The Senate

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

December 2022

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List of Recommendations

Recommendation 1

2.77 The committee recommends that the Department of Agriculture, Fisheries and Forestry and the New South Wales Department of Primary Industries, publicly report on findings from their investigations into the origin of the varroa mite incursion in the Williamtown area.

Recommendation 2

3.21 The committee recommends that the Department of Agriculture, Fisheries and Forestry review its food import risk frameworks to ensure that they are fit for purpose and that decisions under the frameworks are accelerated where required.

Recommendation 3

3.56 The committee recommends that the Department of Agriculture, Fisheries and Forestry prioritises the enhancement of screening and assessment systems to facilitate the timely processing of mail and cargo entering Australia.

Recommendation 4

3.57 The committee recommends that the Australian Government consults with freight, shipping, port and biosecurity stakeholders, including Australia Post, to develop priorities for the implementation and funding of new and emerging technologies into mail and cargo biosecurity screening systems.

Recommendation 5

4.34 The committee recommends the Australian Government, in partnership with industry and state and territory governments, commits to long-term and sustainable funding to the National Bee Pest Surveillance Program.

Recommendation 6

4.35 The committee recommends that the Australian Government reviews the balance between sentinel hives and bait hives as part of the National Bee Pest Surveillance Program.

Recommendation 7

4.42 The committee recommends the Australian Government, in partnership with other stakeholders, ensures that adequate funding is provided to the National Bee Biosecurity Program.

Recommendation 8

4.54 The committee recommends that the Department of Agriculture, Fisheries and Forestry coordinate a national response to control and manage feral and invasive species to safeguard Australia's biodiversity and environmental biosecurity.

Recommendation 9

5.38 The committee recommends that Animal Health Australia and Plant Health Australia broaden their consultations to include all stakeholders from across the supply chain, including transport and livestock transport industries and the retail sector.

Recommendation 10

5.39 The committee recommends that the Australian Government work with agencies and industry bodies to ensure appropriate governance and reporting structures are in place to ensure that recommendations arising from simulations and exercises are implemented in a timely way.

Recommendation 11

5.66 The committee recommends that the Australian Government increase funding to Animal Health Australia and Plant Health Australia to enable them to appropriately maintain, review and develop funding and compensation arrangements.

Recommendation 12

5.67 The committee recommends that the Department of Agriculture, Fisheries and Forestry consults with the honey bee industry to consider the inclusion of pollination services under the Emergency Plant Pest Response Deed Levy guidelines and legislation.

Recommendation 13

5.89 The committee recommends that the Australian Government conduct a review of national livestock traceability funding and co-funding mechanisms, to ensure they are sustainable, comprehensive, and equitable.

Recommendation 14

5.90 The committee recommends that the Australian Government establish a statutory or regulatory authority responsible for managing Australian livestock traceability.

Recommendation 15

5.91 The committee recommends the Department of Agriculture, Fisheries and Forestry, in partnership with state and territory governments and the honey bee industry, conduct a feasibility study for a commercial bee hive traceability system.

Recommendation 16

5.114 The committee recommends that the Australian Government and Animal Health Australia establish a lumpy skin disease vaccine bank for use by Australia in the event of an incursion.

Recommendation 17

5.115 The committee recommends that the Australian Government negotiate with the United Kingdom Government the ability for researchers from the Australian Centre for Disease Preparedness to access and conduct research on Australia's bank of foot-and-mouth virus vaccine in the United Kingdom.

Recommendation 18

5.127 The committee recommends that the Australian Government coordinate the implementation of a national approach to interstate border control and permitting, and use of a national movement permitting system.

Recommendation 19

5.128 The committee recommends that the Australian Government coordinate the development of a national network plan and sustainable funding for the establishment of livestock transport infrastructure at rest stops on key livestock freight routes around Australia.

Recommendation 20

5.129 The committee recommends that the Australian Government conduct industry consultation to determine the feasibility of a Road Transport Management Deposit Scheme.

Recommendation 21

6.71 The committee recommends that the Australian federal, state and territory governments commit to a sustainable biosecurity funding model to reflect the changing risk profile of pests and diseases to Australia's agriculture and environment and overall way of life.

Recommendation 22

6.74 The committee recommends the Australian Government, in partnership with animal, plant and environment biosecurity stakeholders, conducts a review of how biosecurity funding is allocated to ensure that it is adequate and equitable.

Recommendation 23

6.87 The committee recommends that the Department of Agriculture, Fisheries and Forestry incorporate an audit of existing skills and gaps in the development of the national biosecurity workforce strategy.

Recommendation 24

6.88 The committee recommends that the Australian Government support and prioritise biosecurity officers' capacity and capability development to improve border responses and reduce delays for passengers and importers, and improve Australia's overall biosecurity readiness.

Recommendation 25

6.90 The committee recommends that the Australian Government work with relevant industry bodies to design and implement measures to improve the capacity and capability of production animal veterinarians, particularly in rural and remote areas, including:

- **enhancement of veterinarian attraction and retention strategies and initiatives such as graduate and rural practice incentives;**
- **compensation paid to veterinarians in the event of their involvement in an EAD response; and**
- **increased utilisation of rural and remote veterinarians in surveillance and monitoring activities.**

Recommendation 26

6.103 The committee recommends that government departments, Animal Health Australia and Plant Health Australia consult a wider range of stakeholders from across the supply chain, including the transport and livestock transport sectors and the retail sector.

Recommendation 27

6.113 The committee recommends that the department, in consultation with stakeholders, coordinate the development of a strategy for biosecurity research development and extension which includes:

- **a long-term funding mechanism for biosecurity research;**

- **approaches to identify research, development and extension gaps and national priorities across the biosecurity continuum;**
- **strategies to develop better integrations between industry and research organisations; and**
- **mechanisms to support the commercialisation of research, development and extension outputs.**

Recommendation 28

6.127 The committee recommends that the Department of Agriculture, Fisheries and Forestry coordinate the development of national data and information standards, and sharing protocols in relation to biosecurity.

Recommendation 29

6.129 The committee recommends that Plant Health Australia in partnership with the bee industry and other stakeholders of AUSPestCheck, consider the platform's capability and data sharing arrangements for tracking varroa mite should it become endemic.

Abbreviations & Acronyms

ABA	Amateur Beekeepers Australia
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABF	Australian Border Force
ABFA	Australian Barramundi Farmers' Association
ACDP	Australian Centre for Disease Preparedness
ADF	Australian Defence Force
AGCMF	Australian Government Crisis Management Framework
AgriFutures Australia	Rural Industries Research and Development Corporation
AGSOC	Agriculture Senior Officials Committee
Agvet	agricultural and veterinary [chemicals and medicines]
AHA	Animal Health Australia
AHBIC	Australian Honey Bee Industry Council
AHS	African Horse Sickness
AIHSP	Australia Indonesia Health Security Partnership
AIP-EID	Australia Indonesia Partnership for Emerging Infectious Diseases
ALOP	appropriate level of protection
ALTRA	Australian Livestock and Rural Transporters Association
AMA	Animal Medicines Australia
AMIEU	Australasian Meat Industry Employees' Union
ANAO	Australian National Audit Office
APVMA	Australian Pesticides and Veterinary Medicines Authority
ASF	African Swine Fever
ATSE	Australian Academy of Technology & Engineering
AUSBIOAGPLAN	Australian Government Biosecurity and Agricultural Response Plan
AUSVETPLAN	Australian Veterinary Emergency Plan
AVA	Australian Veterinary Association
AWU	Australian Workers' Union
the Biosecurity Act	Biosecurity Act 2015
BNPB	Badan Nasional Penanggulangan Bencana, Indonesia (National Disaster Mitigation Agency)
CCA	Cattle Council of Australia
CEBRA	Centre of Excellence for Biosecurity Risk Analysis, University of Melbourne
CISS	Centre for Invasive Species Solutions
the Code	Australian Honey Bee Industry Biosecurity Code of Practice (2016)
CPSU	Community and Public Sector Union

CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry (Cwlth)
DAWE	Department of Agriculture, Water and the Environment (Cwlth)
DAWR	Department of Agriculture and Water Resources (Cwlth)
DFAT	Department of Foreign Affairs and Trade
DNA	deoxyribonucleic acid
DPI	NSW Department of Primary Industries
EAD	emergency animal disease
EADRA	Emergency Animal Disease Response Agreement
eDNA	environmental deoxyribonucleic acid
EPP	emergency plant pest
EPPR	emergency plant pest response
EPPRD	Emergency Plant Pest Response Deed
FMD	Foot-and-mouth disease
FRDC	Fisheries Research and Development Corporation
GRDC	Grains Research and Development Corporation
Home Affairs	Department of Home Affairs
Hort Innovation	Horticulture Innovation Australia
IGAB	Intergovernmental Agreement on Biosecurity
IGB	Inspector-General of Biosecurity
ISC	Integrity Systems Company
JEV	Japanese encephalitis virus
LiveCorp	Australian Livestock Export Corporation Limited
LSD	Lumpy skin disease
MLA	Meat and Livestock Australia
mRNA	messenger ribonucleic acid
NABF	Northern Australia Biosecurity Framework
NABS	Northern Australia Biosecurity Strategy 2030
NAQS	Northern Australia Quarantine Strategy
NBBP	National Bee Biosecurity Program
NBC	National Biosecurity Committee
NBPSP	National Bee Pest Surveillance Program
NBS	National Biosecurity Strategy
NEBRA	National Environmental Biosecurity Response Agreement
NFF	National Farmers' Federation
NLIS	National Livestock Identification System
NSW	New South Wales
NSWAA	NSW Apiarists' Association
OIE	Office International des Epizooties, now World Organisation for Animal Health
PC	Productivity Commission

PCR	polymerase chain reaction
PHA	Plant Health Australia
PIF	Plant Industry Forum
PLANTPLAN	Australian Emergency Plant Pest Response Plan
PNG	Papua New Guinea
PRISMA	Promoting Rural Incomes through Support for Markets in Agriculture
QBA	Queensland Beekeepers' Association
QFF	Queensland Farmers' Federation
QLD	Queensland
RAAF	Royal Australian Air Force Base
RD&E	research, development and extension
RDC	Research and Development Corporation/s
RMAC	Red Meat Advisory Council
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SEJ	Structured Expert Judgement/s
UK	United Kingdom
WA DPIRD	Western Australia Department of Primary Industries and Regional Development
WOAH	World Organisation for Animal Health, founded as Office International des Epizooties (OIE)

Chapter 1
Introduction and overview

Referral of the inquiry

1.1 On 28 July 2022, the following matters were referred to the Senate Rural and Regional Affairs and Transport References Committee (the committee) for inquiry and report by 10 October 2022:

(a) the adequacy of Australia 's biosecurity measures and response preparedness, in particular with respect to foot-and-mouth disease (FMD) and varroa mite;
(b) response to and implementation of previous reports into biosecurity; and any related matters.[1]

1.2 On 6 September 2022, the Senate granted an extension of time to report until 20 October 2022,[2] with further extensions then granted to 24 November 2022[3] and 8 December 2022.[4]

Conduct of the inquiry

1.3 The committee advertised the inquiry on its website and invited submissions from a range of relevant stakeholders, including government agencies, industry, community groups and individuals. Details regarding the inquiry and associated documents are available on the committee's webpage.

1.4 The committee received 104 public submissions, including two confidential submissions, plus one supplementary submission which are listed at Appendix 2 and are published on the committee's website.

1.5 The committee held the following public hearings:

- 10 August 2022 Canberra—a half day hearing for key departments and agencies;
- 8 September 2022 Canberra—part day hearing for witnesses providing evidence about varroa mite;
- 11 October 2022 Rockhampton— part day hearing for witnesses providing evidence about FMD;
- 12 October 2022 Newcastle—part day hearing for witnesses providing evidence about varroa mite and FMD;

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1 Senator the Hon Sue Lines, President, *Proof Senate Hansard*, 28 July 2022, p. 23.

2 *Journals of the Senate*, No. 9, 6 September 2022, p. 234.

3 *Journals of the Senate*, No. 13, 26 September 2022, p. 300.

4 *Journals of the Senate*, No. 19, 21 November 2022, p. 569.

- 13 October 2022 Canberra—full day hearing for witnesses providing evidence about FMD; and
- 15 November 2022 Canberra—half day hearing for witnesses providing evidence about the biosecurity system, varroa mite and FMD.

1.6 A list of the witnesses who provided evidence at the public hearing is available at Appendix 3.

Acknowledgments

1.7 The committee thanks those individuals and organisations who contributed to this inquiry by preparing written submissions and giving evidence at the public hearing.

References to Hansard

1.8 In this report, references to Committee Hansard are to proof transcripts. Page numbers may vary between proof and official transcripts.

Structure of the report

1.9 This report addresses the committee's terms of reference and comprises six chapters, including this introductory and overview chapter, with the remaining chapters broadly discussing issues along the incursion continuum, moving from offshore to onshore measures as follows:

- **Chapter 2 Current threats and incursions, FMD, LSD and varroa mite**—outlines current threats from FMD and lumpy skin disease (LSD) and details Australia's response to the 2022 varroa mite incursion in New South Wales (NSW). The chapter includes an introduction to the diseases and mites, and discusses risks and impacts for Australia;
- **Chapter 3 Incursion prevention measures**—outlines incursion prevention measures, in particular offshore and at border measures taken to prevent diseases and pests entering Australia;
- **Chapter 4 On-shore surveillance**—discusses on-shore surveillance measures including for animal diseases and in relation to bees and bee pests, including the effectiveness of these measures;
- **Chapter 5 Incursion preparedness**—discusses Australia's preparedness for a disease or pest incursion preparedness, with a particular focus on the implementation of measures aimed at preventing the spread of FMD, LSD and varroa mite;
- **Chapter 6 Reforming the biosecurity system**—outlines previous reviews into Australia's biosecurity system, and the government's response to these reviews and recommendations. Broad issues which cut across the continuum, such as funding and the need for urgency, are also discussed in this chapter.

Key components of Australia's biosecurity system

1.10 Australia's geography and multi-layered biosecurity system has enabled it to remain free of some of the world's most invasive pests and diseases. The Australian Strategic Policy Institute's *The Strategist* detailed the critical nature of Australia's biosecurity system:

> Australia 's biosecurity system protects our economy, our environment and the way of life of all Australians. The consequences of realised biosecurity risks rate as high as those from climate change and geopolitical volatility and could be more disruptive than a global pandemic. Those closest to the biosecurity system believe that it should be classed as part of Australia 's critical infrastructure, a system of national significance.[5]

1.11 Responsibilities for plant and animal biosecurity are shared, as illustrated in Figure 1.1. At the national border they rest with the Commonwealth government, with state and territory governments responsible for biosecurity within their jurisdictions, and preparedness and response measures developed in partnership with industry, producers, research organisations, agricultural and environmental groups, and First Nations communities and individuals.[6]

Commonwealth legislation, policy and frameworks

1.12 DAFF administers the *Biosecurity Act 2015* (the Biosecurity Act), *Export Control Act 1982*, *Imported Food Control Act 1992* and various other Acts in order to protect Australia's animal, plant and human health status and to maintain market access for Australian food and other agricultural exports.[7] In its submission, DAFF outlined the premise of the Biosecurity Act:

> 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 [appropriate level of protection], while also having powers to assess, manage and identify pest or disease incursions within Australian territory.[8]

1.13 The Biosecurity Act defines Australia's ALOP as very low but not zero, with the Beale review (2007) recognising that it is neither possible, nor desirable, to have zero risk.[9]

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5 Andrew Henderson, Australian Strategic Policy Institute, 'Is Australia 's biosecurity system ready for foot-and-mouth disease?' *The Strategist*, 15 July 2022 (accessed 20 September 2022).

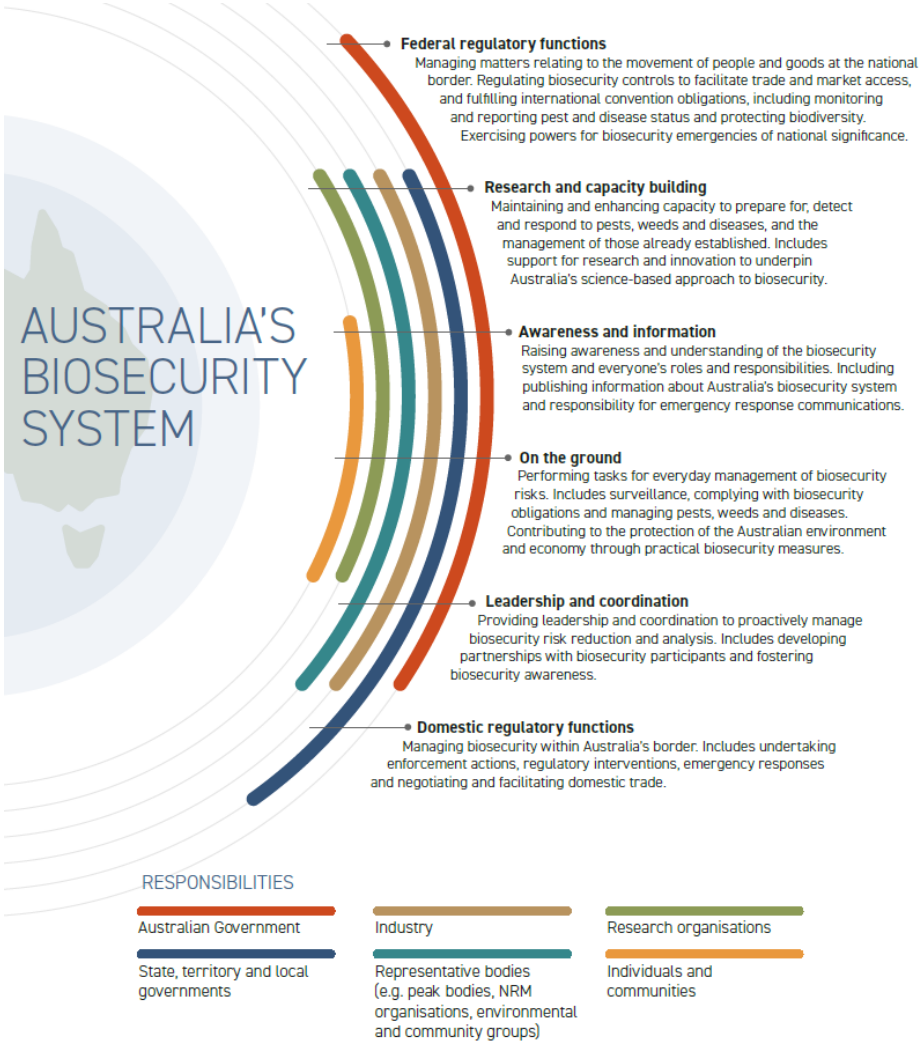
6 Department of Agriculture, Fisheries and Forestry (DAFF), *Biosecurity in Australia*, 29 July 2021 (accessed 24 August 2022); DAFF, *National Biosecurity Strategy*, 2022, pp. 13–14 (accessed 24 August 2022).

7 DAFF, *Legislation*, 9 August 2022 (accessed 24 August 2022).

8 DAFF, *Submission 73*, p. 5.

9 DAFF, *Submission 73*, p. 1.

Figure 1.1 Responsibilities within Australia's biosecurity system



1.14 *The Department of Agriculture, Fisheries and Forestry (DAFF), National Biosecurity Strategy 2022–2032*, 2022, *p. 15 (accessed 29 August 2022).*

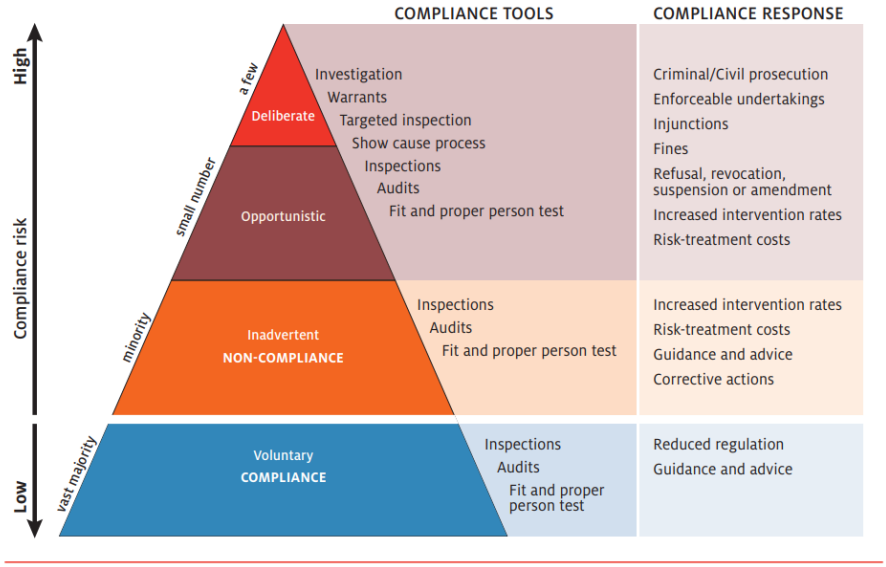
1.15 The Biosecurity Act and regulations also outline offences and penalties that apply if they are not complied with, with maximum penalties increased in 2021.[10] The department's approach to compliance management is summarised in Figure 1.2, with client behaviour affecting the response.[11] Penalties vary, with DAFF advising that 'penalties for those who do the wrong thing include imprisonment for up to 10 years or a fine of up to $1,110,000 (or $5,550,000 for corporate entities) or both.'[12]

[10] DAFF, *Submission 73*, p. 6; Australian Dairy Farmers, *Submission 56*, Attachment 1, p. 8.

[11] Department of Agriculture and Water Resources (DAWR), *Biosecurity compliance statement*, April 2016, p. 4 (accessed 16 September 2022).

[12] DAFF, Biosecurity vigilance brought to the fore', *Media release*, 20 July 2022 (accessed 16 September 2022).

Figure 1.2 DAFF's differentiated biosecurity compliance approach



DAWR, Biosecurity compliance statement, April 2016, p. 3 (accessed 16 September 2022).

National Biosecurity Strategy

1.16 The National Biosecurity Strategy (NBS), released on 9 August 2022, takes a risk-based approach, and sets out six priority areas for government over the next ten years:

- shared biosecurity culture;
- highly skilled workforce;
- sustainable investment;
- stronger partnerships;
- coordinated preparedness and response; and
- integration supported by technology, research, and data.[13]

1.17 The NBS will be complemented by a forthcoming implementation plan, and national action plan to ensure accountability.[14]

Commonwealth Biosecurity 2030

1.18 Commonwealth Biosecurity 2030 was released in 2021 and provides a strategic and practical roadmap for protecting Australia's biosecurity across five key areas:

- regulation;
- funding;
- governance;
- people; and
- technology.[15]

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13 DAFF, *National Biosecurity Strategy*, 2022, pp. 7 and 29 (accessed 24 August 2022).

14 DAFF, *National Biosecurity Strategy*, 2022, p. 34 (accessed 24 August 2022); DAFF, *Submission 73*, pp. 56–57.

Northern Australia

1.19 The Northern Australia Quarantine Strategy(NAQS) was established in 1989 to provide early warning of incursions and address particular biosecurity risks affecting the region. It has been operated solely by the Australian Government since 2000. Its role is to manage biosecurity border movements, identify unique biosecurity risks and collaborate on surveillance and capacity building in northern Australian and neighbouring countries.[16]

1.20 The Northern Australia Biosecurity Strategy 2030 establishes a framework for jurisdictional collaboration, including with industry and community groups, and aims to minimise biosecurity risks over the next 10 years. In March 2022, the Australian Government approved $38 million to support the strategy.[17]

1.21 The Northern Australia Biosecurity Framework (NABF) encourages collaboration between communities, industries and governments to safeguard biosecurity into the future. It is focussed on developing and sharing information on biosecurity prevention, detection and management. The framework encourages cooperation between governments, industry and research institutions on tropical biosecurity, and the sharing of resources to ensure timely and well-informed decisions about tropical biosecurity.[18]

National Biosecurity Statement

1.22 The National Biosecurity Statement, developed in 2018, outlined a national vision and goals, roles and responsibilities, priorities and principles for managing biosecurity risk.[19]

National Lumpy Skin Action Plan

1.23 On 13 October 2022, the Australian Government released the first national action plan for LSD, including eight objectives and 27 actions aimed at aims to strengthening Australia's ability to prevent, detect, prepare for and respond to any LSD incursion.[20]

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15 DAFF, *Submission 73*, p. 58.

16 DAFF, *National Biosecurity Strategy*, 2022, p. 26 (accessed 24 August 2022); DAFF, *Northern Australia Quarantine Strategy (NAQS)*, 4 February 2020 (accessed 24 August 2022); DAFF, *Submission 73*, pp. 21–22.

17 DAFF, *Northern Australia Biosecurity Strategy 2030*, 19 January 2022 (accessed 30 August 2022); DAFF, *Submission 73*, p. 22.

18 DAFF, *Northern Australia Biosecurity Framework*, 19 January 2022 (accessed 30 August 2022).

19 DAFF, *National Biosecurity Strategy*, 2022, p. 38 (accessed 24 August 2022); DAFF, *National Biosecurity Statement*, 10 November 2020 (accessed 25 August 2022).

20 Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry, Australia's first national lumpy skin disease action plan launched', *Media release*, 13 October 2022 (accessed 19 October 2022).

International obligations

1.24 Australia has a range of international rights and obligations in relation to biosecurity, which enable it to establish appropriate sanitary and biosecurity measures in relation to:

- the international movement of goods;
- ensuring animal welfare;
- preventing global disease transmission;
- reporting of notifiable diseases;
- food standards; and
- conservation of biological diversity.

1.25 These activities occur through a range of bodies and instruments including the World Trade Organisation, World Organisation for Animal Health, the International Animal Health Emergency Reserve Arrangement, and the International Plant Protection Convention.[21]

Key bodies

Department of Agriculture, Fisheries and Forestry

1.26 DAFF has the central role in managing biosecurity, undertaking policy, response, compliance and enforcement, regulatory and operational activities. It works in conjunction with the states, territories and other stakeholders on emergency response planning, coordination, as well as with importers, exporters, travellers, producers, supply chain and logistics businesses, and the community to protect Australia from biosecurity risks.[22] DAFF coordinates with other Federal Government departments to manage Australia's biosecurity risks.[23]

1.27 The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) is part of DAFF and undertakes a range of research, including biosecurity research. In 2013, and updated in 2022, ABARES prepared a report into the direct economic impacts of an FMD outbreak in Australia.[24]

National Biosecurity Committee

1.28 Established by the Intergovernmental Agreement on Biosecurity (IGAB), the National Biosecurity Committee (NBC) manages a national, strategic approach to biosecurity threats, provides advice to the Agriculture Senior Officials Committee (AGSOC) on national biosecurity issues and progresses the implementation of the IGAB. It is supported by several sub-committees,

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21 DAFF, *Submission 73*, pp. 11–12.

22 DAFF, *Submission 73*, p. 2.

23 DAFF, *Submission 73*, p. 7.

24 DAFF, *Submission 73*, p. 28.

ongoing expert groups, and short-term, task-specific groups.[25] Outcomes from the NBC also feed into the National Biosecurity Forum, held in conjunction with industry, producers, environmental and community groups.[26]

1.29 Membership comprises senior officials from the Australian Government, state and territory governments, primary industry and/or environment agencies. Animal Health Australia (AHA), Plant Health Australia (PHA), the Australian Local Government Association, and the New Zealand Government may be invited as observers.[27]

Northern Australian Coordination Network

1.30 On 13 October 2022, the Australian and Northern Territory Governments jointly announced the establishment of the Northern Australian Coordination Network. The network aims to bring together the Australian, Northern Territory, Queensland and Western Australian governments, as well as northern livestock industry associations to help manage the threat of LSD and FMD, through improved surveillance and preparedness coordination. It has been established for an initial two-year period and will deliver on-the ground activities in partnership with industry.[28]

Exotic Animal Disease Preparedness Joint Interagency Taskforce

1.31 Announced on 4 August 2022, the taskforce brought together officials from DAFF, Emergency Management Australia, the Australian Defence Force, Australian Border Force (ABF) and AHA, with expertise in biosecurity, animal health, and disaster management to work with states, territories and industry.[29] The taskforce reported to the Minister on 5 September 2022, with further discussion of their findings in Chapter Six. The taskforce has been transitioned into DAFF's Animal Strategy and Coordination branch to support an enduring capacity to respond to an EAD outbreak.[30]

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[25] DAFF, *National Biosecurity Strategy*, 2022, p. 38 (accessed 24 August 2022); DAFF, *Submission 73*, p. 8.

[26] DAFF, *Submission 73*, p. 7.

[27] DAFF, *Submission 73*, p. 8.

[28] Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry and the Hon Paul Kirby MLA, Northern Territory Minister for Agribusiness and Fisheries 'Joint media release: biosecurity boost for Northern Australia', *Media release*, 13 October 2022 (accessed 19 October 2022).

[29] DAFF, *Submission 73*, p. 59; DAFF and Department of Home Affairs (Home Affairs), *Joint Interagency Taskforce EAD Preparedness: recommendations*, 5 September 2022 (accessed 16 September 2022); DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. v and ix (accessed 28 September 2022).

[30] DAFF, *Submission 73*, p. 59; *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 31 (accessed 28 September 2022).

Inspector-General of Biosecurity

1.32 Established under the Biosecurity Act, the Inspector-General of Biosecurity (IGB) has powers to review the performance of functions and exercise of powers by biosecurity officials under the Act. The role is intended to enhance the integrity of Australia's biosecurity systems through independent evaluation and performance review, independent of the Minister and Director of Biosecurity.[31] Its jurisdiction includes 'pre-border (off-shore), at the border and peri[around]-border' biosecurity issues. It does *not* extend to post-border issues, which are generally the responsibility of states and territories and other stakeholders, including 'post-border eradication efforts in response to an incursion'.[32]

1.33 The IGB has made 246 recommendations across 20 reviews to date, with 137 of these actioned and closed and 109 remaining open.[33] Previous reviews and recommendations arising are discussed further in Chapter Six.

