming details of vaccines
  ✓ **Increased biosecurity measures** at the Australian border, including relocation of biosecurity detector dogs, additional signage and informational material, expanded social media campaigns, additional training of airport biosecurity staff, and increased mail profiling and inspections
- **7** ✓ **Minister-hosted roundtables** with the Biosecurity Advisory Panel
  ✓ Biosecurity officers commence boarding planes on arrival from Indonesia with **targeted messaging**
- **8** ✓ **National Management Group** meet and **endorse** the Varroa Mite Response Plan
- **9** ✓ **$18m compensation package** announced for registered beekeepers affected by the **Varroa mite** outbreak
- **13 – 15** ✓ Minister Watt visit to Indonesia
- **14** ✓ Letter from Indonesia **accepting** FMD vaccine expert and in principle acceptance of vaccines
  ✓ **$1.5m** funding announced to **support Indonesia's response** to FMD, including 1m FMD vaccine doses
  ✓ National Management Group meet to agree detail of Varroa mite response funding arrangements
- **15** ✓ **$14m biosecurity package** announced – will bolster Australia's frontline defence and provide more technical support for countries battling FMD and LSD
- **20** ✓ Agriculture Minister's meeting with a **focus on FMD**
- **22** ✓ Determination by Director of Biosecurity declaring the establishment of **Biosecurity Response Zones** (BRZs) at international airports received direct flights from Indonesia
  ✓ National Coordination Mechanism meeting held to **update** the states and territories on the FMD situation
- **26** ✓ Letter from Indonesia received **confirming** requirements for acceptance of **1m FMD vaccine doses**

August

- **5** ✓ **Exotic Animal Disease Preparedness Taskforce** established
- **9** ✓ Inaugural **National Biosecurity Strategy** released
  ✓ **$10m biosecurity cooperation** package to assist Indonesia announced
- **11** ✓ Meeting between Minister for Agriculture and his New Zealand counterpart to discuss FMD