Department of Foreign Affairs and Trade

1.34 The Department of Foreign Affairs and Trade (DFAT) promotes and protects Australia's international interests, including by collaborating with other governments and bodies, including in Indonesia, to improve food security and safeguard biosecurity, while safeguarding trade and security interests.[34]

1.35 DFAT is assisting with a number of support measures in Indonesia, including in relation to vaccine purchase and distribution and the provision of technical assistance, as well as supporting Australia's biosecurity response.[35]

Department of Home Affairs

1.36 The Department of Home Affairs, including the ABF, is working closely with DAFF to enhance Australia's response preparedness and border measures to minimise the risk of an FMD incursion. While it does not have powers to enforce measures under the Biosecurity Act it works with DAFF to implement biosecurity measures at our international border. This has included enhanced information and expertise sharing, enhanced traveller profiling and risk

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31 DAFF, *Submission 73*, p. 54.

32 Inspector-General of Biosecurity (IGB), *Submission 29*, p. 1.

33 DAFF, *Submission 73*, p. 54.

34 Department of Foreign Affairs and Trade (DFAT), *Submission 15*, pp. 1–2; DFAT, *Development issues* (accessed 12 September 2022); DFAT, *Agricultural development and food security* (accessed 12 September 2022); DFAT, *Agricultural development cooperation fact sheet*, May 2021 (accessed 12 September 2022).

35 DFAT, *Submission 15*, pp. 1–2; DFAT, *Development issues* (accessed 12 September 2022); DFAT, *Agricultural development and food security* (accessed 12 September 2022); DFAT, *Agricultural development cooperation fact sheet*, May 2021 (accessed 12 September 2022).

assessment of travellers, management of priorities and traveller volumes, and increased mail screening.[36]

1.37 The department also participates in a number of whole-of-government response for a to coordinate Australia's response preparedness.[37]

Australian National Audit Office

1.38 The Australian National Audit Office (ANAO) regularly reviews aspects of Australia's biosecurity system, with DAFF receiving 11 recommendations from two audits since December 2017.[38]

Research organisations

Commonwealth Scientific and Industrial Research Organisation

1.39 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) aims to deliver research and solutions to ensure that Australia is prepared for current and emerging biosecurity risks.[39]

1.40 The Australian Centre for Disease Preparedness (ACDP) is part of the CSIRO. It is a high-containment facility designed to allow scientific research into dangerous infectious agents, undertakes quality-assured diagnostic tests, and issues advice on exotic and emerging disease issues including in relation to effective disease response strategies, and vaccine effectiveness. It supports animal health laboratory capacity in disease detection and control throughout the Asia-Pacific and including Indonesia.[40]

Rural Research and Development Corporations

1.41 There are 15 Rural Research and Development Corporations (RDCs) which help to drive agricultural innovation. They are comprised of both Commonwealth statutory bodies and industry-owned companies. Of relevance to this inquiry are:

- Australian Livestock Export Corporation Limited (LiveCorp);
- Australian Meat Processor Corporation;
- Australian Pork Limited;
- Dairy Australia Limited;
- Grains Research and Development Corporation (GRDC);
- Horticulture Innovation Australia Limited (Hort Innovation);
- Meat and Livestock Australia (MLA); and

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36 Home Affairs, *Submission 43*, pp. 2–3.

37 Home Affairs, *Submission 43*, p. 3.

38 DAFF, *Submission 73*, p. 55.

39 DAFF, *Submission 73*, p. 28.

40 DAFF, *Submission 73*, pp. 28–29.

- Rural Industries Research and Development Corporation (trading as AgriFutures Australia).

Centre for Invasive Species Solutions

1.42 The Centre for Invasive Species Solutions (CISS) commenced as a cooperative research centre in 2005 and now operates as a not-for-profit, member-based organisation, partly funded by government, formed to address the impact of invasive plants and animals across Australia. The Centre's work encompasses research, development and community engagement in biosecurity surveillance, biocontrol and technologies and systems. CISS collaborates with scientists, governments, universities and peak industry, environmental and natural resource management groups.[41]

Tertiary organisations

1.43 A number of tertiary institutions play a significant role in biosecurity research, development and teaching. Of note are:

- Charles Sturt University—including the Biosecurity Training Centre based in Wagga Wagga, established in partnership with DAFF. It provides front line biosecurity training for DAFF staff, as well as more specialist training.[42]
- University of Melbourne—including the Centre of Excellence for Biosecurity Risk Analysis (CEBRA). It undertakes a variety of research and development, including in the development of risk analysis tools.[43] CEBRA recently facilitated the Structured Expert Judgements (SEJs) for FMD and LSD.

Industry related bodies

1.44 Industry bodies, including peak bodies, across the agricultural, livestock, meat, plant and bee sectors, play a valuable role in Australia's biosecurity system—they publish, in consultation with their members, an array of ambitious and considered strategies and position papers that seek to make a case for reform, action and investment.[44]

Animal Health Australia and Plant Health Australia

1.45 Key players include Animal Health Australia (AHA)and Plant Health Australia (PHA), both of which are not-for-profit companies created to coordinate the government-industry partnership for animal and plant biosecurity in Australia. Their roles are to minimise animal disease and plant

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41 Centre for Invasive Species Solutions (CISS), *About CISS* (accessed 6 September 2022); CISS, *Research* (accessed 6 September 2022).

42 DAFF, *Biosecurity Training Centre* (accessed 6 September 2022); Charles Sturt University, *Biosecurity Training Centre* (accessed 6 September 2022).

43 DAFF, *Submission 73*, p. 28.

44 DAFF, *National Biosecurity Strategy*, 2022, p. 39 (accessed 24 August 2022).

pest impacts on Australia, boost industry productivity and profitability and enhance market access.

1.46 Both AHA 's and PHA's memberships include the Australian Government and all state and territory governments. AHA members also include 23 animal industry members. PHA members include 47 plant industry organisations.[45]

1.47 The AHA is funded by DAFF under a pre-agreed formula applicable to all members.[46]

Biosecurity arrangements

Australian Government Crisis Management Framework

1.48 The Australian Government Crisis Management Framework (AGCMF) is part of Australia's national security response. It outlines the Australian Government 's approach to preparing for, responding to and recovering from crises, including guidance on ministerial and officer roles and responsibilities and 'arrangements that link ministerial responsibility to the work of key officials, committees and facilities.'[47]

AUSBIOAGPLAN

1.49 The Australian Government Biosecurity and Agricultural Response Plan (AUSBIOAGPLAN) outlines the coordination arrangements for plant and animal biosecurity crises under the Australian Government Crisis Management Framework (AGCMF), led by DAFF.[48]

Intergovernmental Agreement on Biosecurity

1.50 The Intergovernmental Agreement on Biosecurity (IGAB) sets out commitments for federal and state and territory governments, outlines agreed national goals and objectives, and clarifies roles and responsibilities.[49] The current agreement was signed in 2019 and is due for review in 2024.[50]

Emergency Animal Disease Response Agreement

1.51 AHA is the custodian of the Emergency Animal Disease Response Agreement (EADRA) and national coordinator of key government-industry biosecurity

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45 DAFF, *Submission 73*, pp. 10 and 24.

46 DAFF, *Submission 73*, p. 24.

47 DAFF, *Submission 73*, p. 7; DAFF, *Submission 73*, p. 59; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 20 (accessed 28 September 2022).

48 DAFF, *Submission 73*, p. 9.

49 DAFF, *National Biosecurity Strategy*, 2022, pp. 28 and 38 (accessed 24 August 2022).

50 DAFF, *Intergovernmental Agreement on Biosecurity (IGAB)*, 6 January 2022 (accessed 24 August 2022).

partnerships in the area of animal health, producing and inputting into strategies and plans to guide these efforts.[51] The legally binding EADRA outlines industry and government obligations (including cost sharing) in the event of a disease incursion (such as FMD) in Australian animals.[52]

1.52 AHA manages the agreement on behalf of the parties, including conducting training, response debriefs, executing variations and assisting parties to understand their obligations. AHA also verify eligible cost claims for eradication responses under the agreement.[53]

Emergency Plant Pest Response Deed

1.53 PHA is the custodians of the Emergency Plant Pest Response Deed (EPPRD) and national coordinator of key government-industry biosecurity partnerships in the area of plant health, producing and inputting into strategies and plans to guide these efforts.[54] The EPPRD is a legally binding agreement between PHA, the Australian and state and territory governments, and the national plant industry body. The EPPRD outlines cost sharing and other responsibilities in an emergency response.[55]

National Environmental Biosecurity Response Agreement

1.54 The National Environmental Biosecurity Response Agreement (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, including for cost-sharing, to be applied by agreement of the parties where there are no existing arrangements. 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.[56]

AUSVETPLAN

1.55 AHA manages the development and review of the Australian Veterinary Emergency Plan (AUSVETPLAN) is a national response plan for the management and, where possible, eradication of emergency animal diseases (EAD).[57]

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51 DAFF, *National Biosecurity Strategy*, 2022, p. 38 (accessed 24 August 2022).

52 DAFF, *Submission 73*, pp. 10 and 25.

53 DAFF, *Submission 73*, p. 10.

54 DAFF, *National Biosecurity Strategy*, 2022, p. 38 (accessed 24 August 2022).

55 DAFF, *Submission 73*, pp. 10 and 25.

56 DAFF, *Submission 73*, pp. 11 and 24.

57 DAFF, *Submission 73*, pp. 10 and 24.

1.56 AUSVETPLAN includes disease specific documents, including for FMD and LSD, and provides operational manuals, resources, and other materials to assist in a response, with scientific, technical and operational advice provided by governments and industry.[58]

1.57 For FMD the nationally agreed approach is one of rapid containment and eradication and includes:

- an immediate national livestock standstill for at least 72 hours;
- implementation of legislated declared areas and quarantine and movement controls in declared areas to minimise the spread of infection.[59]

1.58 An updated version of the AUSVETPLAN Response Strategy Manual for LSD was published in August 2022.[60]

PLANTPLAN

1.59 Nationally consistent guidelines for managing a response to a plant pest incursion are detailed under the Australian Emergency Plant Pest Response Plan (PLANTPLAN), which has been issued since 8 December 2021 under Schedule 5 of the EPPRD. These guidelines specify actions at a national, state/territory and local government level, describing 'national procedures, management structures and information flow systems'. The PLANTPLAN specifies different stages of a response, and the roles and responsibilities of government and industry at each phase. In addition, it incorporates best practice in Emergency Plant Pest responses using an incident management system and standardised documentation (such as guidelines, job cards, procedures and forms/templates).[61] PHA manages the development and review of the PLANTPLAN.[62]

1.60 Emergency response programs are currently underway for varroa mite in New South Wales, banana freckle in the Northern Territory and exotic fruit fly in Torres Strait and Queensland.[63]

Biosecurity risk

1.61 The National Biosecurity Strategy, along with a number of submitters to the inquiry,[64] highlight the changing or increasing biosecurity risks to Australia posed by:

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58 DAFF, *Submission 73*, p. 24.

59 DAFF, *Submission 73*, p. 35.

60 DAFF, *Submission 73*, pp. 44–45.

61 DAFF, *Submission 73*, pp. 24—25; Plant Health Australia (PHA), *Fact sheet: The Emergency Plant Pest Response Deed* (accessed 18 October 2022).

62 DAFF, *Submission 73*, pp. 10 and 24–25.

63 DAFF, *Submission 73*, p. 25.

- climate change;
- changing trade and travel patterns;
- changing land use and decreasing biodiversity;
- major global disruptions;
- illegal activities; and
- the increasing presence of significant exotic plant, environment and animal pests and diseases in the region.[65]

1.62 Increasing biosecurity threats and their wider impacts are increasingly recognised through approaches such as 'One Health' which is used to manage and safeguard the health of people, animals, and the environment. This approach integrates public health, veterinary health and environmental sectors, disciplines, and communities across societies to address root causes and create long-term, sustainable solutions, and is particularly relevant to the control of zoonotic diseases.[66]

1.63 The economic value of Australia's biosecurity system is significant. In 2020 it was valued at around $314 billion, with the total flow of benefits from assets vulnerable to biosecurity hazards estimated at $251.5 billion per annum, or A$5.7 trillion over 50 years. In contrast, the absence of a biosecurity system was estimated to result in around $671.9 billion in damages attributable to newly introduced pests and diseases over 50 years. Highlighting the benefits of investment in the system, a robust biosecurity system is estimated to reduce damages due to pests and diseases by close to $345 billion, at a cost of $10.4 billion.[67]

Overview of biosecurity preparedness

1.64 Australia's biosecurity preparedness is multi-layered and incorporates a range of measures:

- **Pre-border measures**—aimed at preventing biosecurity risks from reaching Australia. Measures include prevention, management, and response activities with regional and international partners, risk and intelligence collection, offshore verifications, surveillance and identification, trade and import assessments and controls, inspections, and audits of arrangements

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64 See, for example: DAFF, *Submission 73,* pp. 2 and 13; Grain Producers Australia, *Submission 61,* [p. 14]; Invasive Species Council, *Submission 92,* p. 5; Department of Jobs, Precincts and Regions (Victoria), *Submission 95,* p. 2; National Farmers' Federation (NFF), *Submission 50,* p. 3.

65 DAFF, *National Biosecurity Strategy*, 2022, p. 20 (accessed 24 August 2022); DAFF, *Submission 73,* p. 13.

66 World Health Organization, *One Health Q&A*, 17 September 2017 (accessed 6 September 2022).

67 Aaron Dodd, Natalie Stoeckl, John Baumgartner and Tom Kompas, *Key Result Summary: Valuing Australia 's Biosecurity System*, Centre of Excellence for Biosecurity Risk Analysis (CEBRA) Project 170713, August 2020, pp. v–vi (accessed 22 August 2022).

for imported goods, financial assistance, expert assistance, capability, and capacity building within the region;[68]

- **Border measures**—risk-based measures conducted at the border to ensure that biosecurity risks are prevented or detected, across the various entry pathways (including passengers, cargo, mail and natural pathways). Activities include: up to date frameworks and procedures, regulatory systems co-designed with industry, upgrading data and information systems, and investing in workforce capability development. It also includes measures such as surveillance and quarantine arrangements, including border controls, profiling, screening and inspection, documentation review, education and awareness, and compliance activities;[69]
- **Post-border measures**—measures aimed at identifying, containing and limiting the impact of biosecurity incursions (e.g. including those that entre via illegal activity or natural pathways). Measures are conducted in partnership with state and territory governments, industry and other stakeholders. Measures include: biosecurity preparedness planning and testing, pest and disease monitoring, surveillance, reporting, incursion response, research and development including into diagnostics, containment and treatments, education and awareness, regulatory and enforcement action, the development of partnerships, and recovery.[70]

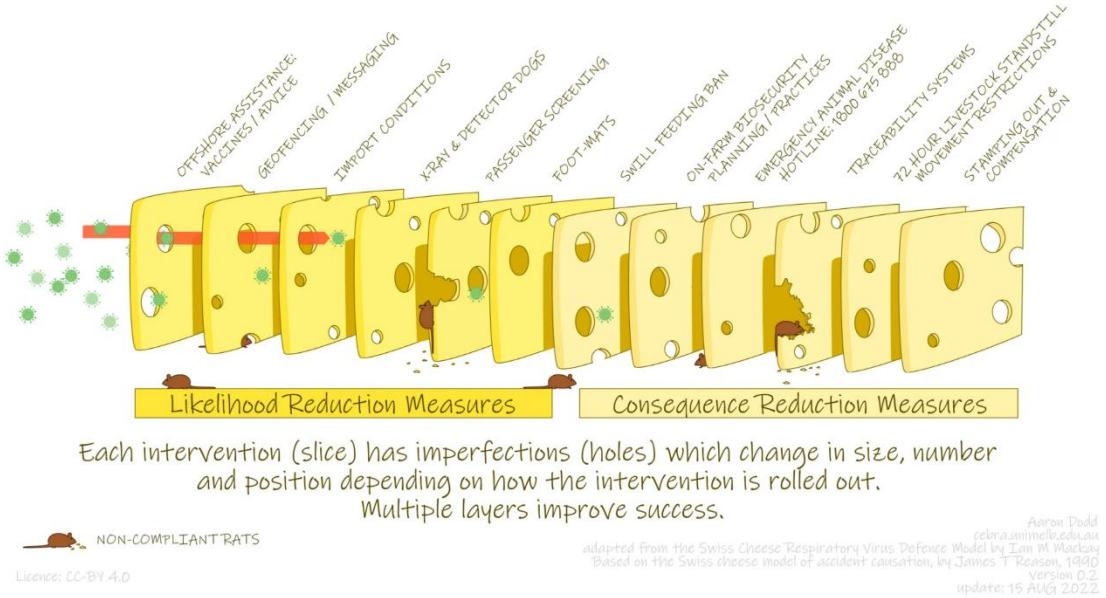
1.65 Using the 'Swiss cheese' analogy of biosecurity controls, Figure 1.3 shows how a range of measures work together to reduce the risk of an FMD incursion, and quickly address any entry of the disease.

[68] DAFF, *National Biosecurity Strategy*, 2022, p. 14 (accessed 24 August 2022); DAFF, *Submission 73*, pp. 14–17.

[69] DAFF, *National Biosecurity Strategy*, 2022, p. 14 (accessed 24 August 2022); DAFF, *Submission 73*, pp. 17–19.

[70] DAFF, *National Biosecurity Strategy*, 2022, pp. 14–15 and 17 (accessed 24 August 2022); DAFF, *Submission 73*, p. 20.

Figure 1.3 The 'Swiss cheese' model of FMD biosecurity measures



Dr Aaron Dodd, 'Be alert, not alarmed about foot and mouth disease', *Pursuit, 17 August 2022 (accessed 10 November 2022).*

Emergency response

1.66 In the event of an emergency DAFF would invoke its Incident Management Framework and work to develop a Biosecurity Incident Management System to ensure a nationally coordinated and consistent approach.[71]

1.67 While states and territories have statutory responsibilities for the management of animal diseases and plant pests and diseases within their jurisdiction, the Australian Government would work with the jurisdictions, AHA and PHA, as well as industry to support Australia's preparedness and response.[72]

Other biosecurity issues of concern

1.68 The committee's inquiry was primarily focussed on the immediate threats represented by the varroa mite incursion, and the increased potential for an outbreak of FMD and LSD from Indonesia. However, submissions made to the inquiry addressed several other important biosecurity issues, in particular environmental and aquacultural biosecurity.

1.69 The committee is cognisant of the threats in these areas and acknowledges these issues deserve further scrutiny in the right forum. The committee will continue to scrutinise Australia's biosecurity response through its oversight of DAFF and inquire into matters as referred by the Senate.

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[71] DAFF, *Submission 73*, pp. 22–23.

[72] DAFF, *Submission 73*, p. 23.

Environmental biosecurity

1.70 With the cost of invasive species conservatively estimated at $13 billion per year and the total threat to valued assets of nearly $700 billion over 50 years,[73] it was timely for the Invasive Species Council to draw the committee's attention to the significant environmental biosecurity gap in Australia's biosecurity system. The council noted:

> While Australia can be proud of its success in maintaining freedom from many damaging pests of agriculture, contributing to our ongoing profitability and competitiveness as a producer, the same cannot be said about environmental invasive species. The Australian environment has not fared well in contrast, with invasive weeds, forest diseases, insects and feral vertebrates contributing to extinctions and declines of precious biodiversity, and remaining extremely expensive in terms of damage and loss.[74]

1.71 While there has been some progress in environmental biosecurity, it lags behind primary industries considerably.[75] The council called for the consideration of biosecurity as a whole, inclusive of agricultural and environmental biosecurity, an increase in funding, a robust and transparent process for determining environmental biosecurity priorities, further research and development, and improved public reporting.[76]

1.72 CISS also drew attention to the need for increased attention to environmental biosecurity, and the need for an underpinning research and development capability.[77] CISS, WoolProducers Australia, the National Farmers' Federation (NFF) and others drawing attention to the centre's dire funding situation.[78] The NFF noted the valuable work of the centre, advising that it:

> provides an innovation pipeline of new biocontrol agents, toxins and detection tools which is vital to putting better and cheaper solutions into the hands of farmers, other land managers and communities. Such advancements can be often deployed at significant scale, making material impacts on feral populations.[79]

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[73] NFF, *Submission 50,* Attachment 1, p. 3; Invasive Species Council, *Submission 92,* p. 2; Jim Fletcher, *Submission 11,* Attachment 1, p. 38.

[74] Invasive Species Council, *Submission 92,* p. 10.

[75] Invasive Species Council, *Submission 92,* pp. 2, 8 and 11.

[76] Invasive Species Council, *Submission 92,* pp. 2–3 and 13.

[77] CISS, *Submission 99,* p. 9.

[78] CISS, *Submission 99,* pp. 2 and 9–10; WoolProducers Australia, *Submission 67,* p. 8; NFF, *Submission 50,* pp. 10–11; Biosecurity Collective, *Submission 90,* p. 9; Invasive Species Council, *Submission 92,* pp. 3 and 13–14.

[79] NFF, *Submission 50,* pp. 10–11.

Aquaculture biosecurity

1.73 A number of submitters raised concerns about the adequacy of Australia's biosecurity preparedness with particular reference to aquaculture and aquatic animal diseases. They highlighted a number of issues specific to this sector including:

- absence of appropriate frameworks and national leadership;[80]
- the particular challenges and difficulties associated with eradicating diseases in aquatic environments;[81]
- insufficient risk assessment of aquatic animal industries and potentially inadequate importation and decontamination controls;[82]
- insufficient testing and compliance assessments of imported fish products;[83] and
- lack of research and development.[84]

[80] Jim Fletcher, *Submission 11*, Attachment 1, p. 17; Invasive Species Council, *Submission 92,* pp. 20–23.

[81] Australian Barramundi Farmers' Association (ABFA), *Submission 22,* p. 2.

[82] ABFA, *Submission 22,* pp. 2–6; Fisheries Research and Development Corporation (FRDC), *Submission 48,* pp. 4–5.

[83] ABFA, *Submission 22,* p. 4.

[84] FRDC, *Submission 48,* p. 8.

Chapter 2
Current threats and incursions: Foot-and-mouth, Lumpy skin disease and Varroa mite

2.1 This chapter considers current threats and incursions impacting upon Australia's biosecurity system, with a particular focus on foot-and-mouth disease (FMD), lumpy skin disease (LSD) and varroa mite. The committee examined the nature of the threat or incursion, and the risks they pose to Australian agriculture, trade, and the economy, as well as impacts on the environment and our communities.

Foot-and-mouth disease

What is foot-and-mouth disease?

2.2 FMD is an internationally and nationally notifiable, highly contagious viral disease that affects cloven-hoofed animals such as cattle, pigs, sheep, goats, camels, alpacas, and deer. FMD spreads through close contact between animals, and through feeding infected products to animals, and has the capacity to infect an entire herd within 48 hours.[1] FMD can also spread through animal products including hides, meat and dairy products, farm equipment, clothing, and by the wind.[2]

2.3 FMD is not generally a fatal disease for adult animals, but it can kill young animals and have serious impacts on productivity. It is very rare for FMD to infect humans.[3] FMD is a category two disease under the Emergency Animal Disease Response Agreement (EADRA).[4]

Where is foot-and-mouth disease found?

2.4 At the time of reporting, Australia was officially free from FMD.[5]

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1 Department of Agriculture, Fisheries and Forestry (DAFF), *Foot and mouth disease*, 10 May 2022 (accessed 12 August 2022); World Organisation for Animal Health (WOAH), *Foot & mouth disease questions & answers*, p. 1 (accessed 12 August 2022).

2 DAFF, *Livestock producers*, 22 July 2022 (accessed 12 August 2022); DAFF, *Potential for wind-borne spread of FMD in Australia: report summary*, 4 November 2019 (accessed 12 August 2022).

3 DAFF, *Livestock producers,* 22 July 2022; DAFF, Foot-and-mouth disease: a threat to Australian livestock, *Factsheet*, July 2022, pp. 1–2 (accessed 12 August 2022).

4 Animal Health Australia (AHA), *Australian Veterinary Emergency Plan AUSVETPLAN Edition 3: Disease strategy foot-and-mouth disease (Version 3.4)*, 2014, p. 3 (accessed 22 August 2022).

5 DAFF, *Submission 73*, p. 30.

2.5 FMD is found in over 70 countries around the world, and is considered endemic in several parts of Asia, most of Africa, and the Middle East.[6]

Indonesian foot and mouth disease outbreak

2.6 Australia became aware of reports of an FMD outbreak in Indonesia on 6 May 2022, with reports that the first cases were detected in late April 2022.[7] Indonesia notified the World Organisation for Animal Health (WOAH) of FMD on 9 May 2022.[8] On 5 July 2022, Indonesian authorities reported that the incursion had reached Bali.[9] Prior to this outbreak Indonesia had been FMD free since 1986.[10]

2.7 With around 65 million FMD-susceptible animals in the country,[11] the potential economic impact of an FMD outbreak in Indonesia could be as high as 9.9 trillion Indonesian rupiah, or around $965 million.[12]

Indonesian response

2.8 Indonesia's initial response focussed on policy and technical approaches. It was reported that the response was hampered by the geographic spread of the country, inadequate compensation, lack of access to vaccines, vaccine hesitancy, and the makeup of the livestock industry, with over 90 per cent of the cattle industry characterised by smallholder farms.[13]

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6 DAFF, Answer to question on notice during a committee private briefing, additional information received 9 August 2022, IQ22-000003, pp. 2–3.

7 James Nason, 'Foot and Mouth Disease reported in Indonesia', *Beef Central*, 6 May 2022 (accessed 18 August 2022).

8 Dr Beth Cookson, Acting Australian Chief Veterinary Officer and Andrew Metcalfe AO, Secretary, DAFF, *Proof Committee Hansard*, 10 August 2022, p. 6.

9 DAFF, 'Foot and mouth disease confirmed in Bali', *Media statement*, 5 July 2022 (accessed 15 August 2022).

10 Jordyn Beazley, 'Foot-and-mouth disease: how Indonesia is trying to control the outbreak by the end of the year', *The Guardian*, 4 August 2022 (accessed 15 August 2022).

11 James Nason, 'Troy Setter's update on Indonesia's FMD, LSD control efforts', *Beef Central*, 19 July 2022 (accessed 18 August 2022).

12 T S P Naipospos and P P Suseno, *Cost Benefit Analysis of Maintaining FMD Freedom Status in Indonesia. Report to the World Organisation of Animal Health*, November 2017 cited in Promoting Rural Incomes through Support for Markets in Agriculture (PRISMA), *Indonesia market watch: How ready is the market to contain Foot and Mouth Disease in Indonesia?*, June 2022, p. 3 (accessed 19 August 2022).

13 Chris Barrett and Karuni Rompies, 'Caution as Bali records zero foot and mouth cases', *The Age*, 29 July 2022, p. 13; Jordyn Beazley, 'Foot-and-mouth disease: how Indonesia is trying to control the outbreak by the end of the year', *The Guardian*, 4 August 2022 (accessed 15 August 2022); Emma Conners, 'In Indonesia, a foot and mouth battle of epic proportions', *Australian Financial Review*, 24 July 2022 (accessed 18 August 2022); PRISMA, *Indonesia market watch: How ready is the market to contain Foot and Mouth Disease in Indonesia?*, June 2022, p. 6.

2.9 Around mid-June the Badan Nasional Penanggulangan Bencana (BNPB, National Disaster Mitigation Agency) launched nationwide movement restrictions and segregation, disinfection, the slaughter of affected animals, an education campaign and planning for compensation scheme for affected farmers.[14]

2.10 At the same time, the government approved the purchase of 29 million vaccines and commenced work on the development of a local vaccine,[15] with plans to vaccinate at least 8,000 cattle by early July and triple vaccinate 17 million head of livestock—or around 80 per cent of livestock in affected provinces—by 2023.[16]

2.11 By early August, FMD had spread to 23 provinces, including Bali, with just over 992 000 animals vaccinated, 7 702 animals slaughtered, and 4 847 animal deaths. From mid-August the Indonesian government reported a decline in daily case numbers[17] and no new FMD cases in a number of provinces.[18]

2.12 On 18 November, the Ministry of Agriculture was reporting around 46 000 active cases of FMD across 17 provinces, with nine provinces reporting zero cases. Based on numbers provided by the Ministry, around 87 per cent of infected animals clinically recovered, with 1.5 per cent of animals dying and just over two percent slaughtered.[19]

2.13 In November 2022, DAFF officials advised the committee that Indonesia's progress in vaccinating its livestock was 'very encouraging', with nearly six million animals vaccinated and plans for all animals in Bali to be vaccinated

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[14] Devi Nindy Sari R and Resinta S, 'Govt to apply COVID strategy to contain FMD outbreak: BNPB', *ANTARA News,* 24 June 2022 (accessed 18 August 2022); Aditya Ramadhan and Raka Adji, 'Ministry readies strategy to handle foot-mouth disease in livestock', *ANTARA News*, 10 May 2022 (accessed 18 August 2022).

[15] Fardah, 'Indonesia accelerates battle against FMD outbreak in 19 provinces', *ANTARA News*, 25 June 2022 (accessed 18 August 2022); Dedy Darmawan Nasution and Nidia Zuraya, 'Kementan Luncurkan Vaksin PMK Lokal Bulan Ini, Produksi 1 Juta Ton', *Republika.co.id*, 6 October 2022 (accessed 7 October 2022).

[16] Fardah, 'Indonesia accelerates battle against FMD outbreak in 19 provinces', *ANTARA News*, 25 June 2022.

[17] Kementerian Pertanian, 'Kasus PMK Kian Menurun di Sejumlah Wilayah, 5 Provinsi Nol Kasus dalam 2 Pekan - Siaga PMK', *MediaIndonesia.com*, 6 August 2022 (accessed 18 August 2022).

[18] PMK Taskforce, The remaining 209 cases, the head of the task force encourages Lampung to immediately complete the PMK, Badan Nasional Penanggulangan Bencana (BNPB, National Disaster Mitigation Agency), 11 August 2022 (accessed 18 August 2022); Andi Nur Aminah, 'BNPB: Delapan Provinsi di Indonesia Nol Kasus PMK', *Republika.co.id*, 4 September 2022 (accessed 7 October 2022).

[19] Kementerian Pertanian Republik Indonesia, *Informasi Penanggulangan Dan Tindakan Pencegahan Wabah PMK* (accessed 18 November 2022).

by the end of the year.[20] The department advised that the FMD situation in Indonesia appeared to be stabilising after a peak of cases in June 2022, and stated that 'as far as FMD is concerned, our view is that the situation has plateaued in Indonesia, and they're making every effort to get it under control. That is our best assessment of what is happening in Indonesia'. However, DAFF also noted that, for the moment, the risk to Australia remains:

> We would think that as they start to move through both natural infection and vaccination and their other control measures we would be able to see a reduction in the risk. Is it the case now? No. Our risk settings have not changed at the border, and we still remain highly alert and have large numbers of people, processors, engaged at the border in Indonesia and also post-border to make sure that we have all the bases as covered as we can in that process.[21]

Risks and impacts of an Australian FMD outbreak

Risk of outbreak

2.14 The Australian Veterinary Emergency Plan (AUSVETPLAN) notes that the highest risk of entry of FMD to Australia is via the illegal import of infected meat and dairy products brought in by passengers, through the post, or via rubbish discarded by sea craft or planes. The risks posed by the illegal swill-feeding of pigs with infected meat products makes it likely that any FMD outbreak will first be seen in pigs.[22]

2.15 Over the previous 18 months DAFF has worked with the Centre of Excellence for Biosecurity Risk Analysis (CEBRA), at the University of Melbourne, to conduct Structured Expert Judgement (SEJ) exercises. The group considered a range of factors when developing their risk level, including those in Figure 2.1 and the FMD outbreak in Indonesia (including Bali).[23]

2.16 SEJs are not based on modelling; rather, they consider a variety of views, and form just one of the tools that the department uses to assess risk, with risk dependent upon 'both the probability of an event and its consequences'.[24]

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[20] Dr Chris Parker, First Assistant Secretary, Biosecurity Animal Division, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 26; Kementerian Pertanian Republik Indonesia, *Informasi Penanggulangan Dan Tindakan Pencegahan Wabah PMK*.

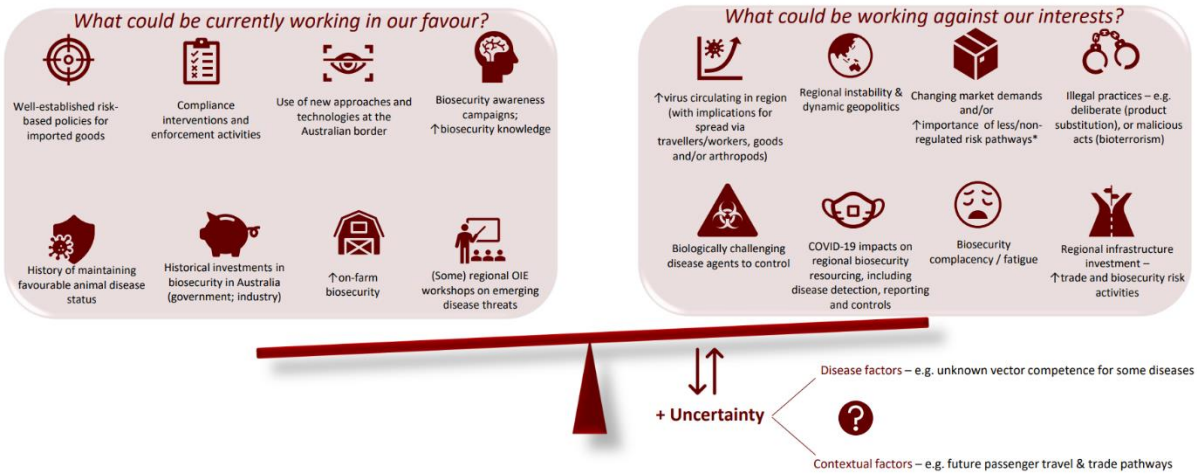
[21] Dr Parker, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 30.

[22] AHA, *Australian Veterinary Emergency Plan AUSVETPLAN Edition 3: Disease strategy foot-and-mouth disease (Version 3.4)*, 2014, pp. 27–28.

[23] DAFF, *Submission 73,* p. 33; Dr Aaron Dodd, 'Be alert, not alarmed about foot and mouth disease', *Pursuit*, 17 August 2022 (accessed 22 August 2022).

[24] DAFF, *Submission 73,* pp. 33–34; DAFF, answers to written questions on notice, no. 6, IQ22–000064, [p. 39] (received 22 August 2022).

Figure 2.1 FMD: Factors working for and against Australia's biosecurity interests



Beef Central, What is the probability of an internationally-notifiable incursion in the next five years? *[March 2022] (accessed 2 September 2022).*

2.17 In March 2022, the likelihood of an outbreak of FMD in Australia in the next five years was assessed as nine per cent. After FMD was detected in Indonesia in May 2022, the group reconvened and revised the likelihood up to 11.6 per cent.[25] DAFF also reported a combined estimated probability, which included FMD and LSD, submitting that:

> The combined estimated probability of an outbreak in Australia of any one of FMD, LSD, AHS [African Horse Sickness] or ASF [African Swine Fever] was 56 per cent … over a five-year period.[26]

2.18 Angus Hobson advised the committee of his concerns at the 'disproportionately high emphasis placed on qualitative assessments of incursion risk (and insufficient value placed on on-the-ground expertise from potential countries of FMD origin).' He argued that the SEJ should be repeated to take account of additional risks and that there should be greater transparency and third-party auditing of the SEJ process to build stakeholder confidence.[27]

Direct risks and impacts

2.19 With around 100 million head of livestock susceptible to FMD, at an estimated value of $30 billion, the consequences of an incursion in Australia would be significant, particularly for trade and the economy.[28] Around 70 per cent of

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25 DAFF, *Submission 73*, p. 33; Dr Aaron Dodd, ' Be alert, not alarmed about foot and mouth disease', *Pursuit*, 17 August 2022.

26 DAFF, *Submission 73*, pp. 33–34; DAFF, answers to written questions on notice, no. 6, IQ22–000064, [p. 39] (received 22 August 2022).

27 Angus Hobson, *Submission 63*, p. 6.

28 DAFF, *Submission 73*, p. 30.

Australia's beef, lamb, sheep and goat meat is exported each year, so the overnight loss of trade markets if Australia were to have an FMD or LSD incursion would be 'devastating'.[29]

Economy and trade

2.20 In 2013, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimated the direct economic impact of a large Australian, multi-state FMD outbreak to be $52 billion over 10 years.[30] Around 99 per cent of these costs were anticipated to be direct economic costs, with one percent being disease control costs.[31]

2.21 In 2022, ABARES updated its estimate to reflect changes in industry structure and economic conditions, the value of industry output, and the application of discount rates and risk in economic analysis. ABARES forecast that an FMD outbreak would have a direct economic impact of around $80 billion.[32]

2.22 An FMD outbreak could be expected to directly impact a range of industries including breeders, meat, dairy, wool, hides and skins, and exporters, with the Queensland beef industry bearing the largest impact.[33]

2.23 Actual impacts would be affected by the eradication strategy selected, with submitters highlighting significant economic impacts including:[34]

- nation-wide trade and export bans—return to normal trade would be dependent upon certification of FMD freedom with the potential for prolonged uncertainties and impacts;[35]

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[29] John McKillop, Independent Chair, Red Meat Advisory Council (RMAC), *Proof Committee Hansard*, 15 November 2022, p. 7; DAFF and Department of Home Affairs (Home Affairs) *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 29 (accessed 28 September 2022).

[30] Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), *Direct economic impacts of a foot-and-mouth (FMD) disease incursion in Australia, An update of ABARES 2013 estimate* (Direct economic impacts of FMD update), 22 July 2022 (accessed 19 August 2022).

[31] ABARES, *Consequences of a foot-and-mouth disease outbreak*, 22 July 2022 (accessed 19 August 2022).

[32] This is a 2020-21 figure with a three per cent discount rate applied. ABARES, Direct economic impacts of FMD update, 22 July 2022. The government is considering expanding its current modelling on potential economic impacts to improve support and recovering and respond to more indirect consequences of emergency animal diseases. DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 35.

[33] Nicola Hinder PSM, First Assistant Secretary, Exports and Veterinary Services Division, DAFF, *Proof Committee Hansard*, 10 August 2022, p. 10; ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia*, Research report 13.11, October 2013, p. 27 (accessed 19 August 2022); Productivity Commission (PC), *Impact of a foot and mouth disease outbreak on Australia: research report*, 2002, p. xviii (accessed 22 August 2022).

[34] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia*, Research report 13.11, October 2013, p. viii.

- outlay of cost of disease control strategies for governments, industry and producers;[36]
- payment of compensation for slaughtered animals (shared government and livestock industry cost);[37]
- economic losses for producers which may result in a sustained drop in livestock and production numbers following an FMD outbreak; and potentially resulting in higher costs for consumers.[38]

2.24 DAFF is proactively discussing trade and export matters with trading partners but noted that 'pre-emptive negotiations may not be possible, as information specific to the variant of FMD detected will be needed.'[39]

2.25 Several submitters noted Australia's 'clean and green' reputation which has given the country a competitive edge in global markets. There is potential for this valuable reputation to be lost, with ongoing impacts, if there were an FMD incursion.[40]

2.26 The Australian Livestock Export Corporation Limited (LiveCorp) advised the committee that the Indonesian FMD outbreak has already impacted Australia's live cattle export trade, with higher prices and some supply challenges, and exports down by approximately one third.[41] The FMD outbreak in Indonesia has also impacted the Indonesian registration of Australian feedlots live exporting to that country, potentially significantly restricting the number of animals exported from Queensland ports. This is anticipated to have food security impacts in Indonesia.[42]

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[35] See, for example: Animal Medicines Australia (AMA); *Submission 35,* p. 4; Cattle Council of Australia (CCA), *Submission 44,* p. 4; DAFF, *Submission 73,* pp. 31–33; RMAC, *Submission 77,* [p. 2]; John McKillop, RMAC, *Proof Committee Hansard,* 15 November 2022, p. 11.

[36] National Farmers' Federation (NFF); *Submission 50,* p. 3; AMA; *Submission 35,* p. 4; ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. 16 .

[37] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. 14.

[38] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. 26.

[39] DAFF, *Submission 73,* pp. 32–33.

[40] See, for example: Australian Veterinary Association (AVA), *Submission 18,* p. 3; Australian Workers' Union (AWU), *Submission 31,* p. 1; AMA; *Submission 35,* p. 4; Community and Public Sector Union (CPSU), *Submission 76,* [p 1]; Department of Primary Industries and Regional Development Western Australia, *Submission 80,* [p. 2].

[41] Wayne Collier, Chief Executive Officer, Australian Livestock Export Corporation Limited (LiveCorp), *Proof Committee Hansard*, 11 October 2022, p. 2.

[42] Wayne Collier, LiveCorp, *Proof Committee Hansard*, 11 October 2022, p. 8.

Agricultural and environmental impacts

2.27 An FMD outbreak is expected to have the following agricultural and environmental impacts:

- animal welfare issues—due to animals having to be killed (particularly in intensive farming where there is no space to accommodate rapidly growing animals), overcrowding resulting from livestock movement restrictions, and poor animal husbandry practices;[43]
- environmental issues associated with the culling and disposal of large numbers of livestock, including contamination of water, visual pollution and toxic emissions resulting from burning of carcasses;[44] and
- abandonment of livestock production in some areas, leading to land vacancies and deterioration because of uncontrolled pest and weed populations.[45]

Community, health and other impacts

2.28 With an estimated workforce of around 445 000, including producers, processors and the broader economy, an FMD outbreak is also anticipated to have significant social impacts:[46]

- social disruption for individuals, families and communities directly associated with livestock production and processing—including immediate and long term mental and physical health issues, strained family relationships, and reduced social cohesion resulting from financial stress, hardship and uncertainty;[47]
- social impacts for other producers and communities as a result of FMD control measures, such as isolation, animal welfare concerns and anxiety caused by living with movement restrictions, vaccination and culling of livestock;[48]

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[43] Royal Society for the Prevention of Cruelty to Animals (RSPCA); *Submission 47,* pp. 2 and 4; Dr Ron Glanville, *Submission 4,* p. 2; Angus Hobson; *Submission 63,* p. 5; AMA; *Submission 35,* p. 4.

[44] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. xiii; PC, *Impact of a foot and mouth disease outbreak on Australia: research report*, 2002, p. xxxii .

[45] Angus Hobson; *Submission 63,* p. 5.

[46] John McKillop, RMAC, *Proof Committee Hansard,* 15 November 2022, p. 7.

[47] Primary Producers South Australia, *Submission 75,* pp. 4, 7 and 10–11; Wilmot Cattle Company, *Submission 88,* p. 2; RSPCA; *Submission 47,* p. 2; Angus Hobson; *Submission 63,* p. 5; DAFF, *Submission 73,* p. 33; Matthew Journeaux, Acting Federal Secretary, Australasian Meat Industry Employees Union (AMIEU), *Proof Committee Hansard,* 15 November 2022, p. 15.

[48] Grain Growers, *Submission 20,* [p. 3]; Angus Hobson; *Submission 63,* p. 5; RSPCA; *Submission 47,* p. 4; Queensland Farmers' Federation (QFF), *Submission 79,* p. 3; ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. xi.

- response fatigue and social impacts for other industries including local councils, emergency response staff, veterinarians and health providers;[49]
- potential risk to the continuity of meat supplies if the closure of export markets impacts on the commercial viability of local meatworks;[50] and
- wider public concerns over animal welfare.[51]

2.29 Matthew Journeaux, Acting Federal Secretary of the Australasian Meat Industry Employees' Union (AMIEU) was unequivocal about the impacts of an FMD incursion:

> If foot-and-mouth disease was to be found in Australia, it would have devastating and immediate consequences for our industry. The industry would grind to a halt and all of these jobs that rely on it would stop. The resulting economic and social consequences would be significant. Australia relies heavily on exports and the meat industry exports approximately 70 per cent of what it produces. Essentially, that part of the turn-off would stop immediately. Re-establishing lost access to markets would likely be a very lengthy process and may persist for a considerable length of time after any disease outbreak had been contained or dealt with. Indeed, market share may never fully be restored.[52]

Indirect risks and impacts

2.30 Anticipated indirect impacts of an Australia FMD outbreak include:

- increased costs and losses for associated industries such as transport, processing, and feedstock suppliers of $11.5 billion over 10 years;[53]
- loss of employment and social impacts on related industries including shearers, traders, transport providers, meat processing, feedstock suppliers, dairy processors, agricultural contractors, and fuel and tyre suppliers;[54]
- potential for loss of consumer confidence in meat products due to misconceptions about food safety;[55]

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[49] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. 34; RSPCA; *Submission 47*, p. 3; PC, *Impact of a foot and mouth disease outbreak on Australia: research report*, 2002, pp. xxxi and 29.

[50] Matthew Journeaux, AMIEU, *Proof Committee Hansard,* 15 November 2022, pp. 15–16.

[51] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, pp. xii–xiii.

[52] Matthew Journeaux, AMIEU, *Proof Committee Hansard,* 15 November 2022, p. 15.

[53] 2013 estimate. ABARES, *Consequences of a foot-and-mouth disease outbreak*, 22 July 2022 (accessed 7 December 2022; Australian Livestock and Rural Transporter's Association (ALRTA), *Submission 78*, p. 7.

[54] AMIEU, *Submission 86,* [p. 2]; Angus Hobson; *Submission 63,* p. 5; DAFF, *Submission 73,* p. 33; Mathew Munro, Executive Director, ALRTA, *Proof Committee Hansard,* 11 October 2022, p. 24.

[55] ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, p. xiii.

- major supply chain disruptions and panic buying due to public lack of awareness or understanding of movement controls;[56] and
- potential flow-on losses for small business, education, tourism, hospitality, transport and sport.[57]

2.31 David Hill, cattle producer and Chair of the Cattle Council of Australia (CCA) LSD and FMD Working Group, told the committee of his concerns:

> There is some concern about the lack of accuracy on the impact. We don't really know what the actual cost would be, because of the whole of the supply chain. It's what we've talked about. We've had processors and the transport industry, but it's all the other supply industries and the small communities in rural and regional areas…I wouldn't like to try and put a figure on it. Everyone agrees it's a lot higher than what has been bandied around…There are so many things they're not taking into account as far as that goes.[58]

2.32 The Australian Livestock and Rural Transporters Association (ALRTA) also noted that industries indirectly affected by an FMD incursion are not signatory to cost-sharing compensation arrangements. While such industries may be able to access short-term compensation arrangements through states and territories,[59] these will not enable recovery and build resilience into these sectors.

Lumpy skin disease

What is lumpy skin disease?

2.33 LSD is a highly infectious, internationally and nationally notifiable viral disease that affects cattle and water buffalo. LSD spreads through vectors, primarily biting insects such as flies, mosquitoes and ticks, and may be spread through fomites such as equipment or feed, air-dried hides, and possibly animal to animal. It is possible for the disease to spread longer distances through wind dispersal of vectors.[60]

2.34 LSD has a relatively low mortality but can still result in significant illness, including fever, emaciation, depression, and characteristic skin nodules. This

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[56] *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 29–30.

[57] QFF, *Submission 79,* p. 3; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 21; ABARES, *Potential socio-economic impacts of an outbreak of foot-and-mouth disease in Australia,* Research report 13.11, October 2013, pp. 16–17; DAFF, *Submission 73,* p. 33; Mathew Munro, ALRTA, *Proof Committee Hansard,* 11 October 2022, p. 19.

[58] David Hill, cattle producer and Chair of the LSD and FMD Working Group, CCA, *Proof Committee Hansard,* 11 October 2022, p. 30.

[59] Mathew Munro, ALRTA, *Proof Committee Hansard,* 11 October 2022, p. 24.

[60] DAFF, *Submission 73,* p. 43; AHA, *Australian Veterinary Emergency Plan AUSVETPLAN: Response strategy Lumpy skin disease (edition 5)*, 2022, p. 3.

often results in production losses such as infertility, abortion, low milk yield and animal welfare issues. There is no threat to human health.[61] LSD is a category three disease under the EADRA.[62]

Where is lumpy skin disease found?

2.35 At the time of reporting, Australia had no reported cases of LSD.[63]

2.36 LSD is endemic in Africa, but since 2012 has spread through the Middle East and south-east Europe. Since 2019 it has spread through Asia, including India, China and Southeast Asia, with the disease confirmed in Vietnam, Thailand, and Malaysia in 2021.[64]

Indonesian LSD outbreak

2.37 On 3 March 2022, the Indonesian government notified the World Organisation for Animal Health of the detection of LSD in cattle across 31 villages in Riau Province, Sumatra.[65] There is some evidence of cases in Indonesia from mid-February.[66] The disease is thought to have entered the Malacca Straights from Malaysia and, at the time of reporting, was forecast to spread through the Indonesian archipelago over the next 12 months.[67]

2.38 Indonesia had already been preparing for a possible LSD outbreak, given the presence of the disease in the region, and had communicated its challenges with diagnostic capability, staff training, access to vaccines and compensation for producers.[68] By 15 March 2022, the disease had spread to 10 districts.

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61 DAFF, *Submission 73*, p. 43.

62 AHA, *Australian Veterinary Emergency Plan AUSVETPLAN: Response strategy Lumpy skin disease (edition 5)*, 2022, p. 21 (accessed 9 September 2022).

63 DAFF, *Submission 73*, p. 43.

64 DAFF, *Submission 73,* p. 43; WOAH, *Factsheet: Lumpy skin disease*, June 2022, pp. 1–2 (accessed 9 September 2022); AHA, *Australian Veterinary Emergency Plan AUSVETPLAN: Response strategy Lumpy skin disease (edition 5)*, 2022, p. 4.

65 The Hon David Littleproud MP, Minister for Agriculture and Northern Australia, 'Australia ready to assist in containing lumpy skin disease outbreak in Indonesia', *Media release*, 4 March 2022 (accessed 30 September 2022).

66 Sugiharto, 'LSD Livestock Disease Found in Indonesia, What To Do?', *AgroIndonesia*, 17 March 2022 (accessed 7 October 2022).

67 Dr Ross Ainsworth, 'Lumpy Skin Disease confirmed in Sumatra, raising alert for Australia', *Beef Central*, 3 March 2022 (accessed 30 September 2022); Daniel Fitzgerald, 'Lumpy skin disease found in Indonesia, putting northern biosecurity on high alert', *ABC News*, 4 March 2022 (accessed 30 September 2022).

68 M M Hidayat, Senior Veterinary Officer, Ministry of Agriculture, *Preparedness by the country at the risk of Lumpy skin disease (LSD) incursion Country name: Indonesia*, 2021, p. 4 (accessed 30 September 2022).

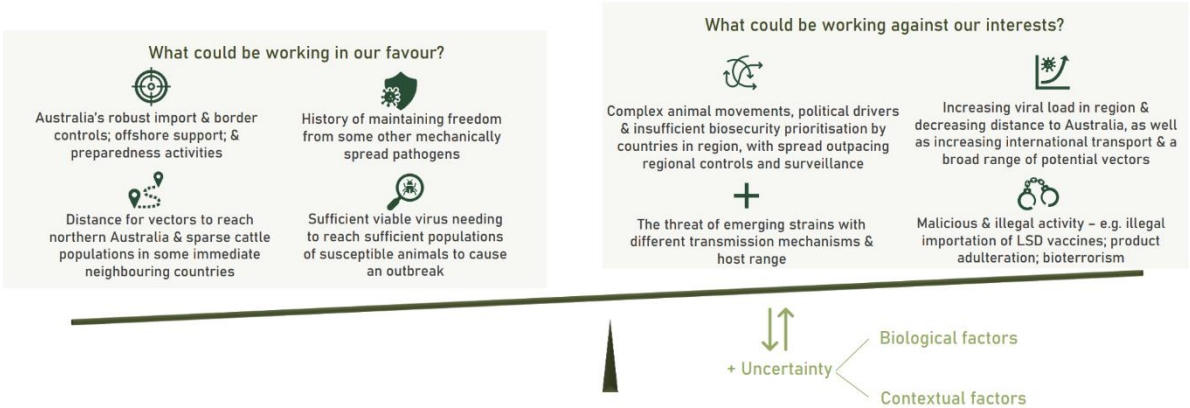
2.39 In November 2022, the department advised that it was difficult to determine Indonesia's progress on addressing LSD, due to its focus on FMD. At the time of reporting the disease was reported to have spread to Java.[69]

Risks and impacts of an Australian LSD outbreak

2.40 The AUSVETPLAN notes that the highest risk of entry of LSD to Australia is via vectors carrying the disease into Northern Australia. The presence of cattle and water buffalo (including feral populations) and the geographic extent and isolation of grazing may make discovery more difficult and delay detection, as well as making eradication difficult.[70] Importation of products or equipment carrying the LSD virus are another potential source of entry to Australia.[71]

2.41 In March 2021, the SEJ process identified the probability of an LSD outbreak in the next five-years as eight per cent. After LSD was detected in Indonesia the SEJ exercise was repeated considering a range of factors, such as those in Figure 2.2, and the probability was revised up to 28 per cent.[72]

Figure 2.2 LSD: Factors working for and against Australia's biosecurity interests



Department of Agriculture, Water and the Environment (DAWE) and CEBRA, What is the probability of a lumpy skin disease outbreak in Australia in the next 5 years?, *12 April 2022 (accessed 12 September 2022).*

Direct risks and impacts

2.42 An LSD outbreak would have significant impacts on domestic and international trade for cattle and water buffalo industries including producers,

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69 Dr Chris Parker, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 30.

70 AHA, *Australian Veterinary Emergency Plan AUSVETPLAN: Response strategy Lumpy skin disease (edition 5)*, 2022, p. 17; DAFF, *Submission 73,* pp. 43–44.

71 DAFF, *Emergency Animal Disease Bulletin No. 121*, 7 November 2019 (accessed 30 September 2022).

72 DAFF, *Submission 73,* p. 33; DAWE and CEBRA, *What is the probability of a lumpy skin disease outbreak in Australia in the next 5 years?,* 12 April 2022 (accessed 12 September 2022).

live animal and reproductive material exports. The economic and trade impact is estimated to be $7.39 billion of exports per year.[73]

2.43 Some trading partners may impose their own import bans, despite lack of LSD certification requirements, making the timeframe for the return to normal trade uncertain. DAFF has commenced work on the development of new trade conditions, in preparation for a possible LSD outbreak.[74]

2.44 Direct and indirect impacts are anticipated to be similar to those outlined for FMD outlined earlier in this chapter.

Varroa mite

What is varroa mite?

2.45 The varroa mite (*Varroa destructor* and *Varroa jacobsoni*) is an external parasite of the European (*Apis mellifera*) and Asian honey bees (*Apis cerana*). The varroa mite is spread via the movement of drone bees between hives, where the mite quickly and easily transfers itself between bees. Should a hive become infested with the varroa mite and left untreated, its inhabitants are weakened and subsequently killed within three to four years.[75]

2.46 An endemic infestation of the varroa mite would likely result in the progressive destruction of 95 to 100 per cent of Australia's wild European honey bee (honey bee) population.[76] The varroa mite can be controlled through the application of chemical mite killers and other management strategies,[77] meaning farmed honey bees and pollination services could manage an incursion at an additional and ongoing cost.[78] Native bee species are not impacted by the varroa mite.[79]

2.47 The varroa mite is regarded as the most serious global pest for the honey bee. *Varroa destructor* is found across most of Asia, Europe, the United States, South America and New Zealand. Australia is the only inhabited continent without the varroa mite, with previous outbreaks of *Varroa jacobsoni* contained in Queensland (2016, 2019 and 2020) and *Varroa destructor* contained in Victoria (2018). In those instances, the identification took place at sea ports (Port of

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[73] DAFF, *Submission 73*, pp. 43–44.

[74] DAFF, *Submission 73*, p. 44.

[75] DAFF, *Submission 73*, p. 46.

[76] DAFF, *Submission 73*, p. 46.

[77] Rural Industries Research and Development Corporation (AgriFutures Australia), *Submission 72*, [p. 4].

[78] Stephen Fuller, President, The NSW Apiarists' Association (NSWAA), *Proof Committee Hansard*, 12 October 2022, p. 7.

[79] DAFF, *Submission 73*, p. 46.

Townsville and the Port of Melbourne).[80] The most recent incursion in New South Wales (NSW) is the first outbreak to be found in commercial hives in Australia.

2.48 The varroa mite is listed as a category three Emergency Plant Pest (EPP) under Schedule 13 of the Emergency Plant Pest Response Deed (EPPRD), in recognition of the damage varroa mite would have on Australia's agricultural sector should it become endemic.[81] Internal and external mites of bees are listed in the top ten of Australia's 42 National Priority Plant Pests.[82] The Honey Bee Industry Biosecurity Plan also lists the varroa mite as the most serious threat to the industry.[83] This plant biosecurity threat is in addition to other notable plant pest risks, including the khapra beetle (listed as number two on the Australia's National Priority Plant Pests list) and the brown marmorated stink bug.[84]

Current and potential impacts

2.49 Honey bees play a crucial role in the agricultural sector, primarily through pollination services. Approximately 65 per cent of agricultural and horticultural crops in Australia rely on honey bee pollination. In 2014, the honey bees' contribution to the Australian economy was estimated to be $14.2 billion per annum.[85]

2.50 The cost of the varroa mite becoming established in Australia would be substantial. The NSW Department of Primary Industries (DPI) reported that the annual cost of controlling the varroa mite across Australia's 600 000 managed hives would be $54 million. In NSW, which hosts 300 000 managed hives, the annual cost would be $27 million. In addition, the availability of honey bees for pollination services could be significantly reduced due to the loss of wild honey bees and varroa mite's impact on managed hives.[86] ABARES estimated that a varroa mite incursion at the Port of Sydney would cost producers and consumers $5.2 billion without containment and approximately

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80 AgriFutures Australia, *Submission 72*, [p. 4].

81 Plant Health Australia (PHA), *Government and Plant Industry Cost Sharing Deed in respect of Emergency Plant Pest Responses*, 7 September 2022, p. 124; PHA, *Pest categorisation* (accessed 20 October 2022).

82 DAFF, *National Priority Plant Pests (2019)* (accessed 20 October 2022).

83 Horticulture Innovation Australia (Hort Innovation), *Final Report: National honey bee pest surveillance program*, February 2019, p. 5 (accessed 14 September 2022).

84 DAFF, *National Priority Plant Pests (2019)*.

85 DAFF, *Submission 73*, p. 46.

86 Scott Hansen, Director General, NSW Department of Primary Industries (DPI), *Proof Committee Hansard*, 12 October 2022, p. 38.

$3.8 billion with containment over 30 years.[87] Modelling by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) predicted that the economic costs avoided by keeping Australia varroa mite free ranged from $21.3 million to $50.5 million per year.[88]

2.51 As demonstrated by the most recent incursion, pollination services and the producers that rely upon those services are highly vulnerable to a varroa mite incursion. According to Horticulture Innovation Australia (Hort Innovation), '[o]f Australia's $30 billion agricultural production per annum, approximately $1.8 billion is estimated to be responsive to honey bee pollination'.[89] Vulnerable pollinator reliant crops include: almonds, canola, cotton, papaya, apples and pears, grains, passionfruit, avocados, lychees, strawberries/berries/blueberries, macadamias, summer fruits, melons, vegetables, cherries and onions.[90] Of those sectors, the almond industry was substantially impacted by the NSW incursion. Prior to the incursion, the sector had anticipated a $1 billion crop for 2022. However, due to restrictions placed on the movement of hives by various governments in response to the NSW incursion, the almond industry may have 'hundreds of millions of dollars [sic] worth of production losses'.[91]

2.52 Impacts of the varroa mite outbreak go beyond the commercial sector. Hobby beekeepers found within the eradication zone have had their hives and bees euthanised. The rationale for such an action was contested, with some beekeepers supportive of the eradication process and others questioning its rationale. For many beekeepers who have had a close bond with their honey bees, the eradication of their prized hives has been a deeply distressing experience.[92]

New South Wales incursion

2.53 Australia's most recent varroa mite incursion in NSW has highlighted the strength of the nation's bee biosecurity program and the importance of effective collaboration between governments, industry and impacted communities.

2.54 On 22 June 2022, the DPI detected a varroa mite incursion in two DPI-managed sentinel hives located at the Port of Newcastle. Response plan measures specified within the EPPRD were immediately enacted, with the

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87 DAFF, *Submission 73*, p. 46.

88 Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Submission 40*, p. 3.

89 Hort Innovation, *Final Report: National honey bee pest surveillance program,* February 2019, p. 5.

90 BeeAware, *Pollinator reliant crops* (accessed 19 September 2022).

91 Tim Jackson, Chief Executive Officer, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, p. 27.

92 Greg Bearup, 'The Big Sting', *Weekend Australian*, 6 August 2022, p. 16; Dolfi Benesh, *Submission 103*, pp. 1–3.

Australian Government co-funding 25 per cent of response activities in NSW, including an $18 million compensation package.[93] The National Management Group approved an overall budget of $65 million to facilitate eradication activities as part of the 100-day eradication plan.[94]

2.55 The eradication plan established a biosecurity zone, containing the infected hives and euthanising honey bees. Initially the biosecurity zone covered an area within a 50-kilometre radius of the Port of Newcastle. Within this zone, no beekeeper was permitted to move or tamper with their hives, unless authorised. Beekeepers were also required to advise the DPI of the location of their hives.[95]

2.56 On 26 June 2022, DPI announced a state-wide emergency order that prohibited the movement of bees across NSW. The control order was in response to the probability of varroa mite being found outside the initial biosecurity zone. Subsequently, a 25km surveillance zone was established, where DPI officials monitored and inspected managed and feral honey bees in the region. At this time, eradication measures continued within the 10km emergency zone in proximity to the Port of Newcastle.[96]

2.57 Testing of hives outside of the initial biosecurity zone resulted in further detections, at the NSW mid north coast and Seaham. By 28 June 2022, a total of seven infested premises had been discovered, in addition to those sentinel hives near the Port of Newcastle.[97] The varroa mite emergency order was subsequently extended to the Port Stephens peninsula (3 July), Narrabri and Wards River (9 July) as further detections occurred. By 25 July 2022, 43 premises had been found to contain hives infested with varroa mite.[98]

2.58 The timing of the NSW incursion coincided with the pollination season. Without access to bee hives, the pollination dependent agricultural and horticultural sectors would faulter. In response, DPI announced on 16 July 2022 a risk-based approach that would permit the movement of low-risk hives to enable critical pollination services. Under the plan, commercial beekeepers were required to alcohol wash a proportion of their

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93 DAFF, *Submission 73*, p. 48.

94 Dr John Tracey, Deputy Director General, Biosecurity and Food Safety, DPI, *Proof Committee Hansard*, 12 October 2022, p. 32.

95 DPI, 'Varroa mite incursion detected in NSW', *Media release*, 24 June 2022 (accessed 13 September 2022); DAFF, *Submission 73*, p. 48.

96 DPI, 'Statewide emergency order issued for varroa mite in NSW', *Media release*, 26 June 2022, (accessed 13 September 2022).

97 DPI, 'New biosecurity zone set up for varroa mite', *Media release*, 28 June 2022, (accessed 13 September 2022).

98 DPI, 'Biosecurity zones around Coffs Harbour after new Varroa mite response', *Media release*, 25 July 2022, (accessed 13 September 2022).

hives and record a negative detection of varroa mite, as well as complete a short online training course. Beekeepers located within biosecurity zones were not permitted to move their hives.[99] Should a beekeeper unintentionally move hives from the biosecurity zone, they risked a fine of $1.1 million. If intentional, the fine would be $2.2 million and potentially jail time.[100]

2.59 As of 25 October 2022, 102 premises had reported a varroa mite detection. 90 per cent of hives located within the eradication emergency zones had been euthanised. All hives located in Jerrys Plain, Narrabri, Denman and Wards River areas had been euthanised and disposed of, with the euthanasia program ongoing in the Nana Glen, Newcastle and the Hunter eradication zones.[101] The department intends to fully eradicate the varroa mite throughout NSW.[102]

2.60 In October 2022, the Wild European Honey Bee Management Program commenced. This program established fipronil baiting stations within a 10-kilometre zone around premises where varroa mite had been detected within the eradication emergency zone. The use of the fipronil baiting stations is strictly managed by trained DPI personal in accordance with the requirements of the Australian Pesticides and Veterinary Medicines Authority permit.[103] Honey beekeepers from across Australia have reportedly volunteered to support efforts to eradicate the varroa mite in the wild.[104] The use of baiting stations also plays a vital role in the eradication of unregistered hives within a biosecurity zone, such as unregistered (hobby) hives.[105]

2.61 DPI advised the committee that discussions were taking place with the Consultative Committee on Emergency Plant Pests to finalise the three-year eradication and surveillance program. This program's success will support a proof of freedom declaration. Once the plan has been endorsed by the Consultative Committee, a proposal will be made to the National Management Group to approve a cost-shared budget for the three-year program.[106]

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[99] DPI, 'New plan to allow pollination movements', *Media release,* 16 July 2022, (accessed 13 September 2022).

[100] Daniel Le Feuvre, Chief Executive Officer, Australian Honey Bee Industry Council (AHBIC), *Proof Committee Hansard,* 8 September 2022, p. 11.

[101] DPI, *Varroa mite emergency response*, (accessed 29 September 2022).

[102] DPI, 'New focus for Varroa mite response in eradication zone', *Media release,* 20 August 2022 (accessed 13 September 2022)

[103] DPI, *Wild European Honey Bee Management Program* (accessed 29 September 2022).

[104] Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, p. 2.

[105] Sheila Stokes, President, Amateur Beekeepers Australia (ABA), *Proof Committee Hansard,* 12 October 2022, p. 11.

[106] Dr John Tracey, DPI, *Proof Committee Hansard,* 12 October 2022, p. 32.

2.62 Whilst remaining cautious, various stakeholders expressed optimism that the incursion could be eradicated.[107] The DPI assured the committee that the response met national and international standards for identification and management of eradication and surveillance zones. Concerning the surveillance zones, the DPI pointed out that testing across 100 000 hives with no cases of varroa mite was a positive indicator that the biosecurity zones were appropriately established.[108]

2.63 This outlook was not shared by all stakeholders. The NSW Apiarists' Association (NSWAA) remained doubtful, largely due to the difficulty of managing an incursion in wild bee populations. The NSWAA also queried the impact of non-compliance on the prospect of eradication, based on reports of beekeepers not following the control order.[109] Witnesses also questioned the effectiveness of fines as a deterrent, with many doubting whether the DPI would seek to persecute those in breach of the state's biosecurity control order.[110] The DPI assured the committee that all non-compliance infringements that have been issued were being followed up by DPI personnel, with a number of ongoing investigations into potential infringements.[111]

2.64 The vulnerability of the eradication process was highlighted on 27 November 2022, with a report that the varroa mite had been detected outside of the Hunter Valley's eradication zone. This detection resulted in the expansion of the eradication zone in that area by 10 kilometres, encompassing 80 more sites and the anticipated eradication of 650 beehives.[112] An additional infected premises was identified on 29 November 2022, taking the total infected premises to 104, and resulting in a further expansion of the eradication zone.[113]

2.65 Overall, the committee received positive reports on the response to the incursion, despite various issues being revealed throughout the process.[114] The Australian Honey Bee Industry Council (AHBIC), which has been on the

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[107] Sheila Stokes, ABA, *Proof Committee Hansard,* 12 October 2022, p. 10; Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 11.

[108] Scott Hansen, DPI, *Proof Committee Hansard,* 12 October 2022, p. 34.

[109] Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, p. 3.

[110] Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, p. 3; Sheila Stokes, ABA, *Proof Committee Hansard,* 12 October 2022, p. 13.

[111] Scott Hansen, DPI, *Proof Committee Hansard,* 12 October 2022, p. 34.

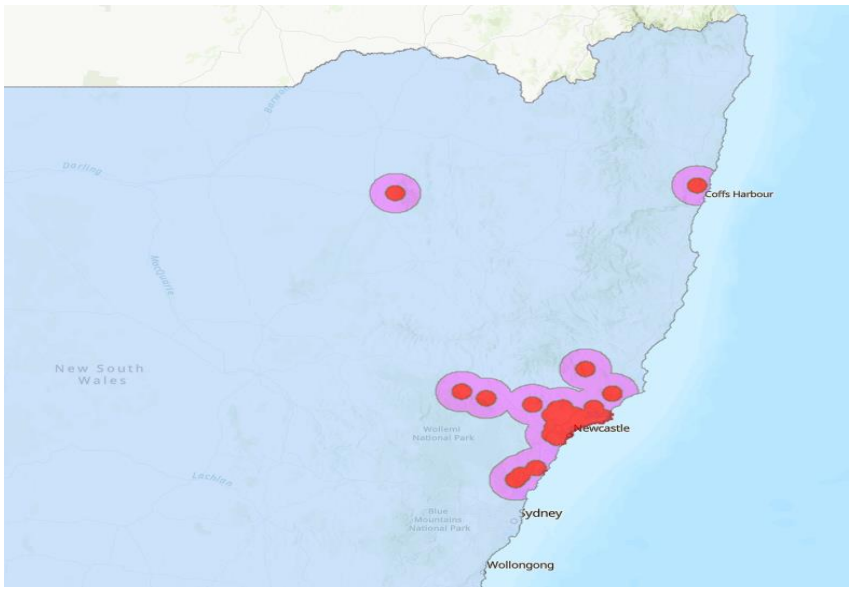
[112] Linda Morris, 'Hundreds more hives to be destroyed after varroa mite discovered outside "red zone"', *Sun Herald,* 27 November 2022, p. 9.

[113] DPI, *Varroa mite emergency response*, Varroa mite emergency response (nsw.gov.au) (accessed 2 December 2022).

[114] Sheila Stokes, ABA, *Proof Committee Hansard,* 12 October 2022, p. 12.

ground since the first detection of varroa mite, made clear that the DPI's commitment 'has been second to none' and those staff on the ground and based in Orange 'have been outstanding'.[115]

Figure 2.3 Varroa mite emergency zone map—September 2022



Source: DPI, Varroa mite emergency response, Varroa mite emergency response (nsw.gov.au) *(accessed 13 September 2022).*

2.66 The scale of the operation across NSW was extensive. Over the first 70 days of the incursion, a total of 250 personnel were on the ground identifying and testing hives, with a further 1,600 government employees working on the response during this time.[116] As of 11 October 2022, 13 819 of the 17 538 hives in the eradication zone had been euthanised (75 per cent). Sampling had taken place across 28 850 hives, with a further 85 569 hives sampled by beekeepers. The DPI has also processed 1 996 movement permit declarations for a total of 333 000 hives. Of those hives, 116 000 supported pollination services within the state.[117] The first 100 days of the outbreak is anticipated to have cost governments and industry between $52 million and $54 million, which does not include direct costs to NSW and individuals.[118]

Origin of the incursion

2.67 Whilst the varroa mite incursion was first detected in sentinel hives located at the Port of Newcastle, further investigation has revealed the incursion had started several months to a year before its detection.[119] The investigation has

[115] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 1.

[116] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 6.

[117] Dr John Tracey, DPI, *Proof Committee Hansard,* 12 October 2022, p. 32.

[118] Scott Hansen, DPI, *Proof Committee Hansard,* 12 October 2022, p. 38.

[119] CSIRO, *Submission 40*, p. 9.

found the area around Williamtown (including Tomago, Raymond Terrace and Salt Ash) to have had the highest density of infected hives, with clear evidence of the natural spread of varroa mite across the area. Extensive alcohol wash data has revealed some of the highest infestation rates to be centred in the Williamtown area, which is home to a Royal Australian Air Force Base (RAAF Base Williamtown).[120]

2.68 On 10 August 2022, DAFF advised the committee that it was not aware of any contact with the Department of Defence concerning the varroa mite outbreak, but was waiting the outcome of an epidemiological assessment by the DPI. At the time, DAFF hypothesised two potential scenarios for the cause of the incursion. The first hypothesis outlined was that the incursion came from a ship waiting off the coast of Newcastle because of supply chain issues caused by the COVID pandemic. The other hypothesis was that the incursion originated from a hitchhiker in an aircraft.[121]

2.69 The AHBIC agreed that the incursion most likely had not originated from the Port of Newcastle. It pointed out that the Williamtown area had multiple pathways of high risk, such as a commercial airport, RAAF base and an industrial area that imports containers and equipment.[122]

2.70 Further information provided to the committee noted that NSW had commenced an investigation into the potential origin of the incursion. However, DAFF indicated that a determination would be difficult due to the nature of the varroa mite. It added that it was likely that 'we will never know the exact first point of entry or how long it may have been present in Australia before detection'.[123]

2.71 On 12 October 2022, DPI updated the committee on its findings. It reported that genetic sequencing had found the varroa mite outbreak to be a common species, indicating that there was only one outbreak, rather than multiple incursions. Regarding its origin, the DPI agreed that it would be difficult to identifying how varroa mite entered Australia, and potentially unlikely.[124] The DPI clarified that its investigation would not consider biosecurity protocols at entry points into Australia because it is the Commonwealth's jurisdiction.[125]

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120 DAFF, Answers to questions taken on notice, 10 August 2022, No. 4, p. 2, (received 22 August 2022).

121 Dr Gabrielle Vivian-Smith, Australian Chief Plant Protection Officer, DAFF, *Proof Committee Hansard,* 10 August 2022, p. 21.

122 Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 3.

123 DAFF, Answers to questions taken on notice, 10 August 2022, No. 4, p. 2 (received 22 August 2022).

124 Scott Hansen, DPI, *Proof Committee Hansard,* 12 October 2022, p. 34.

125 Scott Hansen, DPI, *Proof Committee Hansard,* 12 October 2022, pp. 35–36.

However, it has had discussions with the Commonwealth about the potential point of entry for the varroa mite incursions.[126]

Endemic outbreak

2.72 As previously noted, whilst governments and industry remain focused on the eradication of the varroa mite in Australia, the NSWAA was doubtful eradication was feasible. It called for authorities to start considering measures should varroa mite be declared endemic. In this case, beekeepers would need to have access to organic and chemical solutions capable of protecting their hives.[127] The NSWAA reassured the committee that the bee industry could manage an endemic varroa mite situation based on the experience of other countries. However, it simultaneously supported the implementation of measures (such as traceability) to slow the spread of the varroa mite to minimise its initial impact on industry.[128]

2.73 Concerns with the prospect of an endemic outbreak of varroa mite were not shared by Dolfi Benesh, a commercial beekeeper within the NSW eradication zone. Mr Benesh submitted that the eradication strategy was scientifically controversial, and the approach taken by the DPI was not practical. He questioned the scientific evidence of the approach and referenced the ease of treatment methods utilised worldwide to manage the varroa mite. Mr Benesh's objections to the eradication approach were shared by over 25 000 signatories to an online petition calling for a new approach.[129]

Committee view

2.74 The committee notes the actions of the Indonesian government in response to the challenges of simultaneous FMD and LSD outbreaks in 2022, and the challenges associated with Indonesia's wide geographic spread and working with a large number of livestock smallholders to ensure appropriate biosecurity measures are in place.

2.75 The committee commends the efforts of governments, industry and local communities impacted by the NSW varroa mite incursion. This incursion has had a profound impact on all stakeholders involved, especially for those beekeepers who have had their hives exterminated as part of the response. The committee is supportive of the response measures implemented by the DPI, in recognition that such activities were agreed to by all stakeholders of the EPPRD.

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[126] Dr Chris Anderson, Manager, Plant Biosecurity Prevention and Preparedness and NSW Deputy Chief Plant Protection Officer, DPI, *Proof Committee Hansard,* 12 October 2022, pp. 38–39.

[127] Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, p. 5.

[128] Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, pp. 7–8.

[129] Dolfi Benesh, *Submission 103*, pp. 1–2.

2.76 The committee notes a lack of clarity regarding the potential origins of this varroa mite incursion. Whilst the committee recognises the difficulty of identifying the original entry pathway, a reasonable expectation is that DAFF, in partnership with the DPI and other relevant government bodies, publicly reports on findings from the investigations into the incursion. This information may result in a better understanding of biosecurity protocols in the Williamtown area, with potential insights gained for varroa mite preparedness measures across Australia.

Recommendation 1

2.77 The committee recommends that the Department of Agriculture, Fisheries and Forestry and the New South Wales Department of Primary Industries, publicly report on findings from their investigations into the origin of the varroa mite incursion in the Williamtown area.

2.78 The committee is pleased that the goal shared by the DPI and industry is the eradication of the varroa mite, and that most stakeholders are optimistic of this outcome. The committee will remain engaged with this matter as it progresses from the 100-day eradication plan to the three-year eradication and surveillance program.

Chapter 3
Incursion prevention measures

Pre-border and border biosecurity measures

3.1 Australia's multi-layered biosecurity system, as noted in Chapter 1, incorporates both pre-border and border biosecurity measures. This chapter considers key elements, primarily focusing on matters relevant to foot-and-mouth (FMD) and lumpy-skin-disease (LSD), and where relevant, to varroa mite and plant biosecurity more broadly.

Australian support for regional capability and capacity development

3.2 Australia provides regional leadership and supports capability and capacity development in neighbouring countries as a way of safeguarding the region, limiting the spread of diseases and pests, and preventing biosecurity incursions into Australia. Support is through the provision of technical advice and financial aid, including through partnership programs, in conjunction with state and territory jurisdictions, industry and representative bodies.[1]

3.3 Australia and Indonesia have a long history of collaboration in animal health and the control of infectious diseases going back to at least the 1970s.[2] Australia has implemented a range of specific measures to support Indonesia since the start of its LSD and FMD outbreaks, including:

- $1.5 million in funding, including 1 million FMD vaccinations;[3]
- $500 000 to Meat and Livestock Australia (MLA) to enhance the Indonesian feedlot sector's response to FMD and LSD;[4]

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1 Department of Agriculture, Fisheries and Forestry (DAFF), *Submission 73,* pp. 14–16; DAFF, *National Biosecurity Strategy*, 2022, p. 16. See, for example: Robert Fergusson, Assistant Secretary, Indonesia Branch, Department of Foreign Affairs and Trade (DFAT), *Proof Committee Hansard,* 10 August 2022, p. 9; Wayne Collier, Chief Executive Officer, Australian Livestock Export Corporation Limited (LiveCorp), *Proof Committee Hansard,* 11 October 2022, p. 1.

2 Australia Indonesia Partnership for Emerging Infectious Diseases (AIP-EID) Animal Health Program 2011–15, *Strengthening Indonesia's veterinary services*, 2015, p. 4 (accessed 19 August 2022); Stuart D. Blacksell, Jarunee Siengsanan-Lamont, Somjai Kamolsiripichaiporn, Laurence J. Gleeson, and Peter A. Windsor, A history of FMD research and control programmes in Southeast Asia: lessons from the past informing the future, *Epidemiology and Infection*, 147, 2019, pp. 7–8 (accessed 22 August 2022).

3 Senator the Hon Penny Wong, Minister for Foreign Affairs and Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry, 'Australia supports Indonesia's response to foot and mouth outbreak', *Joint media release,* 14 July 2022 (accessed 15 August 2022).

4 Senator Wong and Senator Watt, 'Australia supports Indonesia's response to foot and mouth outbreak', *Joint media release,* 14 July 2022; DAFF, *Submission 73,* p. 38.

- *$5 million for technical expertise, vaccine distribution and technical support to Indonesia, Timor-Leste and Papua New Guinea (PNG) comprising personnel, logistical support, and diagnostic and epidemiological work;*[5] *and*
- a further $10 million in overseas aid funding to support the FMD and LSD response in Indonesia including 3 million vaccines, seed funding for a livestock identification system, the provision of personal protective equipment and disinfectants, staff training, and biosecurity expertise.[6]

3.4 In total the Australian government has provided around 5 750 000 doses of FMD vaccines and 435 000 doses of LSD vaccines to aid Indonesia's response.[7]

3.5 These measures have been supported by intelligence from Indonesian chief veterinary officers and officials, as well as Australian staff in Indonesia, and the provision of technical and industry advice from Australia.[8]

3.6 The National LSD Action Plan supports continuing government and industry international engagement and capacity building in the region, with Australia to take a lead role in assisting its neighbours, including providing ongoing support to Indonesia to strengthen their LSD response.[9]

3.7 Most submitters who commented on pre-border measures supported the Australian Government's actions in order to minimise risks to Australia[10] and address food security issues for Indonesia.[11] The Australian Livestock Exporters' Council[12] and the Red Meat Advisory Council (RMAC) told the

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5 Senator Watt, '$14 million package builds on biosecurity protection', *Media release,* 15 July 2022 (accessed 15 August 2022).

6 Senator Wong and Senator Watt, 'Strengthening Australia's biosecurity partnership with Indonesia', *Joint media release,* 9 August 2022 (accessed 15 August 2022); Dr Chris Parker, First Assistant Secretary, National Animal Disease Preparedness Coordinator, DAFF, *Proof Committee Hansard,* 10 August 2022, p. 9; DAFF, *Submission 73,* p. 41.

7 Peter Timson, Acting Deputy Secretary, Biosecurity and Compliance Group, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 23; DAFF, Correspondence concerning corrections to the Hansard record, 24 November 2022.

8 DAFF, *Submission 73*, p. 37.

9 Senator Watt, Australia's first national lumpy skin disease action plan launched', *Media release,* 13 October 2022 (accessed 19 October 2022); DAFF, *National lumpy skin action plan*, October 2022, pp. 5–6 (accessed 19 October 2022).

10 See, for example: Australian Academy of Technology & Engineering (ATSE), *Submission 12*, p. 1; Grain Growers, *Submission 20*, [p. 4]; Cattle Council of Australia (CCA), *Submission 44*, pp. 1 and 4; National Farmers' Federation (NFF), *Submission 50*, p. 9.

11 William Wilson, cattle producer and Chair, Cattle Board, AgForce Queensland, *Proof Committee Hansard*, 11 October 2022, p. 31; David Hill, cattle producer and Chair of the LSD and FMD Working Group, CCA, *Proof Committee Hansard*, 11 October 2022, p. 31.

12 Mark Harvey-Sutton, Chief Executive Officer, Australian Livestock Exporters' Council (ALEC), *Proof Committee Hansard*, 15 November 2022, p. 13.

committee of the importance of intergovernmental relations, with the latter stating 'our bilateral relationships with Indonesia are critical for the longer-term success of our sector, and it's vital that any decisions made around tourism or support for Indonesia take into account that longer-term economic dependency on each other'.[13] However, some witnesses including the National Farmers' Federation (NFF), thought that there was greater scope to involve industry partners.[14]

Trade and import controls

3.8 Australia has a range of trade and import controls in place to minimise biosecurity risks for Australia.[15] In relation to FMD, high-risk goods may only be imported from countries or zones that Australia has assessed as FMD-free (without vaccination), while lower risk goods may be permitted from countries where FMD is endemic, but goods need to have been processed.[16]

3.9 Australia enhanced its import conditions for commercial meat, dairy and peat products from Indonesia following the FMD outbreak, with over 2 300 permits varied or suspended to reduce the risk of an FMD incursion.[17] In September 2022, the Minister announced a ban on the importation of meat products for personal use from all countries not recognised as being FMD-free, and during October 2022, restrictions were also implemented in relation to unregulated animal-based pet food.[18]

3.10 The National LSD Action Plan commits to the review of current import policies for products from LSD-affected countries, improved communication in relation to trade issues, and the development of a strategic approach to minimising export trade disruptions in the event of an LSD incursion in Australia.[19]

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[13] John McKillop, Independent Chair, Red Meat Advisory Council (RMAC), *Proof Committee Hansard*, 15 November 2022, p. 7.

[14] NFF, *Submission 50*, p. 9; Wayne Collier, LiveCorp, *Proof Committee Hansard,* 11 October 2022, p. 4.

[15] DAFF, *Submission 73*, pp. 14 and 16–17.

[16] DAFF, *Submission 73*, p. 35.

[17] DAFF, answers to written questions on notice, 12 August 2022, No. 6, IQ22–000027, [pp. 6–7] (received 22 August 2022).

[18] Senator Watt, 'Personal imports of meat banned in FMD crackdown', *Media release*, 7 September 2022 (accessed 13 September 2022); DAFF, 'Alert: Destruction of unregulated animal-based pet food (including rawhide dog chews) imported via mail', *BICON*, 15 October 2022 (accessed 19 October 2022); Peter Timson, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 23.

[19] Senator Watt, 'Australia's first national lumpy skin disease action plan launched', *Media release*, 13 October 2022; DAFF, *National lumpy skin action plan*, October 2022, pp. 7–8.

3.11 The department also conducts other trade preparedness work in conjunction with other departments and industry.[20]

3.12 Wilmot Cattle Company told the committee that more could have been done to restrict high risk food imports earlier, suggesting that an immediate ban on all imported food products under 10 kilograms originating from countries with FMD and other significant diseases should have been put in place.[21]

Off-shore surveillance and intelligence gathering

3.13 DAFF also undertakes strategic intelligence gathering and horizon scanning activities offshore to better anticipate, identify and analyse emerging biosecurity risks, including monitoring the disease and pest status of trading partners.[22]

3.14 DAFF has enhanced its intelligence gathering and sharing activities and offshore surveillance, through the support of a range of FMD and LSD surveillance programs, including through sentinel herds in PNG and Timor-Leste.[23]

3.15 Property Rights Australia argued that the government's FMD and LSD pre-border response could have been improved by using offshore sentinel herds in South Asia.[24]

3.16 In relation to plant diseases and pests, plant industries highlighted gaps in pre-border data collection and surveillance. The Plant Industry Forum/Citrus Australia referenced the importance of integrating the freight industry into the biosecurity system, through training and container traceability.[25] With regard to container traceability, the Freight and Trade Alliance noted that the 'inability to risk assess based on container history due to the lack of data' was a likely contributor 'to a spike in khapra beetle incursion in recent times'.[26]

Committee view

3.17 Based on the evidence received during the inquiry, the committee concludes that Australia's pre-border measures have been largely effective. The committee recognises the long-standing support for international partners in

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20 Peter Timson, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 23.

21 Wilmot Cattle Company, *Submission 88*, p. 2.

22 DAFF, *Submission 73*, pp. 14 and 16.

23 DAFF, *Submission 73*, pp. 14 and 16; Charles Sturt University, *Submission 28*, p. 5; Department of Home Affairs, *Submission 43*, p. 3.

24 Property Rights Australia, *Submission 23*, [p. 4].

25 Nathan Hancock, Chair, Plant Industry Forum; and Chief Executive Officer, Citrus Australia, *Proof Committee Hansard,* 12 October 2022, p. 18.

26 Freight and Trade Alliance, *Submission 19*, p. 1.

relation to local, regional capacity and capability development and surveillance. In particular, the committee commends recent government and industry efforts to support Indonesia in its response to FMD and LSD.

3.18 The committee notes that ongoing initiatives and opportunities exist to further this work, including as part of the National LSD Action Plan and *international partnerships such as the World Organisation for Animal Health (WOAH).*

3.19 Given the risks posed by the import of unregulated meat products potentially carrying diseases, including FMD, the committee considers that the department's decisions to impose further import restrictions should have been made earlier. Decision-making by the department needs to better consider the competing interests of importers against those of Australia's producers and consumers.

3.20 The committee sees potential in enhancing the freight industry's role in pre-border biosecurity processes through additional training and traceability measures. Whilst supportive of these measures, the committee foresees significant challenges with the development of a pre-border container traceability system. Despite this view, the committee is supportive of ongoing work in this space.

Recommendation 2

3.21 The committee recommends that the Department of Agriculture, Fisheries and Forestry review its food import risk frameworks to ensure that they are fit for purpose and that decisions under the frameworks are accelerated where required.

Border biosecurity measures

3.22 Biosecurity measures are also implemented at the border to stop or detect biosecurity risks before they can spread and include the development of effective operational frameworks and procedures, regulatory systems, as well as surveillance, border control and screening arrangements, and education and awareness activities.

Passenger assessment and screening

3.23 The Australian Government has established a range of border biosecurity measures for airline passengers entering Australia. Additional measures applied from July 2022, after reports of FMD in Indonesia and Bali.[27] Measures included:

- assessment of 100 per cent of passengers against biosecurity risk profiles, with higher risk passengers flagged and subject to screening such as x-ray, detector dog or manual baggage inspection;

[27] DAFF, *Submission 73*, pp. 38–39.

- all passengers using the SmartGates or in manual immigration lines asked whether they have been in Indonesia and subject to further assessment, including targeted questioning and screening;
- passengers who declare biosecurity goods or high risk activities on the Incoming Passenger Card referred for biosecurity assessment;
- real-time biosecurity assessments completed by biosecurity officers in baggage collection areas with passengers referred for biosecurity screening as needed;[28] and
- sanitisation foot mats for travellers arriving directly from Indonesia, along with additional staff to support implementation.[29]

3.24 Related measures such as the declaration of biosecurity zones under the *Biosecurity Act 2015* (the Biosecurity Act), additional powers for biosecurity officers, additional staff, additional training, and the redeployment of detector dogs have supported the implementation of these measures.[30]

3.25 DAFF advised that airline passenger entry is a 'highly compliant pathway' with passengers declaring 98 per cent of FMD risk products, additional products seized, and compliance and enforcement action taken as required. Since April 2019, 726 people have been fined $2 664 and 20 visas have been cancelled because of biosecurity related offences.[31] Colin Hunter, of the department's Biosecurity Operations Division told the committee that:

> I can assure you that the full weight of the law is being applied at the border through the Infringement Notice Scheme. Where appropriate, we work with Border Force and our enforcement colleagues to take those matters to the courts where an infringement notice is not appropriate.[32]

3.26 Submissions to the committee highlighted several areas in which stakeholders felt that more could have been done. The Australian Livestock and Rural Transporters Association (ALTRA)[33] and Green Shirts Movement Queensland considered the risk to be so significant that Australia's border with Indonesia

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[28] DAFF, answers to written questions on notice, 12 August 2022, No. 6, IQ22–000027, [pp. 6–7] (received 22 August 2022).

[29] Colin Hunter, First Assistant Secretary, Biosecurity Operations Division, DAFF, *Proof Committee Hansard,* 10 August 2022, p. 4; DAFF, Answer to a written question on notice, IQ22-000033, pp. 1–2 (received 22 August 2022).

[30] DAFF, *Submission 73*, pp. 38–41.

[31] DAFF, *Submission 73,* pp. 20 and 42; DAFF, answers to written questions on notice, 12 August 2022, No. 6, IQ22–000027, [p. 7] (received 22 August 2022); Colin Hunter, DAFF, *Proof Committee Hansard*, 15 November 2022, pp. 28–29; Colin Hunter, DAFF, correspondence received 24 November 2022, p. 2.

[32] Colin Hunter, DAFF, *Proof Committee Hansard*, 15 November 2022, p. 29.

[33] Australian Livestock and Rural Transporters Association (ALTRA), *Submission 78,* p. 8; Mathew Munro, Executive Director, ALTRA, *Proof Committee Hansard*, 11 October 2022, pp. 19, 21 and 24.

should have been closed to non-essential travel until FMD was under control in Indonesia.[34]

3.27 In contrast, the Australian Livestock Export Corporation Limited (LiveCorp) warned that any decision to close borders needed to be based on 'very strong scientific justification' given the significant lasting trade, reputation, and economic effects.[35]

3.28 Australian Dairy Farmers[36] and Property Rights Australia observed that the Australian Government response was too slow, even after FMD was confirmed in Bali,[37] with the latter stating:

> Emergency measures on almost every count seemed to be slow to be approved and slow to roll out … We also note from the evidence of Mr. Mettcalf [sic], Secretary of DAFF, that evidence of FMD was informal until 9th May when Indonesia reported it to the World Organisation of Animal Health. This was a 'trigger'. WE believe that waiting for a formal response from the country of origin before any measures are taken may not always be an appropriate response and may lead to a fatal delay.[38]

3.29 They advised, along with Jim Fletcher, that the implementation of passenger screening measures has been patchy, with the potential to compromise Australia's biosecurity system. In addition, the Community and Public Sector Union (CPSU) told the committee that risks were downgraded to reduce long queues and delays at Sydney airport resulting from understaffing.[39]

3.30 Mr Fletcher suggested better training and more thorough implementation of border measures.[40] Several witnesses called for improvements to passenger screening, including the screening of 80 per cent of arriving passengers,[41] luggage inspections for all travellers from Indonesia,[42] additional screening and bans for passengers travelling to rural or peri-urban destinations,[43]

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34 Green Shirts Movement Queensland, *Submission 60,* [pp. 4–5].

35 Wayne Collier, LiveCorp, *Proof Committee Hansard,* 11 October 2022, p. 5.

36 Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 2.

37 Property Rights Australia, *Submission 23,* [pp. 1–2].

38 Property Rights Australia, *Submission 23,* [p. 4].

39 Community and Public Sector Union (CPSU), *Submission 76,* p. 4.

40 Jim Fletcher, *Submission 11,* pp. 1–2.

41 Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 6; Angus Hobson, *Submission 63,* p. 6.

42 Property Rights Australia, *Submission 23,* pp. 1–2.

43 Wilmot Cattle Company, *Submission 88,* p. 2; Property Rights Australia, *Submission 23,* p. 3.

additional detector dogs,[44] and the implementation of more advanced x-ray technology.[45]

3.31 DAFF highlighted the challenges associated with screening all luggage, noting:

> … there are no reliable costings for the department to conduct full 100% baggage inspections (full unpack and repack) on all arriving Indonesian travellers, as it is not logistically possible to do so at major airports like Sydney and Melbourne.[46]

3.32 The Inspector-General of Biosecurity (IGB) has conducted several reviews into the efficacy and adequacy of DAFF's x-ray scanning and detector dog screening techniques, noting that the use of detector dogs and x-ray machines will support Australia's biosecurity system to an appropriate level.[47] One review noted the importance of continuing to use a combination of 2-dimensional x-ray technology along with detector dogs beyond 2030, while 3-dimensional x-ray capability is under development.[48] $11.7 million over four years additional funding for detector dogs was provided in the October 2022 budget to improve capability.[49]

3.33 Angus Hobson suggested a broader, independent audit of airport biosecurity measures, to identify gaps, quantify additional resources needed and test technological measures.[50]

Border communications and awareness

3.34 The Australian government has undertaken a range of border communications and awareness activities, including changes to passenger card declarations, biosecurity announcements, placement of signage and bins for disposal of

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44 CCA, *Submission 44*, [p. 1].

45 Freight and Trade Alliance, *Submission 19*, Attachment B, p. 1; Wilmot Cattle Company, *Submission 88*, p. 2; Inspector-General of Biosecurity (IGB), *Biosecurity risk management of international express airfreight pathway for non-commercial consignments*, Review Report no. 2019–20/03, 2020. The Hon Mark Furner MP, Minister for Agriculture, Industry Development Queensland, *Submission 69*, p. 6.

46 DAFF, answer to a written question on notice, IQ22–000027, p. 2 (received 22 August 2022).

47 IGB, *Efficacy and adequacy of department's X-ray scanning and detector dog screening techniques to prevent the entry of biosecurity risk material into Australia*, Review report no. 2022–23/03, 2022, p. 2 (accessed 19 September 2022); DAFF, *Submission 73*, p. 64.

48 DAFF, *Innovative Biosecurity 3D X-ray Project* (accessed 19 September 2022); DAFF, answer to a written question on notice, IQ22–000027, pp. 2–3 (received 22 August 2022); IGB, *Efficacy and adequacy of department's X-ray scanning and detector dog screening techniques to prevent the entry of biosecurity risk material into Australia*, Review report no. 2022–23/03, 2022, pp. 2–3, 13, 58 and 65.

49 Commonwealth of Australia, *Budget October 2022–23: Budget measures*, Budget paper no. 2, 2022, p. 44 (accessed 26 October 2022).

50 Angus Hobson, *Submission 63*, p. 6.

foodstuffs, updates to import documentation, and industry awareness raising.[51]

3.35 Following the Indonesian FMD outbreak these communications and awareness raising activities increased.[52] Travellers were given new biosecurity messages and flyers, including FMD-specific advice, with airport broadcasts and additional airport signage also installed.[53] Biosecurity messaging was increased on the Biosecurity, Smartraveller and other government webpages, on social media, via airlines and travel agents, and at Bali holiday accommodation.[54]

3.36 The CCA,[55] WoolProducers Australia[56] and the NFF called for increased industry-government collaboration, and clearer public communications and expert advice in relation to biosecurity issues, including traveller responsibilities. The NFF also called for enhancements to the existing National Biosecurity Communications and Engagement Network.[57]

3.37 Evidence provided by Green Shirts Queensland and Property Rights Australia highlighted lack of awareness of the impacts of an FMD incursion by some Australian travellers, and concern at over-reliance on passenger honesty. One traveller reportedly said, 'I know the name foot and mouth, but I don't know what it is, what it's from or if it affects humans … After they didn't close the border I forgot about it'.[58]

3.38 Property Rights Australia called government messaging and signage 'boring and incomplete' and 'bland and not confronting', arguing that messages about the urgency and importance of biosecurity did not have sufficient impact.[59] Both Green Shirts Queensland and Wilmot Cattle Company argued for improved biosecurity and FMD-specific communications for travellers.[60]

3.39 Green Shirts Australia and Mr Fletcher called for greater transparency and more communications from the Australian Government (for example, in

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51 DAFF, *Submission 73*, p. 19.

52 DAFF, *Submission 73*, p. 41; Peta Lane, First Assistant Secretary, Biosecurity Strategy and Reform Division, DAFF, *Proof Committee Hansard*, 15 November 2022, p. 29.

53 DAFF, answers to written questions on notice, 12 August 2022, No. 6, IQ22–000027, [p. 7] (received 22 August 2022); DAFF, *Submission 73*, pp. 38–41.

54 DAFF, *Submission 73*, pp. 39–41; DAFF, answers to written questions on notice, 12 August 2022, No. 6, IQ22–000042, [p. 20] (received 22 August 2022).

55 CCA, *Submission 44*, p. 9.

56 Wool Producers Australia, *Submission 67*, p. 5.

57 NFF, *Submission 50*, pp. 11–12.

58 Green Shirts Queensland, *Submission 60*, pp. 5 and 7.

59 Property Rights Australia, *Submission 23*, pp. 1–2.

60 Green Shirts Queensland, *Submission 60*, p. 7; Wilmot Cattle Company, *Submission 88*, p. 3.

relation to product testing) to ensure that producers are sufficiently informed and to promote cooperation and confidence in the biosecurity system.[61]

Mail and cargo imports

3.40 DAFF has a number of cargo reform projects to manage and streamline incoming mail and cargo screening.[62] System improvements are complicated by continued disruptions to the shipping industry arising from global conflicts and COVID-19, which are forecast to continue into 2023.[63]

3.41 In July 2022, the Australian Government announced increased screening of mail and cargo for traces of FMD, with the implementation of 100 per cent of non-letter mail inspections for mail arriving from Indonesia and China; and the recruitment of 18 additional biosecurity officers at airports and mail centres.[64]

3.42 DAFF has also undertaken assurance activities to test and measure the effectiveness of its biosecurity measures, including the testing of meat products seized at the border from in bound passengers, and through the mail, as well as purchasing and testing of imported food for sale in Australian stores.[65] Although one sample tested positive for deoxyribonucleic acid (DNA) fragments of FMD and African Swine Fever (ASF), this finding did not mean that viable virus was present in the product, and it did not change Australia's disease status.[66]

3.43 Several importers, including the Freight and Trade Alliance, drew attention to long inspection delays, labour-intensive systems, and inadequate communications from the department. These submitters noted that delayed inspections have resulted in consequential contractual failures and significant container detention and storage fees for them and their clients.[67]

3.44 Industry representatives suggested that problems could be addressed by: establishing the importer-departmental relationship as a partnership or

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61 Green Shirts Queensland, *Submission 60,* p. 5; Jim Fletcher, *Submission 11,* pp. 1–2.

62 DAFF, *Submission 73,* p. 18; Commonwealth of Australia, *Budget 2021–22: Budget measures 2021–22—Budget paper No. 2*, 11 May 2021, p. 52 (accessed 20 September 2022).

63 Department of Agriculture, Water and the Environment (DAWE), *Incoming government brief: vol. 1: Agriculture*, June 2022, p. 23 (accessed 23 September 2022).

64 DAFF, *Submission 73*, pp. 3 and 38–39; Department of Home Affairs, *Submission 43,* p. 2.

65 DAFF, *Submission 73*, pp. 41–42; DAFF, Biosecurity vigilance brought to the fore', *Media release,* 20 July 2022 (accessed 16 September 2022).

66 DAFF, *Submission 73*, p. 42.

67 See, for example: Name withheld, *Submission 57,* [p. 1]; Name withheld, *Submission 58,* [pp. 1–2]; Name withheld, *Submission 59,* [p. 1]; D2D Global Logistics, *Submission 1,* [p. 1]; Freight and Trade Alliance, *Submission 19,* [p. 1].

customer-service provider association; improving technology to reduce problems with inspection bookings and information sharing; simplifying and deregulating trade arrangements; fast-tracking trusted importers initiatives; ensuring that large importers have permanent inspection bookings; and adequately resourcing inspections.[68]

3.45 The CPSU advised the committee of a range of problems, including declines in staffing levels and increases in insecure work, despite increasing cargo and mail volumes and changing workloads. It cited an over-reliance on documentation when clearing imports, and over-reliance on approved arrangements with insufficient assurance surveillance.[69] By way of example, it admitted:

> Members in various biosecurity work areas have reported that CCV [cargo compliance verification] inspections are often cancelled when officers are not available to conduct these inspections within 3 days of arrival as the import industry do not want cargo held and these inspections are not cost recovered.[70]

3.46 The union highlighted the 'inability [of current arrangements] to manage current risks'[71] and argued for a larger departmental inspection workforce,[72] submitting that:

> Having industry participants effectively self-regulate by managing these risks allows the import industry to reduce its costs while risking the integrity of our biosecurity system. There is a conflict of interest as importers inevitably consider the monetary impact when making decisions and assessments about biosecurity risk.[73]

3.47 In September 2022, the Australian Government announced the establishment of the Cargo Service Rapid Response Team to help address increased workloads and delays in biosecurity clearance affecting commercial cargo imports. This team has provided additional capacity to manage and reduce delays and enhance industry collaboration and conducted a range of engagement activities.[74] The department is continuing to develop an infringement notice scheme to address non-compliance in the cargo, maritime and mail pathways.[75]

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68 Name withheld, *Submission 59*, p. [1]; Freight and Trade Alliance, *Submission 19*, [p. 2–3].

69 CPSU, *Submission 76*, pp. 2–4.

70 CPSU, *Submission 76*, p. 4.

71 CPSU, *Submission 76*, p. 5.

72 CPSU, *Submission 76*, p. 5.

73 CPSU, *Submission 76*, p. 5.

74 DAFF, '182-2022: Establishment of the Cargo Service Delivery Rapid Response Team', *Industry advice notice*, 28 September 2022 (accessed 7 October 2022).

75 Colin Hunter, DAFF, *Proof Committee Hansard*, 15 November 2022, p. 29.

3.48 In relation to livestock transport, LiveCorp highlighted that additional measures put in place, including in response to the COVID-19 pandemic, have helped address biosecurity risks associated with the return of livestock transport vessels to Australia, including in relation to washing, disinfecting, fumigating, reduction of foot traffic, and the use of foot baths.[76]

3.49 In terms of plant biosecurity measures, the committee received evidence that highlighted potential improvements to cargo screening measures. The Freight and Trade Alliance listed several longer-term biosecurity reforms, many of which were in their pilot phase, but would enhance border surveillance with new and emerging technologies. These reforms would see greater integration and use of x-ray technology, environmental DNA (eDNA) testing, handheld technologies, sensor and camera systems and artificial intelligence into border screening processes.[77]

3.50 One diagnostic measure that has been progressed is Australia's eDNA biosecurity capability, with the establishment of a National eDNA Reference Centre and eDNA Collaboration Network. DAFF, in partnership with the University of Canberra and the Centre for Invasive Species Solutions (CISS), established the Centre to enhance the department's National eDNA Testing Program that assists with biosecurity decisions at the border and beyond. At present, eDNA testing is being used to detect khapra beetle and brown marmorated stink bugs arriving in sea containers, with additional capabilities being rolled out over between 2022 and 2026.[78] The CISS and Commonwealth Scientific and Industrial Research Organisation (CSIRO) reported that eDNA technology could be applied to detect a range of exotic bee pests and diseases, including varroa mite.[79]

Committee view

3.51 Australia's border measures have been largely effective to date, however the committee has received evidence that the system is under pressure and fragile, because of increasing biosecurity threats, more mobile populations, and resourcing and capability constraints.

3.52 The committee received a range of evidence regarding the effectiveness of Australia's border assessment and screening measures. Both the previous and current governments put measures in place to address the risks posed by regional incursions of FMD and LSD through returning air travellers, which

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[76] Wayne Collier, LiveCorp, *Proof Committee Hansard,* 11 October 2022, pp. 2–3.

[77] Freight and Trade Alliance, *Submission 19,* p. 6.

[78] DAFF, 'National eDNA Reference Centre launched with University of Canberra', *Media release,* 20 January 2022 (accessed 19 October 2022).

[79] Centre for Invasive Species Solutions (CISS), *Submission 99*, pp. 1, 5-6; Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Submission 40*, p. 9.

resulted in high levels of compliance and greater levels of biosecurity awareness by the public.

3.53 However, the committee also heard that implementation of some measures appears to have been patchy, and dependent upon the availability of biosecurity staff and resources on the ground. While there is future scope for screening to be further automated and improved through technology—potentially strengthening diagnostic capabilities, streamlining screening processes and bolstering human resource capabilities—the committee agrees with the government approach to maintain more traditional screening methods while the new capability is developed and becomes more reliable. The department may also wish to consider the need for an independent audit of border assessment and screening arrangements to determine their effectiveness and identify any areas for improvement.

3.54 The committee remains concerned that importers continue to be impacted by inspection delays and challenges resulting in higher container storage and detention costs. The committee heard that problems have been caused by ongoing effects of COVID-19 on officer availability, lack of resourcing, and the need to further develop industry partnerships and trusted importer arrangements.

3.55 The committee understands the department is aware of the key issues impacting arrivals and entry of mail and cargo to Australia and is undertaking ongoing work to address these issues and improve services, but emphasises that this work needs to be prioritised and fast-tracked.

Recommendation 3

3.56 The committee recommends that the Department of Agriculture, Fisheries and Forestry prioritises the enhancement of screening and assessment systems to facilitate the timely processing of mail and cargo entering Australia.

Recommendation 4

3.57 The committee recommends that the Australian Government consults with freight, shipping, port and biosecurity stakeholders, including Australia Post, to develop priorities for the implementation and funding of new and emerging technologies into mail and cargo biosecurity screening systems.

Chapter 4
On-shore surveillance

Overview of on-shore prevention and detection biosecurity activities

4.1 The core focus of this chapter is on-shore surveillance activities. These measures are designed to detect and assess the size and severity of an incursion, and support the necessary proof of freedom from disease should an incursion take place. The chapter considers these surveillance measures within the context of foot-and-mouth disease (FMD) and lumpy skin disease (LSD), and national bee pest surveillance and biosecurity programs. The chapter concludes with consideration of the management of feral and invasive populations, including internal varroa mite pest control measures.

On-shore surveillance—FMD and LSD

4.2 Animal Health Australia (AHA) 'manages the national animal health surveillance and monitoring programs,' such as the National Significant Diseases Investigation Program and the National Arbovirus Monitoring Program, under the authority of federal, state and territory governments. It also plays a central role in data capture, analysis and reporting and related policy.[1] Wildlife Health Australia's activities include managing national wildlife disease surveillance programs, as well as facilitating investigations of disease incidents and providing input into emergency animal disease (EAD) preparedness.[2]

4.3 The Northern Australia Quarantine Strategy (NAQS) works with a range of stakeholders including state and territory governments and Aboriginal and Torres Strait Islander communities, including supporting the Northern Australia Surveillance network. NAQS undertakes a range of activities including feral and other animal health surveys, monitoring of sentinel animals, vector trapping, and community reporting projects targeting a number of animal pests and diseases including FMD and LSD.[3]

4.4 Between January 2021 and March 2022, five routine tests were conducted for LSD under the NAQS, with no animals testing positive for the disease. In the same period testing for FMD and LSD was conducted as part of national

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1 Animal Health Australia (AHA), *Submission 83*, p. 14. See also: Victorian Department of Jobs, Precincts and Regions, *Submission 95*, p. 2; Jim Fletcher, *Submission 11*, Attachment 1, p. 16; Department of Agriculture, Fisheries and Forestry (DAFF), *National lumpy skin action plan*, October 2022, p. 11 (accessed 19 October 2022).

2 DAFF, *Submission 73*, p. 10.

3 AHA, *Animal Health Surveillance Quarterly*, January to March 2022, Volume 27, Issue 1, p. 5, pp. 4–5 (accessed 18 October 2022).

notifiable animal diseases investigations, with all 11 cattle investigations finding negative for FMD, all 11 cattle investigations finding negative for LSD, and all four sheep investigations finding negative for FMD.[4]

4.5 One of the National LSD Action Plan's objectives is to improve LSD surveillance, through a range of activities including the development of a national LSD surveillance strategy, as well as the development and review of bovid and arthropod monitoring programs, and training and awareness programs.[5]

4.6 Other FMD-related surveillance programs include the successful Commonwealth Scientific and Industrial Research Organisation (CSIRO), Charles Sturt University and Meat and Livestock Australia (MLA) partnership on the ten-year project, *FMD Ready*. The project was aimed at increasing EAD preparedness, especially for FMD, improving disease surveillance, including by producers, to aid reporting and incursion identification and management.[6]

4.7 The committee heard that, with FMD and LSD on Australia's doorstop, further resources should be devoted to surveillance programs. Australian Pork Limited advised the committee of the need for a more collaborative, coordinated, and robust national surveillance (and diagnostic) system, including through a greater focus on harmonised methodologies.[7]

4.8 Other witnesses advised of the need to better use sentinel herds in South Asia, and that greater surveillance of feral populations is required, including using non-government resources such as hunters, landowners and Indigenous communities,[8] as well as community supported or citizen science surveillance.[9] The Australian Veterinary Association (AVA) and other submitters called for greater surveillance through the engagement of private veterinary practices

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4 AHA, *Animal Health Surveillance Quarterly*, January to March 2022, Volume 27, Issue 1, pp. 6, 34, 37 and 41–42.

5 DAFF, *National lumpy skin action plan*, October 2022, pp. 10, 11–12, 14–15 and 17. See also: Department of Agriculture, Water and the Environment (DAWE), *Commonwealth biosecurity 2030: Action plan 2022*, 2022, p. 21 (accessed 12 September 2022); DAFF, *Submission 73*, p. 44.

6 Rural Research and Development Corporations, *Submission 21*, p. 2; Charles Sturt University, *Submission 28*, p. 6; Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Submission 40*, pp. 5–6.

7 Australian Pork Limited, *Submission 74*, p. 4.

8 Saba Sinai, Australian Strategic Policy Institute, *'Deep roots': agriculture, national security and nation-building in northern Australia (Strategy 2022)*, August 2022, p. 44 (accessed 20 September 2022); Property Rights Australia, *Submission 23*, p. 4.

9 Invasive Species Council, *Submission 92*, pp. 3, 9 and 12–13. See also: Northern Territory Department of Industry, Tourism and Trade, *Submission 94*, p. 2; Centre for Invasive Species Solutions (CISS), *Submission 99*, p. 4.

and public-private surveillance initiatives, as well as companion, and wildlife disease surveillance.[10]

4.9 However, the Invasive Species Council observed that producer and citizen surveillance is not sufficient, advising that 'relying on livestock owners to be vigilant and observe feral pigs and buffalo near their properties for symptoms is not enough to adequately address this risk'.[11]

4.10 The Cattle Council of Australia (CCA) recommended the introduction of specific FMD and LSD surveillance activities targeted at disease pathways, including weather and vector modelling for potential LSD incursions, as well as the take up of new and innovative surveillance techniques to improve detection, a view supported by the Invasive Species Council and Northern Territory Government.[12]

4.11 Illumina supported the utilisation of more innovative surveillance tools through genomic technologies, research and data in order to detect and understand an incursion and plan a response.[13] Australian Pork Limited called for better use of technology such as pen side testing, application of artificial intelligence and analytics in relation to disease spread, and access to better resources to enable producers to identify EADs,[14] while the Northern Territory government called for the deployment of remote sensors, environmental deoxyribonucleic acid (eDNA) techniques and a northern coordination network to improve surveillance.[15]

Committee view

4.12 There are substantial benefits—including economic benefits—in keeping pests and diseases out of Australia rather than trying to manage them after they have entered Australia. The committee notes that the October 2022 budget has committed $61.6 million over two years from 2022–23 to strengthen Australia's

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[10] Australian Veterinary Association (AVA), *Submission 18,* pp. 3–6. See also: Animal Medicines Australia (AMA), *Submission 35,* pp. 5 and 7; Australian Pork Limited, *Submission 74,* p. 4; Red Meat Advisory Council (RMAC), *Submission 77,* [pp. 6–7].

[11] Invasive Species Council, *Submission 92,* pp. 7–8.

[12] Cattle Council of Australia (CCA), *Submission 44,* pp. 6–8; Invasive Species Council, *Submission 92,* p. 13; Northern Territory Department of Industry, Tourism and Trade, *Submission 94,* p. 2. See also: Australian Pork Limited, *Submission 74,* p. 4; Department of Primary Industries and Regional Development Western Australian, *Submission 80,* [p. 7].

[13] Illumina, *Submission 64*, pp. 2–5.

[14] Australian Pork Limited, *Submission 74,* pp. 13–14.

[15] Northern Territory Department of Industry, Tourism and Trade, *Submission 94,* p. 3.

frontline biosecurity capability, including enhancing the domestic detection and response capability in northern Australia, amongst other measures.[16]

4.13 The committee supports this greater focus and investment in on-shore surveillance, monitoring and early detection activities, particularly in northern Australia, and including the development and implementation of the National LSD Action Plan. These measures will help safeguard the country's trade status and clean, green reputation, the natural environment, and the livelihoods and lifestyles of Australian producers and residents.

On-shore surveillance—bee biosecurity

4.14 Australia's bee pest surveillance program incorporates surveillance activities surrounding high to medium-risk ports. These surveillance activities are designed to ensure any incursion is swiftly detected and eradicated. Supporting that program is the National Bee Biosecurity Program, which supports the management of established bee pests and disease, and preparedness for and surveillance of exotic bee pests within the honey bee industry.

National Bee Pest Surveillance Program

4.15 The backbone of Australia's bee biosecurity program is the National Bee Pest Surveillance Program (NBPSP). The NBPSP establishes a network of sentinel hives and catch boxes at 25 port locations across Australia (see Table 4.1 for locations). The program acts as an early warning system for a varroa mite incursion, as well as other pest beetles, viruses, pest bees, hornets and wasps. High-risk ports have four to six sentinel hives that are inspected every six weeks by bee biosecurity officers. General port surveillance activities and industry awareness activities complement the NBPSP to ensure exotic bee swarms, pests and diseases are promptly detected.[17] In addition to sentinel hives, other activities such as catchboxes, floral sweep netting and swarm/feral nest capture are used to assist bee biosecurity functions.[18]

4.16 Nationally, the NBPSP is administered and coordinated by Plant Health Australia (PHA) and is delivered by state and territory primary industry departments in their respective jurisdictions. The program has been an industry-government partnership since 2012, with Horticulture Innovation Australia (Hort Innovation) as a major funder, with other funds leveraged

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[16] Commonwealth of Australia, *Budget October 2022–23: Budget measures*, Budget paper no. 2, 2022, p. 44 (accessed 26 October 2022).

[17] CSIRO, *Submission 40*, p. 9

[18] Horticulture Innovation Australia (Hort Innovation), *Final Report: National honey bee pest surveillance program*, February 2019, pp. 8–13.

from horticulture industries, grains, the Australian Government and through Emergency Plant Pest Response and PHA levies.[19]

4.17 Eight of the 25 ports subject to the NBPSP are classified as high-risk ports. These high-risk ports are operationally funded through the NBPSP, with the remaining surveillance activities at other locations operationally funded through in-kind contributions by state and territory jurisdictions.[20]

Reviews of the NBPSP

4.18 The NBPSP has been subject to a number of reviews and assessments that have sought to improve and focus bee biosecurity activities and resources.[21] A 2016 review of the NBPSP by Hort Innovation considered inspection periods and the number and location of sentinel hives across Australia's air and sea ports. The report utilised the *Varroa Spread Model* 'to identify surveillance components that would be required to achieve the highest likelihood of detection'.[22] The report subsequently made recommendations on the number of sentinel hives located at all high and medium risk ports, along with increasing the frequency of inspection periods.[23]

4.19 The review by Hort Innovation resulted in several amendments to the NBPSP. PHA reported that these amendments included:

- surveillance activities incorporating 33 sea and air ports;
- the number of sentinel hives increasing from 26 in 2011 to 178 in 2018;
- the inspection and testing of sentinel hives every six weeks;
- reposition of sentinel hives around ports;
- the incorporation of surveillance methods for exotic honey bee viruses, African hive beetle and Asian hornets;
- improved remote surveillance catchboxes deployed nationwide; and
- increased floral sweeping activities at 17 of the highest risk ports.[24]

4.20 As detailed above, surveillance activities were in place at 33 sea and air ports, with 178 sentinel hives operating in 2018. However, evidence provided to the

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19 DAFF, *Submission 73*, p. 47; Plant Health Australia (PHA), *Submission 85*, [p. 3].

20 PHA, *Submission 85*, [p. 3].

21 These reviews and assessment include: Review of the National Sentinel Hive Program (Boland, 2005); Risk assessment of ports for bee pests and pest bees (CSIRO, 2013); Statical Review and Redesign of the National Bee Pest Surveillance Program (PHA, 2016); Ports Risk Assessment for Bee Biosecurity (DAWE, 2020); and Review of the National Bee Pest Surveillance Program (Glanville, 2020).

PHA, *Submission 85*, [p. 5].

22 Hort Innovation, *Final Report: National honey bee pest surveillance program,* 2016, p. 28.

23 Hort Innovation, *Final Report: National honey bee pest surveillance program,* 2016, p. 28.

24 PHA, *National Bee Pest Surveillance Program*, 2018, p. 4 (accessed 15 September 2022).

committee by DAFF on behalf of PHA revealed a reduction in both the number of ports subject to surveillance activities (25 ports) and the number of sentinel hives (107 sentinel hives). Table 4.1 shows the breakdown of the NBPSP as of August 2022:

Table 4.1 Breakdown of the National Bee Pest Surveillance Program, August 2022

Jurisdiction	Locations	No. of sentinel hives	No. of standard catch boxes	No. of remote catch boxes
Qld	Port of Brisbane, Port of Townsville.	6	16	6
NSW	Port Botany, Port Kembla, Newcastle.	18	10	5
Vic	Port of Melbourne, Port of Geelong, Port of Portland, Westernport.	18	29	6
Tas	Port of Bell Bay, Port of Hobart, Port of Devonport, Port of Burnie, Port Latta, Triabunna.	19	11	3
NT	Port of Darwin.	4	8	0
SA	Port Adelaide, Adelaide airport.	10	13	5
WA	Fremantle Harbour, Port of Bunbury, Geraldton Port, Kwinana, Perth Airport, Esperance Port, Port of Albany.	32	30	4
Total		**107**	**117**	**27**

Source: DAFF, Answers to questions on notice, p. 3, 10 August 2022 (received 22 August 2022)

2021–2024 National Bee Pest Surveillance Program

4.21 The most recent iteration of the NBPSP for 2021–24 has incorporated many of the accumulated findings from various reviews. This revised program has established a risk-based methodology, which according to PHA has 're-

prioritised the resources available … to target the eight highest risk ports of entry'.[25]

4.22 The rationale for a risk-based approach was criticised by the AHBIC. It observed that the 'delivery of the wide range of surveillance techniques across the large number of sites in the 2016–21 program' had resulted in 'severe pressure across project partners … jeopardising delivery at the highest risk ports'. The Australian Honey Bee Industry Council (AHBIC) contended that 'this pressure was a result of the [2016–21] program being significantly under-resourced'. It added that the 'true costs of the program across all partners was not captured'.[26]

4.23 The application of a risk-based methodology was also criticised by the Queensland Beekeepers' Association (QBA). It expressed concern with the development of the 2021–24 program, namely that the Australian beekeeping industry had agreed to increase its financial contribution to the program, with the expectation that these additional funds would result in the ongoing surveillance activities under the NBPSP. However, the rationalised and pared back program meant NBPSP activities in Queensland went from seven sites to two. QBA added that the contract negotiations 'relied on state jurisdictions to act in good will to continue to undertake surveillance'. QBA reported that during a general meeting of the AHBIC, the industry agreed to write to PHA 'to express [its] disappointment in the reduced number of surveillance location[s] and the timeliness of the contract negotiations'.[27]

4.24 With respect to the current outbreak, the AHBIC noted that its risk assessment had not identified the current outbreak to have originated from a high-risk entry point. It noted that the primary limitation regarding surveillance is funding, and should there be infinite funding then the NBPSP would be made available at all Australian ports, including airports and Royal Australian Air Force bases.[28]

Adequate and long-term funding

4.25 An overarching and longstanding concern shared by many stakeholders of the NBPSP is access to sustainable and long-term funding. In a 2016 review of the program, Hort Innovation concluded that 'a significant increase in resources is required simply to maintain the program' and that the costings at the time did 'not reflect the activities undertaken'. This analysis found there to be significant shortfalls in the contracted amount ($871,640) versus the actual costs of

[25] PHA, *Submission 85*, [p. 5].

[26] Australian Honey Bee Industry Council (AHBIC), *Submission 65*, p. 4.

[27] Queensland Beekeepers' Association (QBA), *Submission 41*, [p. 1].

[28] Daniel Le Feuvre, Chief Executive Officer, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 7.

running the NBPSP ($2,314,500). At the time, Hort Innovation recommended that there be an 'increase in investment for the NBPSP to maintain and enhance components of the program'.[29]

4.26 There have also been calls for increased funding to the NBPSP by the Australian Parliament. In 2014, the committee recommended the Australian Government enlarge its commitment to the NBPSP. The Australian Government noted this recommendation explaining that the then Department of Agriculture had requested a review of the program, which would inform future investment.[30] Similarly, the House Standing Committee on Agriculture in 2017 inquired into Australia's bee biosecurity system. It recommended an enhanced NBPSP with an appropriate proportion of funds to be provided by relevant Commonwealth agencies.[31]

4.27 A 2020 review of the NBPSP (Glanville review) reiterated the need for long-term funding for the program. The Glanville review forewarned that a sustainable funding model would be needed to support ongoing core programs beyond 2024.[32] This warning was made despite a substantial increase of funding to the NBPSP. The 2016–21 NBPSP received $2.5 million from Hort Innovation, which included contributions from nine pollination-dependent industry research and development levies, $500,000 from the AHBIC, $100,000 from Grain Producers Australia and matched contributions from the Australian Government. An additional $587,000 from the Australian Government was provided to the program, through the Agricultural Competitiveness White Paper. In total, over the 2016–21 period the program received $3 million in funding.[33]

4.28 On 21 December 2021, Hort Innovation and PHA announced a three-year funding arrangement for the NBPSP until 2024. The DAFF noted that the Australian Government and PHA were 'actively seeking to establish a partnership arrangement with the bee industry to sustain the program into the future'.[34]

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29 Hort Innovation, *Final Report: National honey bee pest surveillance program,* February 2019, pp. 28–29.

30 Australian Government response to the Senate Rural and Regional Affairs and Transport References Committee report, *Future of the beekeeping and pollination services industries in Australia*, March 2015, p. 5.

31 House of Representatives Standing Committee on Agriculture and Water Resources, *Inquiry into the biosecurity of Australian honey bees*, March 2017, p. 23.

32 PHA, *Submission 85*, [p. 5].

33 PHA, *About the National Bee Pest Surveillance Program*, 2018, p. 5 (accessed 15 September 2022).

34 DAFF, *Submission 73*, p. 47.

4.29 Various witnesses and submitters shared the view that a more sustainable funding arrangement for the NBPSP is needed,[35] including the program's administrator PHA. It submitted accessing ongoing government funding was a challenge, particularly long-term and sustainable funding. [36] PHA advised the committee that the NBPSP receives $750,000 per annum, whereas it is estimated that between $2.1 million or $2.8 million per annum is required.[37] The AHBIC called for the Australian Government to increase its funding to the NBPSP to 'cover all identified medium and high-risk entry points'.[38]

4.30 According to the AHBIC, an additional challenge has been achieving an agreement between financial contributors to the program, and it warned of ongoing financial issues should more sustainable funding not be forthcoming. Its representative, Daniel Le Feuvre, outlined the reluctance across levy paying industries to contribute to the NBPSP, prior to the most recent varroa mite outbreak:

> Another three-year deal for that surveillance program, luckily, was just re-signed in November or December last year, and it was an incredibly hard job for Hort Innovation to convince their levied industries to contribute to the surveillance program. Whilst you're in peacetime and not in an incursion situation, it's very hard to convince growers to put money into these types of activities whilst they're not affecting their bottom line.[39]

Committee view

4.31 The New South Wales (NSW) varroa mite incursion has highlighted the importance of the sentinel hive program as a means of detecting bee pests and diseases. Whilst the origin of the varroa mite remains unknown, it was Newcastle Port's sentinel hive program that alerted NSW authorities that an incursion had taken place in the region. This incident is in addition to previous detections discovered as part of port surveillance activities.

4.32 The committee is disappointed that under-resourcing of the sentinel hive program remains a longstanding matter of concern, despite repeated calls for increased and long-term funding. Presently, funding to the program is chequered and fails to meet minimum requirements. Of concern is evidence which suggests stakeholder investment in the program was waning prior to the latest NSW incursion, and that a risk-based approach adopted by the NBPSP was partly due to inadequate funding. The committee is also

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[35] Victorian Apiarists' Association, *Submission 96*, p. 1; Almond Board of Australia, *Submission 62*, p. 4.

[36] PHA, *Submission 85*, [p. 3].

[37] Sarah Corcoran, Chief Executive Officer, PHA, *Proof Committee Hansard,* 8 September 2022, p. 16.

[38] AHBIC, *Submission 65*, p. 4; Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 4.

[39] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 8.

concerned by evidence showing a reduction of ports and sentinel hives included under the NBPSP.

4.33 The committee believes the NSW incursion has acted as an important reminder for governments and industry that an adequately funded and operational NBPSP is a vital defence measure for Australia's honey bee and agricultural industries. For this reason, it is imperative that the NBPSP has access to long-term and sustainable funding into the future. Whilst this need has been acknowledged, and work has commenced on negotiating a sustainable model beyond 2024, the committee believes the Commonwealth should make a formal commitment to contribute adequate funding to the NBPSP.

Recommendation 5

4.34 The committee recommends the Australian Government, in partnership with industry and state and territory governments, commits to long-term and sustainable funding to the National Bee Pest Surveillance Program.

Recommendation 6

4.35 The committee recommends that the Australian Government reviews the balance between sentinel hives and bait hives as part of the National Bee Pest Surveillance Program.

National Bee Biosecurity Program

4.36 An additional bee biosecurity measure is the National Bee Biosecurity Program (NBBP). Established in 2014, the NBBP ensures the sustainability and viability of Australia's honey bee industry through the management of established pests and diseases (such as American foulbrood) and increases preparedness for and surveillance of exotic bee pests. The program assists with the maintenance of and improvement of Australia's bee biosecurity status through the promotion of biosecurity awareness and reporting of exotic bee pests and diseases.[40] These post-border awareness and preparedness activities support the adoption of best-practice within industry and by hobbyists.[41]

4.37 The *Australian Honey bee Industry Biosecurity Code of Practice (2016)* (the Code) guides NBBP activities. The Code establishes a clear framework for beekeepers to engage in best practice biosecurity, with specific guidelines for commercial beekeepers. Within some jurisdictions, the Code has been incorporated into respective biosecurity legislation.[42]

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40 DAFF, *Submission 73*, pp. 47–48.

41 PHA, *Submission 85*, [p. 3].

42 DAFF, *Submission 73*, p. 48.

4.38 The NBBP is a partnership between industry and governments. National management and governance of the program is conducted by PHA, with the honey bee industry providing funds and state governments delivering activities and providing regulatory support (including significant in-kind financial support).[43]

4.39 PHA raised several issues about funding of the NBBP. In its submission, PHA pointed out that funding allocated to communication activities that support hobby beekeepers' engagement with the NBBP had ceased in 2019. PHA also commented that overall funding to the NBBP was inadequate:

> The [National] Bee Biosecurity Program, which is that post-border program which has the bee biosecurity officers who engage with the producers, is currently funded to the tune of $436,850 per annum. We estimate that a figure of approximately $1.4 million per annum would see delivery of a program that is better furnished to provide the necessary steps to keep us free from varroa in the event that we're going to eradicate this current incursion. This figure would support a full-time equivalent in six states and half a person in the Northern Territory, as well as the national coordination and communication efforts that are required.[44]

Committee view

4.40 The committee agrees that the NBBP plays a vital role in the management of established bee pests and diseases, and preparedness for and surveillance of exotic bee pests within the honey bee industry. Should varroa mite become endemic in Australia, this program will play an important role in educating and supporting beekeepers and the honey bee industry with varroa mite control measures. Further, the committee is supportive of the NBBP promoting best-practice within the honey bee sector, especially with its alignment to the Code.

4.41 The committee is concerned that the scope of the program has been reduced due to inadequate funding, including for example communication measures targeting hobby beekeepers. For this reason, the committee is supportive of calls for the Australian Government to ensure that adequate funding is provided to the NBBP, along with other financial contributors.

Recommendation 7

4.42 The committee recommends the Australian Government, in partnership with other stakeholders, ensures that adequate funding is provided to the National Bee Biosecurity Program.

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43 DAFF, *Submission 73*, p. 48.

44 Sarah Corcoran, PHA, *Proof Committee Hansard*, 8 September 2022, p. 15.

Management of feral and invasive populations

4.43 Various submitters drew attention to the inadequate and reactive management and control of feral and invasive populations, in particular animals, with the Red Meat Advisory Council (RMAC) advising that inaction and inadequate action have 'enabled a problem long-considered too difficult to address to now present a massive risk to Australia'.[45]

4.44 In relation to FMD, the Invasive Species Council noted that wild populations may act as a reservoir of the disease and may make it difficult to demonstrate freedom from FMD as a precursor to returning to normal trade arrangements after an incursion.[46] They observed that vaccination of livestock is 'difficult, costly, and potentially ineffective depending on which strain enters the country', exacerbated by the challenge of growing populations of feral animals which would fall outside the current response framework.[47] This finding was also made by the Joint Interagency Taskforce: Exotic Animal Disease Preparedness:

> Australia is also home to feral deer, goat, horse, pig and water buffalo populations. These animals could increase the speed, coverage and extent of an EAD outbreak. An EAD outbreak in the feral animal population could make controlling the outbreak more complicated and protracted.[48]

4.45 Mike Darby from the CCA advised that feral animal control should be undertaken as a proactive, pre-incursion strategy including surveillance testing, identification and tagging, as well as eradication and management.[49]

4.46 The Invasive Species Council drew attention to the lack of priority, funding and agreement for feral population control, the challenges of working across jurisdictions, and the detrimental role of minority community groups which advocate for the protection or promotion of feral or invasive populations.[50]

4.47 To address these weaknesses witnesses called for ongoing, stable funding for the Centre for Invasive Species Solutions (CISS) to enable research and development, the urgent management and control of feral animals, including pigs, deer, goats, buffalo, and camels in strategic locations, as well as a control

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[45] RMAC, *Submission 77,* [pp. 6–7]. See, for example: Jim Fletcher, *Submission 11,* p. 1; Property Rights Australia, *Submission 23,* [pp. 3–4]; CCA, *Submission 44,* p. 6; National Farmers' Federation (NFF), *Submission 50,* pp. 10–11; Green Shirts Movement Queensland, *Submission 60,* [pp. 2 and 6]; Angus Hobson, *Submission 63,* p. 4; AHA, *Submission 83,* pp. 15–16.

[46] Invasive Species Council, *Submission 92,* p. 7; Mike Darby, Biosecurity Policy Manager, CCA, *Proof Committee Hansard,* 15 November 2022, p. 12.

[47] Invasive Species Council, *Submission 92,* p. 7.

[48] DAFF and Department of Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 18 (accessed 28 September 2022).

[49] Mike Darby, CCA, *Proof Committee Hansard,* 15 November 2022, pp. 12–13.

[50] Invasive Species Council, *Submission 92,* pp. 2–3 and 7–8.

tool stockpile review and contingency planning in preparation for an FMD or other disease outbreak.[51]

Varroa mite pest control measures

4.48 Should varroa mite become endemic in Australia, potential pest control measures could support the eradication of the mite without the destruction of hives. The committee was advised of research into the development of a pesticide that targets hormone receptors of varroa mites, as well as other honey bee pests, without impacting on the bees and other animals.[52] Reference was also made to breeding programs designed to develop bees resistant to varroa mite.[53]

Committee view

4.49 The committee heard that feral and invasive populations of cattle, water buffalo, pigs, goats, camels and other FMD-susceptible animals, pose a high risk to Australian producers and Australia's FMD- and LSD-free status. The geographic dispersion and isolation of these populations mean that FMD or LSD could reside in these populations for some time before it is detected, with the incursion of LSD through wind-borne vectors across the Torres Strait posing a real risk.

4.50 As well as the environmental harm that these feral and invasive populations cause, the committee notes their potential to prevent Australia achieving freedom from disease status and a return to normal trade arrangements after an incursion.

4.51 Given their wide-ranging impacts, the committee is strongly of the view that there needs to be greater management and coordinated control of feral and invasive populations, including on crown land, to ensure Australia's future biodiversity and reduce its environmental biosecurity risk.

4.52 The committee supports long-term, coordinated, and collaborative approaches to managing and controlling feral populations, including through innovative research and development, partnerships with industry and the private sector, higher profile EAD response measures, and better coordination and collaboration between federal, state and territory jurisdictions.

4.53 The committee also supports appropriate funding to ensure the management of feral and invasive populations and plant pests, and makes wider funding recommendations in relation to this in Chapter Six.

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[51] Invasive Species Council, *Submission 92,* pp. 2–3 and 7–8; RMAC, *Submission 77,* [pp. 6–7]; CCA, *Submission 44*, p. 6; NFF, *Submission 50,* pp. 10–11.

[52] Hort Innovation, *Submission 55*, p. 19.

[53] Stephen Fuller, President, NSW Apiarists' Association (NSWAA), *Proof Committee Hansard,* 12 October 2022, p. 5.

Recommendation 8

4.54 The committee recommends that the Department of Agriculture, Fisheries and Forestry coordinate a national response to control and manage feral and invasive species to safeguard Australia's biodiversity and environmental biosecurity.

Chapter 5
Incursion preparedness

5.1 This chapter considers Australia's readiness for a biosecurity threat incursion. It provides an overview of measures to limit, control and eradicate these threats, and recover from any incursion. It focusses on foot-and-mouth disease (FMD) and lumpy skin disease (LSD), and the current varroa mite incursion in New South Wales (NSW).

Overview of preparedness

5.2 In relation to FMD and LSD, the committee welcomed the findings of the government's Exotic Animal Disease Preparedness Joint Interagency Taskforce:

> It found that EAD [emergency animal disease] response arrangements are comprehensive and well-understood by system participants. These response arrangements are regularly used, with success, in responding to biosecurity incidents. Overall, the system is strong, in particular in prevention and mitigation, and the system is sound.[1]

5.3 The committee heard that while Australia is reasonably well-prepared for an FMD incursion, more can still be done. Jason Strong, Managing Director of Meat and Livestock Australia (MLA) advised:

> What has been forgotten, or ignored, in some of these discussions is the level of preparedness that we actually have as a country and that we have had for a very long time. There are very clear processes that would follow and that cover all options, all areas and all potential risks. It's also highlighted that, while those things have worked incredibly well for us—we don't have these diseases here now, so the system's working … I think everybody agrees that they could be better.[2]

5.4 The Red Meat Advisory Council (RMAC) agreed, writing:

> As an industry, we are satisfied with both industry and governments responses to the heightened [FMD and LSD] disease threat to date, noting that we do not and cannot operate in a zero-risk environment. Arrangements are in place to rapidly detect and respond to exotic disease incursions. However, there is always more that can be done.[3]

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1 Department of Agriculture, Fisheries and Forestry (DAFF) and Department of Home Affairs (Home Affairs), *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 11 (accessed 28 September 2022).

2 Jason Strong, Managing Director, Meat and Livestock Australia (MLA), *Proof Committee Hansard*, 11 October 2022, p. 10. See also: Matthew Journeaux, Acting Federal Secretary, Australasian Meat Industry Employees' Union (AMIEU), *Proof Committee Hansard*, 15 November 2022, p. 16.

3 Red Meat Advisory Council (RMAC), *Submission 77*, [p. 8].

5.5 Alastair James from RMAC told the committee that Indonesia's FMD incursion was beneficial in one sense for Australia:

> We've had the benefit of a crisis response without the crisis being here in Australia. Having it present in our near neighbour Indonesia has kicked everyone into gear, without having to deal with the disease in Australia. The benefits of that have been that the responses to all of the risks that need to happen are all happening now, instead of after we get the disease … So, as long as we keep our foot on the pedal, we should be okay.[4]

5.6 However not all submitters shared this confidence. Angus Hobson suggested that Australia had overestimated its abilities to detect and respond to an incursion, and underestimated the costs and impacts:

> Despite the often-glowing (and often politically motivated) endorsements of our emergency management systems and 'world class biosecurity' protocols, the reality is that Australia does not have a good track record for delivering efficacy or efficiency in either area … As sound as mock-up events and co-ordination strategies may be in theory, the reality is that the 'perfect storm' created from a combination [of events with] an incursion of FMD ... will deliver anticipated and unanticipated consequences that simply exceed our response capability.[5]

5.7 Australian Pork Limited drew on its recent disease incursion experiences and cautioned that Australia's biosecurity system is under pressure:

> While this system has historically protected Australia's natural assets and key industries it is facing increasing pressure due to a combination of challenges … The pressure on our biosecurity system, and the need for urgent reform, has reached a critical tipping point. The growing calls from across industry, government and, increasingly the community, to safeguard Australia's biosecurity system must be addressed using a coordinated, collaborative, innovative and sustainably funded approach.[6]

5.8 The Australian Honey Bee Industry Council (AHBIC) warned that despite preparedness measures being in place in anticipation of a varroa mite incursion, the industry remained underprepared and blindsided by the most recent incursion:

> As an industry, we have done a lot of training and a lot of simulations; we've been through a lot of preparations, designing response plans and getting agreement from industry. But, now that it has happened, we're not as prepared as we thought we were, and I think that's a really key lesson for other industries to take away from this: we thought we were prepared, but we weren't.[7]

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4 Alastair James, Chief Executive Officer, RMAC, *Proof Committee Hansard,* 15 November 2022, p. 13.

5 Angus Hobson, *Submission 63,* pp. 4–5.

6 Australian Pork Limited, *Submission 74,* p. 8.

7 Daniel Le Feuvre, Chief Executive Officer, Australian Honey Bee Industry Council (AHBIC), *Proof Committee Hansard,* 8 September 2022, pp. 1–2.

Incursion response arrangements

5.9 Australia's nationally agreed responses to pest and disease incursions are detailed in the Australian Veterinary Emergency Plan (AUSVETPLAN) and Australian Emergency Plant Pest Response Plan (PLANTPLAN), as outlined in Chapter One.[8]

AUSVETPLAN

5.10 The committee received a range of evidence about the development of the AUSVETPLAN and its effectiveness in addressing an emergency animal disease (EAD) response, including in relation to:

- the complexity of responses outlined in the AUSVETPLAN, and the need for the plan to prioritise key actions and risks;[9]
- the lack of information about how EAD outbreaks and responses will impact industries across the supply chain (e.g. plant industries, transport and retail), and the need to involve a wider range of stakeholders;[10]
- the urgent need for a review of the AUSVETPLAN's valuation and compensation procedures;[11]
- the importance of the development of preparedness and response frameworks and conduct of activities under the Emergency Animal Disease Response Agreement (EADRA) and AUSVETPLAN to ensure consistent outcomes which do not duplicate efforts and waste resources;[12]
- the clarification of response actions for feral animals, particularly given the impacts on freedom from disease and trade;[13]
- the need for technical information to be more easily understood (e.g. vehicle decontamination information);[14]
- the lack of resourcing within Animal Health Australia (AHA), governments, and industry bodies which make it challenging to review and update the AUSVETPLAN as required;[15] and

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8 DAFF, *Submission 73*, p. 24.

9 Jim Fletcher, *Submission 11*, p. 2.

10 Grains Research and Development Corporation (GRDC), *Submission 42*, p. 10; Australian Livestock and Rural Transporters Association (ALTRA), *Submission 78*, pp. 8–9, and 16–17; Woolworths Group, *Submission 100*, [pp. 2–3]; Mathew Munro, Executive Director, ALTRA, *Proof Committee Hansard*, 11 October 2022, pp. 22–23.

11 Animal Health Australia (AHA), *AUSVETPLAN: operational manual: valuation and compensation*, version 5, 2021, pp. 10–11 (accessed 10 November 2022); Wilmot Cattle Company, *Submission 88*, pp. 2–3.

12 WoolProducers Australia, *Submission 67*, p. 6. See also, Australian Pork Limited, *Submission 74*, p. 16.

13 Invasive Species Council, *Submission 92*, pp. 2 and 7–8.

14 ALTRA, *Submission 78*, pp. 13–14.

- the importance of testing the plans to ensure they and the various roles and responsibilities are clear and up to date.[16]

5.11 The Exotic Animal Disease Preparedness Joint Interagency Taskforce also drew attention to the requirement for response plans to be kept up to date, for arrangements to be operationalised, and that provision is made for national sharing and coordination of resources.[17]

5.12 Mathew Munro from the Australian Livestock and Rural Transporters Association (ALTRA) warned that the success of the AUSVETPLAN in the event of an incursion:

> … will depend largely on the operational preparedness of state and territory authorities … Our discussions with senior policy representatives across the jurisdictions indicates varying levels of preparedness, resourcing and industry engagement … the federal government certainly can play a role in coordinating and resourcing.[18]

5.13 Overall, the committee heard that the AUSVETPLAN is valued by industry and producers, particularly for its role in promoting collaboration across a wide range of stakeholders and 'guidance based on sound analysis, linking policy, strategies, implementation, coordination and emergency management'.[19]

PLANTPLAN

5.14 In accordance with PLANTPLAN, a Response Plan is agreed to by affected parties of the Emergency Plant Pest Response Deed (EPPRD). The Plan specifies emergency containment actions, payment of reimbursement costs and cost sharing arrangements.[20] The NSW varroa mite incursion demonstrated the strengths and vulnerabilities of this system; in particular, a need for improved harmonisation and collaboration of incursion responses across jurisdictions.

5.15 Representatives from the bee and agricultural sector raised concerns with the state governments' decision (in Victoria, South Australia and Queensland) to

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15 AHA, *Submission 83,* pp. 10–11; Australian Dairy Farmers, *Submission 56,* Attachment 1, pp. 3–4; Jason Strong, MLA, *Proof Committee Hansard,* 11 October 2022, p. 17.

16 Jason Strong, MLA, *Proof Committee Hansard,* 11 October 2022, p. 17.

17 DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 28.

18 Mathew Munro, ALTRA, *Proof Committee Hansard,* 11 October 2022, p. 19.

19 Cattle Council of Australia (CCA), *Submission 44,* p. 6; Jim Fletcher, *Submission 11,* Attachment 1, p. 26; Animal Medicines Australia (AMA), *Submission 35,* p. 9. See also: WoolProducers Australia, *Submission 67,* p. 6; AHA, *Submission 83,* pp. 7 and 9–10.

20 Plant Health Australia (PHA), *PLANTPLAN: Australian Emergency Plant Pest Response Plan*, 8 December 2021, p. xii (accessed 22 November 2022).

close their borders and restrict the movement of bee hives.[21] In terms of operational activities, the committee heard that there was a 'good level of cooperation' between personnel from interstate to assist with the NSW response. However, the AHBIC observed that Victoria and Queensland had 'both stood up their own incident management teams' resulting in a commitment of their own resources, 'which [was] outside of the agreed response plan and not funded or cost shared across industries'. According to the AHBIC, this led to the '[depletion] of the resources across the board'.[22]

5.16 The almond industry was a primary critic of the different control measures implemented across jurisdictions. Each year the almond industry requires over 300 000 hives during the August pollination season. The scale of this event means almost all commercial pollination hives across Queensland, NSW, Victoria and South Australia are required each year.[23] In recognition of the almond industry's need for hives, the NSW Department of Primary Industries (DPI) implemented an exemption for the movement of hives from low-risk areas. However, this measure was not pursued by other jurisdictions, which closed their borders to hives located in NSW, with disastrous impacts for the almond industry.[24]

5.17 The Almond Board of Australia was critical of the lack of harmonisation between jurisdictions, which resulted in extensive production losses for the industry (estimated to be $300 million) and undermined the industry's confidence in the national emergency plan, to which the almond sector contributed $8.7 million.[25] The Almond Board of Australia was of the view that jurisdictions had failed to implement the agreed national emergency plan:

> They didn't follow the national response. The national response came up with a plan which balanced the absolute need to contain the mite with the absolute economic impact that was going to occur if that wasn't followed … The economic impact will be way beyond [the almond] industry.[26]

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[21] Agriculture Victoria, 'Bee movement restrictions in place for Victoria', *Media release,* 30 June 2022, (accessed 13 September 2022); Department of Jobs, Precincts and Regions, *Submission 95*, pp. 2–3; *South Australian Government Gazette*, No. 51, 21 July 2022, p. 2304 (accessed 13 September 2022); South Australia Department of Primary Industries and Regions, *Moving bees and bee products* (accessed 13 September 2022); Biosecurity Queensland, *Movement restriction in place for bees and bee hives,* 30 June 2022, Biosecurity Queensland (accessed 13 September 2022).

[22] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 10.

[23] Tim Jackson, Chief Executive Officer, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, p. 27.

[24] Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, p. 27.

[25] Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, pp. 27 and 29.

[26] Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, p. 30.

5.18 The lack of jurisdictional harmonisation was also raised by the bee industry. The AHBIC observed different rules and requirements being applied by different states. These actions had a burdensome impact on the honey bee industry by making it difficult to follow compliance measures and understand what was occurring across jurisdictions.[27] The AHBIC also commented that the closure of borders between jurisdictions was never part of the national response plan.[28] The NSW Apiarists' Association (NSWAA) highlighted the widespread disruption caused by the border closures, with pollination services stuck in Victoria reducing the availability of hive numbers for avocado and macadamia pollination in Queensland.[29]

5.19 Overall, the AHBIC observed 'protectionism coming into play' in response to the incursion, but also acknowledged the difficulties faced by states because of the varied views on how best to respond. The AHBIC noted that industry itself was divided on how best to respond should eradication efforts be unsuccessful. However, it detailed a longstanding agreement to a 'five-zone policy':

> As an organisation, as the peak representative body, we agreed many years ago to what we call the five-zone policy: to support eradication as much as possible but also to support business continuity and allow movement. Critical to business continuity in the bee industry is migration and movement of hives. When you restrict movement of hives, particularly across borders … you are impacting the trade of our industry. However, we don't want to encourage that movement if it's going to impact the feasibility and put at risk the eradication program, because that is our No. 1, eradication.[30]

5.20 Various witnesses and submitters called for better national coordination, particularly with the implementation of the emergency response plan.[31] The Almond Board of Australia suggested that harmonisation could be supported by a bee hive traceability system to track hives and verify whether transported hives are from a declared biosecurity zone (see *National traceability systems* below for further information).[32]

5.21 The Inspector-General of Biosecurity (IGB), Dr Lloyd Klumpp, advised the committee that while NSW was leading the response to varroa mite, it remains

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[27] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 2.

[28] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 3.

[29] Stephen Fuller, President, NSW Apiarists' Association (NSWAA), *Proof Committee Hansard*, 12 October 2022, p. 4.

[30] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 10.

[31] Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, p. 30; Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 2.

[32] Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, pp. 27 and 30.

a national response supported by all jurisdictions. Dr Klumpp acknowledged that 'there are challenges to that model', but that the system was 'really sound and effective'.[33]

Simulation exercises and testing

5.22 Australia's plans and preparedness for disease and pest incursions have been tested in a wide range of scenarios, desk and field exercises, and simulations.[34]

Simulation exercises—FMD and LSD

5.23 Recent animal health exercises include *Exercise Odysseus* in 2014–15 involving a national livestock standstill in response to an FMD outbreak, *Exercise Border Bridge* in 2018 covering a cross-jurisdictional LSD incident, and *Exercise Tuckerbox* testing NSW's ability to meet National Livestock Traceability Performance Standards relevant to FMD, in April 2022.[35]

5.24 *Exercise Paratus*, a two-year exercise, has been established to better understand whole-of-government response arrangements for FMD and LSD with a focus on legislation, coordination and exploring the role of the Commonwealth. It will culminate in a major functional exercise in 2023 which will include 'the laboratories testing samples and in-laboratory testing'.[36]

5.25 The committee heard that, while exercises and incursions provide some important learnings and result in recommendations to improve Australia's biosecurity preparedness, there is 'no accountability for ensuring actions are completed to build the resilience of the broader biosecurity sector'.[37] Witnesses described the implementation of resulting recommendations as 'ad-hoc' and pointed to the need for additional implementation resourcing, over and above that required for normal business, and improved governance to address short comings.[38]

5.26 The Australian Chicken Meat Federation observed that the same recommendations keep being made—highlighting that recommendations are

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[33] Dr Lloyd Klumpp, Inspector-General of Biosecurity (IGB), *Proof Committee Hansard*, 15 November 2022, p. 19.

[34] Australian Chicken Meat Federation, *Submission 13*, p. 2; DAFF, *Submission 73*, pp. 23 and 26–27. See, for example: Home Affairs, *Submission 43*, p. 3; National Farmers' Federation (NFF), *Submission 50*, p. 4; Horticulture Innovation Australia (Hort Innovation), *Submission 55*, p. 14; AHA, *Submission 83*, pp. 11, 23–24 and 25–30.

[35] DAFF, *Submission 73*, p. 27.

[36] DAFF, *Submission 73*, p. 27; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 20–21 and 23; Dr Dwane O'Brien, Research Director, Australian Centre for Disease Preparedness (ACDP), Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Proof Committee Hansard*, 5 November 2022, p. 2.

[37] Australian Chicken Meat Federation, *Submission 13*, p. 2.

[38] Australian Chicken Meat Federation, *Submission 13*, p. 2.

not being progressed.[39] Australian Pork Limited also noted that resulting recommendations are often not released quickly and are seldom implemented:

> What is clear is that while independent reviews and exercises can generate significant recommendations that can inform the enhancement of our biosecurity system, and EAD preparedness and response arrangements, they are only of value if they are subsequently implemented.[40]

5.27 It further advised that:

> While our biosecurity system has historically protected us, the clear message from these reviews and exercises, and our lived experience, is that the Australian biosecurity system is at risk of no longer being fit for purpose to protect our industries.[41]

5.28 The Australian Livestock Export Corporation Limited (LiveCorp) told the committee that its simulation exercises had provided important learnings, particularly in relation to gaps and areas for further development, and the importance of role and responsibility clarity. LiveCorp also discussed the importance of taking simulations further and pressure testing response measures to ensure that Australia continues to have a robust system that is still fit for purpose and properly resourced, a view supported by the MLA.[42]

Simulation exercises—varroa mite

5.29 In relation to varroa mite, an Australian-wide emergency preparedness and response exercise took place in 2018, followed by a smaller simulation with the National Biosecurity Response Team at Jervis Bay in 2019.[43] The 2018 simulation exercise, titled *Exercise Bee Prepared*, was facilitated by Plant Health Australia (PHA) through a series of workshops across Australia that tested how rapidly stakeholders respond to a serious bee pest incursion.[44] The 2019 simulation sought to enhance Australia's biosecurity emergency response capability and test the ability to enact the Commonwealth's *Biosecurity Act 2015*.[45]

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39 Australian Chicken Meat Federation, *Submission 13,* p. 2.

40 Australian Pork Limited, *Submission 74,* pp. 18–19.

41 Australian Pork Limited, *Submission 74,* p. 3.

42 Wayne Collier, Chief Executive Officer, Australian Livestock Export Corporation Limited (LiveCorp), *Proof Committee Hansard*, 11 October 2022, pp. 4–5 and 6; Jason Strong, MLA, *Proof Committee Hansard,* 11 October 2022, pp. 11–12; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 26.

43 DAFF, *Submission 73*, pp. 23, 27; CSIRO, *Australia's Biosecurity Future: Unlocking the next decade of resilience (2020–2030)*, 2020, p. 28 (accessed 25 October 2022).

44 Plant Health Australia (PHA), *Exercise bee Prepared*, 22 August 2018 (accessed 24 October 2022).

45 CSIRO, *Australia's Biosecurity Future: Unlocking the next decade of resilience (2020–2030)*, 2020, p. 28.

5.30 As previously noted, the AHBIC advised the committee that despite the preparations and simulations made prior to the current incursion, stakeholders remained underprepared and blindsided by the most recent incursion.[46] This concern was shared by the Queensland Beekeepers' Association (QBA) which noted that the current response plan had been designed to focus on the early detection of an incursion at a high-risk port. However, the NSW incursion demonstrated both a 'low-risk sea port detecting a bee pest, as well as potentially a non-traditional point of entry'. Further, the NSW incursion highlighted the increased 'complexity should a bee pest be wider spread when detected'. QBA was of view that both low-risk and non-traditional points of entry should be included in early warning systems.[47]

5.31 Bee industry representatives recommended that governments and industry review responses to the NSW incursion to improve response measures.[48] The AHBIC recommended that these stakeholders should support 'better preparation and documentation for incident management teams to allow for swift and unimpeded responses to occur'.[49] It identified a range of shortcomings based on industry's experience with the NSW incursion, related to resourcing and administrative processes, along with early response measures not being applicable to the Newcastle incursion.[50]

5.32 PHA confirmed with the committee the intention to conduct a series of reviews and debriefs into the NSW varroa mite response, which is a normal course of action when the EPPRD is enacted. This review process informs stakeholders of strengths and weaknesses of the response plan, which is shared with the animal biosecurity sector. PHA added that the NSW government would also conduct its own review, in addition to the national reviews and debriefs.[51]

5.33 While measures are in place to review and learn from a response to an incursion or simulation, Nathan Hancock from Citrus Australia spoke of a lack of accountability for whether such reforms are implemented, and concluded that the primary hinderance to their implementation is resourcing.[52]

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46 Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, pp. 1–2.

47 Queensland Beekeepers' Association (QBA), *Submission 41*, p. 2.

48 AHBIC, *Submission 65*, p. 5; NSWAA, *Submission 89,* p. 3; QBA, *Submission 41,* p. 2. See also: Rural Research and Development Corporations (AgriFutures Australia), *Submission 21,* [p. 2].

49 AHBIC, *Submission 65*, p. 5.

50 Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 2; AHBIC, *Submission 65*, p. 5.

51 Dr Susanna Driessen, General Manager, Emergency Response, PHA, *Proof Committee Hansard,* 8 September 2022, p. 16.

52 Nathan Hancock, Chair, Plant Industry Forum; and Chief Executive Officer, Citrus Australia, *Proof Committee Hansard,* 12 October 2022, p. 22.

Committee view

5.34 The committee acknowledges the value of the work done by AHA, PHA, governments, industry, and other stakeholders in the preparation of plans for a response to a pest or disease incursion, through the AUSVETPLAN and PLANTPLAN processes. These plans appear to place Australia on a firm footing to mount a robust incursion response. However, the committee also notes the need for stakeholders across the supply chain to be involved in the development of the plans; the need for key actions and risks to be prioritised; the need for plans to be current and communicated and roles and responsibilities understood; and, for responses to be governed by the plans.

5.35 The committee welcomes evidence that the plans continue to be tested, hearing that these reviews should result in a stronger biosecurity response. However, the committee is concerned that recommendations arising from these activities are not systematically implemented, or are not implemented quickly enough. The committee also notes the importance of conducting simulations and tests under pressure to ensure that Australia's biosecurity system is prepared.

5.36 The NSW varroa mite incursion is the first of its kind in Australia and the largest response to date under the PLANTPLAN and EPPRD. As demonstrated by stakeholders' evidence, it has revealed the strengths and weaknesses of incursion response plans within NSW and across Australia. A varroa mite outbreak, originating at a location outside of a bee surveillance area, is a major concern. In addition, the committee is of the view that the actions of state jurisdictions to close borders prevented the movement of low-risk bee hives, and undermined the good will between governments and industry, and the functionality of the biosecurity system more broadly. Despite these concerns, the committee is confident that PHA, along with all signatories of the EPPRD, will conduct a thorough review and debrief into the NSW varroa mite incursion.

5.37 The question that remains is whether such reviews and debriefs result in meaningful change, as experienced by the citrus industry regarding the citrus canker outbreak. The committee is concerned that lack of accountability and resources are reportedly preventing findings from a simulation or incursion being integrated into an emergency plant pest response plan and the biosecurity system more broadly. If the primary hinderance is resources, the committee is hopeful that additional funding to the biosecurity system will ensure the system is adequately resourced to prevent, and when necessary, respond to an incursion.

Recommendation 9

5.38 The committee recommends that Animal Health Australia and Plant Health Australia broaden their consultations to include all stakeholders from across the supply chain, including transport and livestock transport industries and the retail sector.

Recommendation 10

5.39 The committee recommends that the Australian Government work with agencies and industry bodies to ensure appropriate governance and reporting structures are in place to ensure that recommendations arising from simulations and exercises are implemented in a timely way.

Cost-sharing and compensation arrangements

5.40 Government-industry cost sharing arrangements for an EAD are determined by the Emergency Animal Disease Response Agreement (EADRA) or EPPRD. However, eligibility and the amount of compensation a producer receives is determined by states and territories, while business continuity and recovery costs are addressed through separate funding mechanisms.[53]

Emergency Animal Disease Response Agreement

5.41 As discussed in Chapter One, part of the purpose the EADRA is to ensure that funds to combat an EAD are made available and the costs shared among the beneficiaries of the response.[54] Notably, the agreement does not cover the total costs of responses, feral animals are not covered, not all responses are cost shared under these arrangements and not all industry sectors are party to these arrangements—leaving gaps in response funding.[55] There is also no specific funding mechanism for pro-active biosecurity mechanisms such as preparedness and surveillance.[56]

5.42 Under the EADRA, FMD is subject to an 80–20 cost split between government and industry, while LSD is a 50–50 cost split.[57] The AHA is considering submissions for LSD to be rescheduled as a category two disease, which would result in an 80–20 cost split—a move supported by the cattle industry.[58]

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53 AHA, *Submission 83,* p. 8.

54 AHA, *Emergency Animal Disease Response Agreement* (accessed 24 October 2022); DAFF, *Submission 73,* p. 10; AHA, *Submission 83,* pp. 7–8.

55 Jim Fletcher, *Submission 11,* Attachment 1, pp. 10–11 and 17.

56 Jim Fletcher, *Submission 11,* Attachment 1, p. 29; AgriFutures Australia, *Submission 72,* [p. 3].

57 CCA, *Submission 44,* p. 2; DAFF, *Submission 73,* pp. 10 and 25.

58 CCA, *Submission 44,* p. 2; Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 5.

5.43 In September 2022, the Government introduced the Animal Health Australia and Plant Health Australia Funding Legislation Amendment Bill 2022 to the House of Representatives. Now enacted, the bill amended the *Australian Animal Health Council (Live-stock Industries) Funding Act 1996* to facilitate the funding of emergency responses under emergency biosecurity response deeds other than the EADRA to, for example, allow for payment under the Aquatic Deed.[59]

5.44 AHA highlighted several future challenges for the EADRA, including ensuring valuation processes across jurisdictions are appropriate and take account of changes to the agricultural environment (such as trade, market requirements and consumer demands) and the structure and funding of governments. Other challenges include managing the One Health approach and inter-relationships with human health bodies (for example in relation to the Japanese encephalitis virus), the management of vector-borne disease incursions, and the need to encourage new and emerging industry groups to become signatories.[60]

5.45 WoolProducers Australia highlighted the importance of EADRA signatories upholding the primacy of the EADRA as the framework under which all EAD preparedness response activities should be undertaken, to prevent inconsistent outcomes and duplication of effort.[61]

5.46 Australian Pork Limited advised that the agreement could be used to improve Australia's biosecurity response, and advocated for the continuation of a 'collaborative and innovative partnership approach' which is appropriately resourced. Specifically, it argued for strengthened engagement between supply chain businesses and government, a response informed by industry, better alignment and coordination between response plans, and prioritisation and resourcing of coordinated communications.[62]

EAD Emergency response levy

5.47 The committee heard that there are existing levy mechanisms in place to allow for the funding of other biosecurity activities and that these could be used to negotiate wider agreements between industry and government without the need for new or amended legislation. Most industries have established an emergency response levy, usually introduced at a nil rate and activated when required in order to repay the industry's response contribution.[63]

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59 Juli Tomaras and Dinty Mather, Parliamentary Library, 'Animal Health Australia and Plant Health Australia Funding Legislation Amendment Bill 2022', *Bills Digest*, 20 October 2022, pp. 3 and 9 (accessed 22 November 2022). The bill was passed by both Houses on 1 December 2022.

60 AHA, *Submission 83*, p. 9.

61 WoolProducers Australia, *Submission 67*, p. 6.

62 Australian Pork Limited, *Submission 74*, pp. 16–17.

63 DAFF, *Submission 73*, p. 25.

5.48 Any change would require all jurisdictions and industry organisations, as well as the AHA, to agree to the initiative and the amendment of relevant regulations to vary current levies[64]—negotiations which could take some time.

Emergency Plant Pest Response Deed

5.49 As detailed in Chapter One, the EPPRD establishes the financial arrangements and cost sharing agreements between signatories of the deed. The committee heard concerns about the scope of industry participation under the EPPRD. Specifically, bee industry representatives were concerned at the exclusion of pollination services under the EPPRD levy. The AHBIC submitted that the 'steady decline in the national honey crop and industry's inability to impose a levy on pollination services has seen the overall funding from industry (to the EPPRD) decrease over time'.[65] The AHBIC advised the committee that it has advocated for the inclusion of pollination services, with no success, as it is deemed a service rather than a product.[66]

5.50 PHA provided additional information about including pollination services under the EPPRD levy. It outlined the complexities of including services under the current levy guidelines:

> Under the levy guidelines a levy proposal must nominate a levy collection point in the supply chain. It also must define a leviable commodity, determine a unit or levy, determine the rate of the levy and determine the levy return frequency. In the case of pollination services, they're considered a service. They're not listed under these principles, unfortunately, which precludes them from establishing that levy.[67]

5.51 When asked whether amending the guidelines would be a legislative process, PHA responded that no changes to law would be required to make such an amendment. It added that the racehorse industry had established a precedent for the inclusion of services under a levy system.[68]

5.52 The Rural Industries Research and Development Corporation (AgriFutures Australia) added that, in response the AHBIC's 2021 proposal for pollination services to be included under the levy system, the Department of Agriculture, Fisheries and Forestry (DAFF) responded that a 'pollination levy does not fit within the current legal framework on imposing a levy on primary production'. However, it was AgriFutures Australia's understanding that

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64 Jim Fletcher, *Submission 11*, Attachment 1, pp. 29–30 and 35; Australian Dairy Farmers, *Submission 56*, Attachment 1, p. 4.

65 AHBIC, *Submission 65*, p. 4.

66 Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 9.

67 Sarah Corcoran, Chief Executive Officer, PHA, *Proof Committee Hansard*, 8 September 2022, p. 13.

68 Sarah Corcoran, PHA, *Proof Committee Hansard*, 8 September 2022, p. 13.

DAFF was 'working to streamline and modernise the agricultural levies and charges (levies) legislation'.[69]

5.53 This matter was previously considered by this committee in 2014. At the time, the committee recommended that the AHBIC, the Australian Government and the now disbanded Pollination Australia 'enter into discussions about the best way forward to enable the pollination industry to make a contribution … to research and development, and to biosecurity'. In 2015, the Australian Government agreed to this recommendation in principle, advising the committee that it had 'been identified as an option to be pursued in the medium term' and that a 'new legislative framework and extensive consultations with pollination dependent industries' would be required.[70]

5.54 Although most industries reliant upon bee pollination are signatories of the EPPRD, the committee was also advised that one industry was not a signatory and therefore was not obliged to contribute funds to the varroa mite emergency response plan.[71] The committee was informed that this industry was working with PHA to rectify this matter.[72]

5.55 In September 2022 the Government introduced the Animal Health Australia and Plant Health Australia Funding Legislation Amendment Bill 2022 to the House of Representatives. In relation to plant pests and diseases, the bill (which passed both Houses on 1 December 2022) amended the *Plant Health Australia (Plant Industries) Funding Act 2002* to empower the Secretary of DAFF (or their delegate) to determine that a body is a 'relevant Plant Industry Member' and to permit the use of emergency plant pest response (EPPR) levies to promote or maintain the health of an EPPR plant, providing greater flexibility for industries.[73]

Compensation—varroa mite

5.56 According to PHA, an underlying principle of the EPPRD is that 'no one should be better or worse off due to an [Emergency Plant Pest] incursion'. This principle means an owner of a crop or property that is impacted because of an Emergency Response Plan is entitled to be reimbursed under the EPPRD.[74]

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69 AgriFutures, answers to questions taken on notice, 12 October 2022 (received 28 October 2022).

70 Australian Government response to the Senate Rural and Regional Affairs and Transport References Committee report, *Future of the beekeeping and pollination services industries in Australia*, March 2015, p. 4.

71 Andrew Weidemann AM, R&D Spokesman, Grain Producers Australia, *Proof Committee Hansard*, 8 September 2022, p. 24.

72 Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, p. 29.

73 Juli Tomaras and Dinty Mather, Parliamentary Library, 'Animal Health Australia and Plant Health Australia Funding Legislation Amendment Bill 2022', *Bills Digest*, 20 October 2022, p. 3.

74 PHA, *Fact sheet: The Emergency Plant Pest Response Deed*, [p. 2] (accessed 18 October 2022).

5.57 On 9 July 2022, the Australian Government and NSW Government announced an $18 million compensation package for affected registered beekeepers. The compensation package was announced as part of an agreement made under the National Management Group for Emergency Plant Pests.[75] The package compensates impacted bee keepers for costs associated with the loss of equipment, hives and bees destroyed as part of NSW's eradication process. Costs associated with honey loss were also included in the package.[76]

5.58 On 13 September 2022, the NSW Government announced the availability of payments under the compensation package for those within the eradication areas of the biosecurity zone. In collaboration with PHA and the AHBIC, and with the agreement of all governments and apiary industry bodies, an evidence framework was established to guide reimbursements. Recreational beekeepers were entitled to a $550 payment for each hive destroyed, or $200 for those wanting to keep their hive ware.[77] Access to compensation was extended to beekeepers within surveillance zones on 18 October 2022, recognising that those businesses had been adversely affected by the eradication response.[78]

5.59 The committee received evidence about the adequacy and scope of the compensation offered to affected industries. The AHBIC clarified that pollination dependent industries were not covered by the EPPRD because their financial losses were due to border closures.[79] The committee heard that the compensation framework excluded the loss of pollination contracts, a matter objected to by the NSW Apiarists' Association (NSWAA).[80] Although the financial impact caused by the incursion remained widespread, the AHBIC contended that there were limits on the scope of the compensation package because 'there is no way we could provide that cost-benefit analysis to warrant eradication' if all impacted industries were included.[81]

5.60 The committee was also advised that the compensation package excluded those in breach of NSW's biosecurity order. However, Amateur Beekeepers

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[75] For further information about the reimbursement process under the EPPRD, see: DAFF, answers to questions taken on notice, 10 August 2022, p. 2 (received 22 August 2022).

[76] Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry and the Hon Dugald Saunders, NSW Minister for Agriculture and Western NSW, 'Varroa mite compensation for beekeepers', *Joint media release*, 9 July 2022.

[77] NSW Department of Primary Industries (DPI), 'Reimbursements for registered beekeepers now available', *Media release*, 13 September 2022 (accessed 13 September 2022).

[78] Additional information provided by DPI in relation to the public hearing on 12 October 2022 (received 31 October 2022).

[79] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 3.

[80] Stephen Fuller, NSWAA, *Proof Committee Hansard*, 12 October 2022, p. 6.

[81] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard*, 8 September 2022, p. 3.

Australia (ABA) raised doubts about whether this requirement acted as an effective deterrent and it questioned whether the DPI had investigated allegations of such breaches.[82] DPI objected to this critique, advising the committee that it had issued 31 infringement notices to those in breach of the varroa mite emergency order, with further investigations underway.[83]

All hazards disaster recovery arrangements

5.61 PHA proposed a new model to support relief and recovery efforts of farmers impacted by a pest or disease incursion. The suggested model was based on all hazards disaster recovery arrangements, which are applied during high-risk weather seasons. According to the PHA, this arrangement 'could be enacted to support farmers beyond the current national arrangements in addition to the broader impact on the economy, environment, and psychosocial effects'. With reference to the lessons learnt from previous incursions, PHA explained how an all hazards disaster emergency arrangement could be applied to the biosecurity sector:

> Lessons identified across other responses have demonstrated the requirement for recovery services to be engaged early to assist with immediate impacts that are unrelated to pest eradication. Consideration of business continuity at the farm level, and continuity practices for key industry parties is essential for plant industries to continue to produce. This principle is accepted within other hazards as best practice but has not been adopted in the biosecurity sector.[84]

Committee view

5.62 The EADRA and EPPRD appear to have served Australia adequately, establishing a mechanism to share costs and provide compensation to producers in relation to incursions of exotic pests and diseases. However, it is clear to the committee that these arrangements must continue to evolve.

5.63 The committee is aware of the growing challenges facing our producers—including extreme weather events, drought, and rising input costs—as well as increasing biosecurity risks. It is vitally important that cost sharing and compensation arrangements adequately provide for producers to ensure appropriate responses to incursions, resilience, and recovery to safeguard Australia's food production capacity. It is also important that the biosecurity system is sustainably funded, as discussed further in Chapter Six.

5.64 As the committee has noted elsewhere in this report, it is imperative that a wider range of stakeholders be engaged in biosecurity planning and

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[82] Sheila Stokes, President, Amateur Beekeepers Australia (ABA), *Proof Committee Hansard*, 12 October 2022, p. 14.

[83] Additional information provided by DPI in relation to the public hearing on 12 October 2022 (received 31 October 2022).

[84] PHA, *Submission 85*, [p. 6].

arrangements across the supply chain. As demonstrated by the varroa mite incursion, pollination services have been directly impacted, yet are not included under the EPPRD levy system. The committee remains supportive of DAFF working with the honey bee industry to consider the inclusion of pollination services into levies guidelines and legislation, and is disappointed that there has been little progress in this respect since the committee last considered the matter. Similarly, essential enabling stakeholders in sectors like meat processing, transport, and retail must also be included in response arrangements.

5.65 The committee notes PHA's suggestion regarding value for the biosecurity sector in all hazards disaster recovery arrangements being applied to relief and recovery mechanisms, to support farmers impacted by a plant pest or disease incursion. The committee sees merit in further examination of this suggestion and encourages PHA to consult widely with stakeholders to further develop this proposal.

Recommendation 11

5.66 The committee recommends that the Australian Government increase funding to Animal Health Australia and Plant Health Australia to enable them to appropriately maintain, review and develop funding and compensation arrangements.

Recommendation 12

5.67 The committee recommends that the Department of Agriculture, Fisheries and Forestry consults with the honey bee industry to consider the inclusion of pollination services under the Emergency Plant Pest Response Deed Levy guidelines and legislation.

National traceability systems

National livestock traceability system

5.68 The committee heard that a national livestock traceability system is critical to tracing animals through the supply chain, including those susceptible to exotic diseases as such as FMD and LSD. It enables the tracking of any incursion and vaccination status, and supports market access requirements, as well as offering other producer, industry, trade and consumer benefits.[85]

[85] DAFF, *Submission 73*, p. 22; MLA, *Fully traceable* (accessed 6 September 2022); SAFEMEAT Partnership, *Submission 26*, [p. 1]; RMAC, *Submission 77*, [p. 7]; William Wilson, Chair, Cattle Board, AgForce Queensland, *Proof Committee Hansard*, 11 October 2022, p. 31; David Hill, Chair, LSD and FMD Working Group, CCA, *Proof Committee Hansard*, 11 October 2022, p. 33; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 27.

5.69 David Hill, a Queensland cattle producer and Chair of the CCA's LSD and FMD Working Group told the committee that 'animals in this country are transported far and wide, and being able to trace them is the critical thing for us to be able to eradicate the disease'.[86] The National Farmers' Federation (NFF) also observed:

> Robust traceability systems are also important in protecting producers and consumers against food fraud. And the ability to manage biosecurity incursions and food safety incidents is contingent upon the ability to track produce through the supply chain. Accurate tracing can reduce costly consequences by targeting pests and disease responses and limiting product recalls. Consumers are demanding more information about food safety, quality, provenance and sustainability of production.[87]

5.70 The National Livestock Identification System (NLIS) is funded by industry and operated by Integrity Systems Company (ISC), a subsidiary of MLA. It includes mandatory livestock identification and livestock movements (including vendor declarations) in a centralised database.[88] Enforcement is the responsibility of states and territories under local legislation.[89]

5.71 The SAFEMEAT Partnership provides oversight of the national livestock traceability system and has conducted several reviews of the system. ISC advised that testing of the traceability systems 'indicated that the [sheep] mob-based system has a long way to go with regard to meeting the standard, but the cattle system seems to be reasonably solid'.[90] Other recommendations arising from reviews include that:

- a national statutory body or regulatory authority be created to manage the national livestock traceability system, inclusive of standard setting, coordinating compliance and enforcement, and education and extension;
- investment is made to ensure all livestock species can be managed through the system; and
- the national mandated digital identification of all livestock species be in place before 2025.[91]

5.72 In July 2022 Australian Agriculture Ministers reached in-principle agreement to develop a national approach to electronic tagging of individual sheep and

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[86] David Hill, CCA, *Proof Committee Hansard,* 11 October 2022, p. 32.

[87] NFF, *October 2022-23 Pre-Budget Submission*, 2022, pp. 27–28 (accessed 15 September 2022); RMAC, *Submission 77,* [p. 7].

[88] Integrity Systems Company (ISC), *National Livestock Identification System (NLIS)* (accessed 6 September 2022); Jason Strong, MLA, *Proof Committee Hansard,* 11 October 2022, p. 12.

[89] Dr Jane Weatherley, Chief Executive Officer, ISC, *Proof Committee Hansard,* 11 October 2022, p. 17.

[90] Dr Jane Weatherley, ISC, *Proof Committee Hansard,* 11 October 2022, p. 9.

[91] SAFEMEAT Partnership, *Submission 26,* [p. 1].

goats by the beginning of 2025, with arrangements to be progressed by the Sheep and Goats Traceability Taskforce.[92]

5.73 Implementation of a national livestock traceability system will be supported by '$46.7 million over three years from 2022–23 to improve on-farm biosecurity and support the transition to a national livestock traceability system'.[93] Of this, around $26 million is flagged for investment in the database and $20 million for sheep and goat traceability.[94]

5.74 The announcement of sheep and goat traceability has been welcomed by AHA and livestock industries.[95] However, the committee also heard that a number of industry participants want stronger federal government leadership, with some producers nervous that they won't be able to meet the 2025 deadline and others concerned about cost impacts and what the changes mean for them.[96] To address these concerns, Mike Darby from the CCA advocated for better communications with producers:

> There's always pushback against regulatory compliance, but the thing is that the biosecurity situation is unfolding in front of us. The threat is accelerating, and it's incumbent upon us to keep up with the increased threat. So it's a matter of communicating the need for that and why we're doing it so that people can see the threat and see what the solution to the threat is. And traceability is key to managing biosecurity.[97]

5.75 Mr Hutchinson clearly explained the value of a truly national system:

> [national traceability] … is going to put us into a position where, if we can get back into markets a week earlier, it will have paid for itself. If we're exporting $300 million a week of red meat around the world even before Livex [live exports] as well, that allows us an opportunity. By using these systems, they will all pay for themselves and that investment would seem to be definitely worthwhile. That can't be lost on any industry participant, politician or regulator. That's the name of the game.[98]

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92 DAFF, *Submission 73*, p. 22; ISC, *Submission 51,* [p. 2].

93 Commonwealth of Australia, *Budget October 2022–23: Budget measures,* Budget paper no. 2, 2022, p. 44 (accessed 26 October 2022).

94 Bonnie Skinner, Chief Executive Officer, Sheep Producers Australia, *Proof Committee Hansard,* 15 November 2022, p. 8.

95 AHA, *Submission 83,* p. 17; RMAC, *Submission 77,* [p. 8]. See also: CCA, *Submission 44,* pp. 2, 6, and 8; ISC, *Submission 51,* [p. 2]; ALTRA, *Submission 78,* p. 12.

96 Patrick Hutchinson, Chief Executive Officer, Australian Meat Industry Council (AMIC), *Proof Committee Hansard*, 15 November 2022, pp. 8–9; Bonnie Skinner, Sheep Producers Australia, *Proof Committee Hansard,* 15 November 2022, p. 9; Alys Marshall and Maddelin McCosker, 'Queensland's goat industry questions federal government's electronic tag deadline', *ABC News,* 19 November 2022 (accessed 21 November 2022).

97 Mike Darby, Biosecurity Policy Manager, CCA, *Proof Committee Hansard*, 15 November 2022, pp. 9-10.

98 Patrick Hutchinson, AMIC, *Proof Committee Hansard*, 15 November 2022, p. 12.

5.76 ISC noted the growing demand for the database to accommodate all FMD-susceptible species.[99] System enhancements were also recommended by stakeholders to improve the stability, scalability, security, and analytical capabilities of the database, as well as catering for other livestock species and the consequent increase in volume and transactions.[100] ISC and others also recommended a more comprehensive and equitable co-funding arrangement to enable continuous improvements.[101]

5.77 WoolProducers Australia advised the committee that producers were finding different rules across jurisdictions were 'making the current system unworkable' and that compliance processes needed to be improved.[102] Other witnesses called for better governance, standards and business rules,[103] the implementation of digital systems (such as National Vendor Declarations) to enable 'nationally consistent real-time individual traceability',[104] and national enforcement with a structured system of penalties.[105]

5.78 Bonnie Skinner, Chief Executive Officer of Sheep Producers Australia, supported SAFEMEAT's recommendations, saying:

> … what's really important is to achieve this truly harmonised national system, because if we don't have harmonisation we're going to continue to see the issues that have plagued the system up until this point. They largely are due to the disparities that exist, particularly with regard to jurisdictional legislation, and inconsistent application of business roles across each state and territory.[106]

5.79 Queensland cattle producer and Chair of AgForce Queensland's Cattle Board, William Wilson, also highlighted governance and inertia challenges, telling the committee at its Rockhampton public hearing that:

> If the aeroplane industry worked at the speed our industry is moving towards an electronic transfer of data of information of animals, they would still be smoking at the back of planes; it is horrendous.[107]

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99 ISC, *Submission 51,* [p. 1]. See also: Bonnie Skinner, Sheep Producers Australia, *Proof Committee Hansard,* 15 November 2022, p. 13.

100 ISC, *Submission 51,* [p. 1]; WoolProducers Australia, *Submission 67,* p. 7; Dr Jane Weatherley, ISC, *Proof Committee Hansard,* 11 October 2022, pp. 9–10 and 14.

101 ISC, *Submission 51,* [p. 1]; WoolProducers Australia, *Submission 67,* p. 7; William Wilson, AgForce Queensland, *Proof Committee Hansard,* 11 October 2022, p. 32; Bonnie Skinner, Sheep Producers Australia, *Proof Committee Hansard,* 15 November 2022, p. 8.

102 WoolProducers Australia, *Submission 67,* p. 7.

103 WoolProducers Australia, *Submission 67,* p. 7.

104 CCA, *Submission 44,* p. 8; Australian Veterinary Association (AVA), *Submission 18,* p. 7.

105 Jason Strong, MLA, *Proof Committee Hansard,* 11 October 2022, p. 18.

106 Bonnie Skinner, Sheep Producers Australia, *Proof Committee Hansard,* 15 November 2022, p. 8.

107 William Wilson, AgForce Queensland, *Proof Committee Hansard,* 11 October 2022, p. 32.

Bee hive traceability system

5.80 A potential tool to improve coordination and harmonisation of responses to a future varroa mite outbreak is a national bee hive traceability system. Witnesses and submitters suggested that a traceability system would streamline the identification of bee hives during a pest or disease incursion. The ability to identify the movements of hives would enable their quick identification in an impacted area and enable the ongoing movement of low-risk hives during an incursion. It was also argued that identifying the movement of hives would help prevent the closure of borders between jurisdictions, minimise the adverse impacts of an incursion and support the implementation of biosecurity control measures.[108]

5.81 The Almond Board of Australia suggested the use of a single QR code for a truckload of hives (normally 120 per truck) to record hive movements. It emphasised the importance of designing a traceability system that tracks the movement of hives across jurisdictions.[109]

5.82 Whilst supportive of enhanced registration and traceability systems, the NSWAA pointed out the importance of privacy for beekeepers. It suggested the use of industry-run applications to ensure the locations of hives are not public. It also advocated for a traceability system should the varroa mite become endemic within Australia.[110]

5.83 Whilst not specifically declaring its support for a national traceability system, the ABA recommended that beekeeper registration systems be upgraded to ensure they are easier to use, encourage participation, remain updated and collect information such as hive locations. The ABA argued the NSW registration system was not fit-for-purpose and had 'resulted in valuable time and resources being consumed attempting to identify and contact beekeepers and determine where hives are located'. Further, it highlighted the importance of functionality and ease of use, to encourage registration and engagement with the system, rather than punishment.[111]

5.84 DPI recognised a need to review and take on stakeholders' feedback about the state's registration system. It clarified that an active debate about registration revolved around whether registration fees should apply, with some

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[108] Daniel Le Feuvre, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 5; Almond Board of Australia, *Submission 62*, [p. 4].

[109] Tim Jackson, Almond Board of Australia, *Proof Committee Hansard*, 8 September 2022, pp. 28 and 30.

[110] Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, pp. 3 and 8.

[111] Sheila Stokes, ABA, *Proof Committee Hansard,* 12 October 2022, p. 10.

jurisdictions offering registration for free, and whether free registration translates into increased registrations.[112]

5.85 One pre-existing system referenced with the potential to support traceability was the B-QUAL system. Established by the AHBIC, B-QUAL is a quality assurance system for the Australian honeybee industry that integrates certification and trains industry participants in quality standards and biosecurity.[113] The NSWAA commented that discussion had taken place about B-QUAL integrating a 'national freedom of movement' capability. However, progress had been slow.[114]

Committee view

5.86 Given the rise in biosecurity threats, and the wide range of benefits offered by a national traceability system, the committee supports the extension of the NLIS to include individual sheep and goats. It notes that there will be challenges in implementation and additional costs, including for producers, and welcomes the government's announcement of additional funding, while also recognising the need for a review of current funding arrangements.

5.87 The committee considers the role of the NLIS to be sufficiently vital to protecting Australia's livestock that it supports the SAFEMEAT Partnership's recommendations to establish a separate statutory or regulatory authority responsible for managing Australian livestock traceability. Furthermore, the committee is of the view that there is a need for improvements to governance standards and system enhancements to enable a truly national and consistent system.

5.88 In principle, the committee is supportive of a bee hive traceability system designed to support the identification of hives' movements and locations. Whilst traceability may help prevent some adverse impacts of an incursion on industry (such as preventing border closures and the ongoing movement of bee hives during an incursion), there are substantive barriers to its implementation (such as data privacy, alignment and sharing arrangements). For this reason, the committee foresees significant benefit of DAFF leading a feasibility study into a traceability system for commercial bee hives, in partnership with state and territory governments and the honey bee industry.

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112 Scott Hansen, Director General, DPI, *Proof Committee Hansard,* 12 October 2022, p. 38.

113 B-Qual, *B-Qual Certification Benefits* (accessed 27 October 2022).

114 Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, p. 4.

Recommendation 13

5.89 The committee recommends that the Australian Government conduct a review of national livestock traceability funding and co-funding mechanisms, to ensure they are sustainable, comprehensive, and equitable.

Recommendation 14

5.90 The committee recommends that the Australian Government establish a statutory or regulatory authority responsible for managing Australian livestock traceability.

Recommendation 15

5.91 The committee recommends the Department of Agriculture, Fisheries and Forestry, in partnership with state and territory governments and the honey bee industry, conduct a feasibility study for a commercial bee hive traceability system.

Improved diagnostic capability

5.92 Submitters to the inquiry called for a range of improvements to current diagnostic capability, including in relation to FMD and LSD, as part of preparedness arrangements. Enhancements would improve disease surveillance and the ability to diagnose disease quickly, including through:[115]

- capacity building, especially in regional and remote areas, for example through partnerships and private veterinary laboratory involvement;[116]
- training and development to address shortfalls and improve capabilities;[117]
- improvements to sample transportation and processing, particularly for regional areas where results can take 48 hours to be confirmed;[118]
- increased uptake of existing and emerging rapid diagnostic technologies;[119]
- standardised reporting;[120] and
- improved national integration, harmonisation, and coordination.[121]

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115 Dr Ken Jacobs, *Submission 16,* [pp. 1 and 3].

116 Dr Ken Jacobs, *Submission 16,* [p. 3]; AVA, *Submission 13,* p. 6; Australian Pork Limited, *Submission 74,* pp. 4 and 12–13; Charles Sturt University, *Submission 28,* pp. 2 and 7; Invasive Species Council, *Submission 92,* p. 22.

117 Dr Ken Jacobs, *Submission 16,* [p. 3]; AVA, *Submission 13,* p. 6; NFF, *Submission 50,* pp. 9–10; Centre of Excellence for Biosecurity Risk Analysis (CEBRA), *Submission 53,* [p. 4]; Hort Innovation, *Submission 55,* pp. 4 and 11–12.

118 Dr Ken Jacobs, *Submission 16,* [p. 3]; AVA, *Submission 13,* p. 6; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 29.

119 AVA, *Submission 13,* p. 6; Australian Pork Limited, *Submission 74,* pp. 4 and 13–14.

120 AVA, *Submission 13,* p. 6; Illumina, *Submission 64,* Attachment 1, [p. 2].

5.93 Evidence provided by Jim Fletcher indicated that there is no structured approach to the management and funding of a national diagnostic capability. His submission stated that funding remains primarily with the states and territories, with a high reliance on user pays and fees, making it vulnerable to market failure.[122]

5.94 Australian Pork Limited called for a review of the diagnostic testing system to 'streamline processes and enable an innovative system that is efficient, effective and trusted by government, industry, and trade partners'.[123]

5.95 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) emphasised the importance of improved detection and diagnostic capabilities. It submitted that development of genomic technologies, such as polymerase chain reaction (PCR) testing, is vital.[124]

5.96 The Australian Centre for Disease Preparedness (ACDP) facility has emergency plans in place in the event of an FMD incursion and has doubled its stock of PCR tests, with further stocks ordered. A workforce management plan has also been developed, including sharing testing with states and territories.[125]

5.97 Horticulture Innovation Australia (Hort Innovation) referenced a forthcoming project that will investigate international best-practice methods to detect and control varroa mite. This investigation will seek to employ more efficient detection methods and reduce industry's reliance on chemical pest control measures. The horticultural industry's overall research goal is to 'secure and deploy an arsenal of cutting-edge tools to help Australian horticulture'.[126]

Committee view

5.98 The committee heard that there is scope to improve Australia's diagnostic and testing network to ensure there is the capacity and capability to meet the pressures that may arise under any disease incursion, particularly in regional and remote areas. The committee is encouraged by the work that is being done to harmonise and improve the coordination of the diagnostic and testing

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[121] NFF, *Submission 50,* Attachment 1, p. 4; The Hon Mark Furner MP, Queensland Minister for Agricultural Industry Development and Fisheries, *Submission 69,* p. 3; Australian Pork Limited, *Submission 74,* pp. 4 and 13; Illumina, *Submission 64,* Attachment 1, [p. 2].

[122] Jim Fletcher, *Submission 11,* Attachment 1, pp. 16–17.

[123] Australian Pork Limited, *Submission 74,* p. 12.

[124] CSIRO, *Submission 40,* p. 9; Dr Dwane O'Brien, CSIRO, *Proof Committee Hansard,* 5 November 2022, p. 2.

[125] CSIRO, *Submission 40,* pp. 6–7.

[126] Brett Fifield, Chief Executive Officer, Hort Innovation, *Proof Committee Hansard,* 12 October 2022, p. 24.

network and emphasises the importance of the continuation of this work. The committee suggests that further work be done to collaborate and utilise private resources, and to better consider the impacts of incursions and lockdowns on the network, for instance in relation to transportation of samples.

Vaccines and other agvet chemicals

5.99 Under the AUSVETPLAN the vaccination of FMD-susceptible livestock may be considered under certain circumstances, although vaccination may not prevent animals becoming infected with FMD.[127] CSIRO advised that they have been working with the department to model the effects of vaccination against FMD, advising that vaccination will only have a big impact if there is a large outbreak in a densely farmed area. If FMD were to reach Australia the vaccine would be ordered in any case, with any decision on whether to use it, to be made subsequently.[128]

5.100 An FMD vaccination has been approved for use in Australia in the event of an outbreak. Australian has an FMD antigen bank in the United Kingdom, which is supplied by a commercial company,[129] managed by AHA, and co-funded by states and territories and the Commonwealth. The antigens would be used for the manufacture of vaccines to enable Australia to respond to the incursion.[130]

5.101 Testing and exercises have confirmed that Australia's current vaccine bank would be suitable for addressing the FMD strain circulating in Indonesia, and that in the event of an incursion, vaccines would be available within seven days. AHA has also established a local stockpile of suitable vaccine equipment and established an online training package to ensure sufficient capacity for a vaccine program in the event of an outbreak.[131]

5.102 However, Australian Dairy Farmers were concerned that overseas procurement can 'be more expensive, inefficient, and subject to supply chain bottlenecks than if the capability were developed and expanded domestically' and called for the transformation of the ACDP as a 'centre of excellence' for vaccines and diagnostics.[132]

5.103 CSIRO advocated for access to the live FMD virus by the ACDP to improve Australia's capacity to prepare for and respond to an FMD outbreak, advising:

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[127] DAFF, *Submission 73*, p. 36.

[128] Dr Wilna Vosloo, Group Leader, Disease Mitigation Technologies, CSIRO, *Proof Committee Hansard,* 15 November 2022, p. 3.

[129] CSIRO, *Submission 40,* p. 7.

[130] APVMA, *Submission 37,* pp. 4–5; DAFF, *Submission 73*, p. 37.

[131] CSIRO, *Submission 40,* p. 5; AHA, *Submission 83,* pp. 11–12 and 24.

[132] Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 8.

> … access to the live virus would allow improved national and regional surveillance, along with the ability to develop new diagnostic tools and future next generation vaccines including an mRNA [messenger ribonucleic acid] vaccine for FMD.[133]

5.104 Although the laboratory has been designed to allow research into dangerous infectious agents, it (and other laboratories) is not currently permitted to conduct this work, and all research is conducted with collaborators overseas.[134]

5.105 CSIRO is currently in discussions with international companies and a local research institute about mRNA vaccine development, including for FMD.[135]

5.106 Opinions on the need to import the FMD live virus were mixed. RMAC advised that for the FMD virus 'we don't necessarily believe it's necessary to bring into Australia simply because we have an agreement with the UK to import that vaccination on seven days' notice'.[136] However the Australian Lot Feeders' Association, thought there was merit in importing the live virus in order to understand how the disease may spread and behave in Australia.[137]

5.107 The committee heard that the government is not currently considering the import of the FMD live virus, and that any decision would need to be managed carefully with trading partners.[138] DAFF warned that 'there will be some trading partners that would automatically jump to the assumption … "that they effectively have the virus"'.[139] The department also advised that given the highly transmissive nature of the FMD virus and the fact that it has previously escaped from high containment laboratories and vaccine production units overseas, a risk assessment of ACDP facilities, systems and procedures would also be required prior to import.[140]

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133 CSIRO, *Submission 40,* pp. 2 and 7. See also: DAFF, *Submission 73,* p. 29.

134 CSIRO, *Submission 40,* pp. 2 and 6–7; Dr Wilna Vosloo, CSIRO, *Proof Committee Hansard,* 15 November 2022, p. 6.

135 CSIRO, *Submission 40,* p. 7.

136 John McKillop, Independent Chair, Red Meat Advisory Council (RMAC), *Proof Committee Hansard*, 15 November 2022, p. 11.

137 Verity Price, Manager, Policy, Australian Lot Feeders' Association, *Proof Committee Hansard,* 15 November 2022, p. 12.

138 Dr Chris Parker, First Assistant Secretary, Biosecurity Animal Division, DAFF, *Proof Committee Hansard,* 15 November 2022, pp. 24–25; Dr Andrew Sheppard, Biosecurity Mission Lead, CSIRO, *Proof Committee Hansard,* 15 November 2022, p. 5.

139 Nicola Hinder, Acting Deputy Secretary, Agricultural Trade Group, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 25.

140 DAFF, Answer to questions on notice IQ22–000070, 15 November 2022 (received 24 November 2022).

5.108 Australia has imported the LSD live virus, with a rigorous process attached to its import and use to ensure that there is no compromise in biosecurity.[141] There is currently no LSD vaccine approved for use in Australia, however it is anticipated that an application will be made for a permit in due course.[142] The Cattle Council of Australia (CCA) called for an offshore vaccine bank for LSD to allow a speedy response in the event of an incursion.[143]

5.109 Industry supported the importation of the live LSD virus,[144] with Australian Dairy Farmers envisioning this step as the start of a 'more expansive capacity and capability building program domestically'.[145]

5.110 Other agricultural and veterinary (agvet) chemicals and disinfectants have already been approved by the Australian Pesticides and Veterinary Medicines Authority (APVMA) for use in the event of an outbreak of FMD and LSD.[146]

5.111 As previously noted, the APVMA regulates the use of fipronil, which is used to eradicate feral and non-commercial bee hives within the varroa mite eradication zones of NSW. Strict requirements are applied to its use, which is anticipated to run over a 12-month period.[147]

Committee view

5.112 The committee is satisfied that the current vaccine bank arrangements in place would meet Australia's needs for vaccines in the event of an FMD incursion, and it supports the establishment of a similar vaccine bank for LSD.

5.113 Based on the evidence received during the inquiry, the committee notes that there are opportunities for Australia to build its vaccine research, development, and manufacturing capabilities in the medium to long term. As such, the committee supports the ACDP's calls for access to the live FMD virus, with appropriate protections in place, to enable Australia to be better prepared to identify and respond to an incursion and enable the development of a more complex vaccine capability.

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141 Dr Dwane O'Brien, CSIRO, *Proof Committee Hansard,* 5 November 2022, pp. 4–5.

142 APVMA, *Submission 37,* pp. 5–6.

143 CCA, *Submission 44,* p. 6.

144 CCA, *Submission 44,* p. 5; Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 8.

145 Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 8.

146 APVMA, *Submission 37,* pp. 4–5.

147 Dr Gabrielle Vivian-Smith, Australian Chief Plant Protection Officer, DAFF, *Proof Committee Hansard*, 15 November 2022, p. 31; DPI, *Wild European Honey Bee Management Program*, (accessed 29 September 2022).

Recommendation 16

5.114 The committee recommends that the Australian Government and Animal Health Australia establish a lumpy skin disease vaccine bank for use by Australia in the event of an incursion.

Recommendation 17

5.115 The committee recommends that the Australian Government negotiate with the United Kingdom Government the ability for researchers from the Australian Centre for Disease Preparedness to access and conduct research on Australia's bank of foot-and-mouth virus vaccine in the United Kingdom.

Transport infrastructure

5.116 Several witnesses drew attention to the need for improvements to Australia's transport infrastructure and systems as an essential part of the biosecurity system. Australian Pork Limited supported technological enhancements and digitisation of biosecurity information to monitor animal transport.[148]

5.117 ALTRA warned that 'while preparations are indeed underway to varying degrees, jurisdictions are not ready for an FMD outbreak' in the following areas:

- availability of information relating to livestock standstill rules, emergency livestock holding facilities, and usable decontamination advice;
- national digital systems to support livestock transport, including a tested national movement permit system, nationally consistent vendor declarations, and a national electronic livestock identification system; and
- transport infrastructure to support livestock movement including decontamination-grade commercial truck washes in agricultural zones, established under a coordinated national truck wash plan, and managed livestock effluent disposal sites on key freight routes.[149]

5.118 ALTRA recommended that the National Heavy Vehicle Regulator be consulted in the development of a national movement permit system, given its existing registration role and experiences with national permit systems.[150]

5.119 The government's Exotic Animal Disease Preparedness Joint Interagency Taskforce also recognised the importance of a national system, recommending that the government consider further work on 'a national approach to interstate border control and permitting to ensure efficient and effective

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148 Australian Pork Limited, *Submission 74,* pp. 14–15; Christopher Iffland, *Submission 101,* pp. 1–2.

149 ALTRA, *Submission 78,* pp. 10–21. See also: Jason Strong, MLA, *Proof Committee Hansard,* 11 October 2022, p. 15.

150 Mathew Munro, ALTRA, *Proof Committee Hansard,* 11 October 2022, p. 27.

interstate border security movements as part of the enforcement of a livestock standstill or movement controls'.[151]

5.120 In relation to livestock effluent disposal sites as part of multipurpose facilities on key freight routes, ALTRA highlighted that this committee's recommendation made as part of its 2021 inquiry into Australia's trucking industry, has not been addressed, impacting on animal welfare, safety and biosecurity preparedness.[152] Mr Munro from ALTRA highlighted that 'getting that buy-in to build with a network-wide approach has been very difficult, and we really need the federal government's assistance to try and solve that issue'.[153]

5.121 Mr Munro suggested that the development of appropriate effluent disposal sites, truck washdown and other facilities could be progressed if the federal government required the development of such sites through funding conditions, eligibility rules for cost recovery from industry and/or the application of mandatory standards to the design of rest areas.[154]

5.122 To better support the livestock transport industry ALTRA also called on the Federal Government to conduct modelling and industry consultation to determine the feasibility of a Road Transport Management Deposit Scheme to enable the industry to self-fund temporary financial relief to affected transport operators, and improve the resilience and recovery of the agricultural sector in the event of an incursion.[155] Mr Munro advised:

> It's not about looking for handouts. It's about putting industry in a position where it can manage its own risk over the longer term …
>
> We're not asking governments to establish it at this point. We're asking governments to look at some modelling to see how it might work.[156]

Committee view

5.123 The committee heard that consultation and collaboration with the livestock transport industry in relation to biosecurity matters has been patchy, with the

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[151] DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 13 and 29.

[152] Recommendation 9, Rural and Regional Affairs and Transport References Committee, *Without Trucks Australia Stops: the development of a viable, safe, sustainable and efficient road transport industry*, August 2021, pp. 151–152 and 193–194. Mathew Munro, ALTRA, *Proof Committee Hansard*, 11 October 2022, pp. 19–21.

[153] Mathew Munro, ALTRA, *Proof Committee Hansard*, 11 October 2022, p. 20.

[154] Mathew Munro, ALTRA, *Proof Committee Hansard*, 11 October 2022, pp. 23, 26 and 28.

[155] ALTRA, *Submission 78*, pp. 21–22.

[156] Mathew Munro, ALTRA, *Proof Committee Hansard*, 11 October 2022, p. 25.

peak body, ALTRA, only recently invited to participate in preparedness and response planning.[157]

5.124 Given Australia's COVID-19 experiences with border control, entry requirements and the issue of permits, the committee supports a nationally coordinated approach to the imposition of biosecurity movement restrictions and the development of a national movement permit system to ensure that our transport and freight network operates optimally.

5.125 The committee reiterates its recommendation arising from its inquiry into Australia's trucking industry, in its report *Without Trucks Australia Stops*, and advocates for the development of a coordinated network of facilities. It is clear that guidelines relating to heavy vehicle rest area facilities, including effluent disposal, truck washes, loading infrastructure, and holding pens, have been inadequate in ensuring the development of multiuser facilities on key routes, which could benefit users across the agricultural sector.[158] The committee notes that in addition to the $60 million already set aside to fund rest areas through the Heavy Vehicle Safety and Productivity Program, the government has committed to an additional $80 million for new and refreshed rest areas.[159]

5.126 The committee also heard that the projected cost of an FMD outbreak does not take account of economic impacts on related industries such as the livestock transport sector. This sector is subject to a range of pressures including those relating to extreme weather events (such as flooding), human and animal diseases, rising fuel costs and other emergencies, and is not a signatory to existing cost sharing arrangements.[160] The committee applauds ALTRA's initiative and desire to manage its own risks over the longer term through a Road Transport Management Deposit Scheme and supports further investigation into the merits of such a scheme.

Recommendation 18

5.127 The committee recommends that the Australian Government coordinate the implementation of a national approach to interstate border control and permitting, and use of a national movement permitting system.

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157 Athol Carter, Executive Member, ALTRA, *Proof Committee Hansard,* 11 October 2022, pp. 21–22.

158 Athol Carter, ALTRA, *Proof Committee Hansard,* 11 October 2022, p. 26.

159 Senator the Hon Carol Brown, Assistant Minister for Infrastructure and Transport, 'Delivering $140 million for heavy vehicle rest areas', *Media release,* 11 November 2022 (accessed 23 November 2022).

160 Mathew Munro, ALTRA, *Proof Committee Hansard,* 11 October 2022, p. 24.

Recommendation 19

5.128 The committee recommends that the Australian Government coordinate the development of a national network plan and sustainable funding for the establishment of livestock transport infrastructure at rest stops on key livestock freight routes around Australia.

Recommendation 20

5.129 The committee recommends that the Australian Government conduct industry consultation to determine the feasibility of a Road Transport Management Deposit Scheme.

Chapter 6
Reforming the biosecurity system

6.1 This chapter considers key recommendations arising from significant biosecurity reviews and looks at the Department of Agriculture, Fisheries and Forestry's (DAFF) performance in implementing those recommendations. The chapter also looks at key recommendations arising from the reviews where the committee received significant evidence as part of its inquiry, including in relation to sustainable biosecurity funding. Lastly, the chapter examines several issues which cut across the biosecurity continuum and makes recommendations for improvement.

Findings of major biosecurity reviews and inquiries

6.2 Over recent decades, governments have commissioned several independent reviews into biosecurity. These reviews have been the catalyst for significant regulatory and structural reforms—many of which are in the process of being implemented. Concurrently, the Inspector-General of Biosecurity (IGB) and the Australian National Audit Office (ANAO) have played an ongoing oversight role. Key reviews and audits referenced throughout this inquiry include:

Independent reviews

- The Beale review (2008)—recommended moving from the concept of 'quarantine' to that of 'biosecurity', adopting a risk management approach, prioritising partnerships with non-government stakeholders and the development of a National Agreement on Biosecurity, a new Biosecurity Act and a new statutory office of IGB;[1]
- the Matthews review (2011)—looked into Australia's preparedness to prevent and respond to an outbreak of foot-and-mouth disease (FMD), leading to dedicated FMD Taskforce (active 2012 to 2014) and development of a National FMD Action Plan;[2] and
- the Craik review (2017)—which looked at the operation of the national biosecurity system as underpinned by the original 2012 Intergovernmental Agreement on Biosecurity (IGAB). The Craik review recognised that biosecurity threats are increasing rapidly, recommended a series of major

[1] Department of Agriculture, Fisheries and Forestry (DAFF), *Submission 73*, p. 51. See also: Beale, Fairbrother, Inglis and Trebeck, *One Biosecurity: a working partnership*, September 2008 (accessed 13 September 2022).

[2] DAFF, *Submission 73*, p. 51. See also: Ken Matthews AO, *A review of Australia's preparedness for the threat of foot-and-mouth disease*, October 2011 (accessed 13 September 2022).

reforms with a five-to-ten-year timeframe, and led to a new IGAB between Australian governments, which came into effect in January 2019.[3]

Exotic Animal Disease Preparedness Joint Interagency Taskforce

6.3 Announced on 4 August 2022, the taskforce brought together officials from DAFF, Emergency Management Australia, the Australian Defence Force, Australian Border Force (ABF) and Animal Health Australia (AHA) to work with states, territories and industry. The taskforce conducted a range of exercises to determine roles and responsibilities and assess preparedness for an FMD or lumpy skin disease (LSD) incursion.[4] The taskforce noted that 'participants showed tremendous good will and cooperation … and expressed a willingness to share information and build upon Australia's world class system'.[5]

6.4 The taskforce reported to the Minister on 5 September 2022. It found that 'the scale and speed of response required in the case of an FMD or LSD incursion would be significant and therefore place considerable pressure on the system'.[6] However, the taskforce also reported that the biosecurity system was prepared, concluding that:

> … [Emergency Animal Disease, (EAD)] response arrangements are comprehensive and well-understood by system participants. These response arrangements are regularly used, with success, in responding to biosecurity incidents. Overall, the system is strong, in particular in prevention and mitigation, and the system is sound.[7]

6.5 The taskforce made 14 recommendations, including:

- the need for improved national coordination and stakeholder engagement and participation;
- development of a national crisis communications strategy and content with an emphasis on the value of 'strong and consistent messaging';

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[3] DAFF, *Submission 73*, p. 53. See also: Craik, Palmer and Sheldrake, *Priorities for Australia's biosecurity system: an independent review of the capacity of the national biosecurity system and its underpinning intergovernmental agreement*, 2017 (accessed 13 September 2022).

[4] DAFF, Submission 73, p. 59; DAFF and Department of Home Affairs (Home Affairs), *Joint Interagency Taskforce EAD Preparedness: recommendations*, 5 September 2022 (accessed 16 September 2022); DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. v and ix (accessed 28 September 2022).

[5] DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 30.

[6] Jamieson Murphy, 'FMD outbreak plan "strong" but a handful of tweaks needed: report', *Farmonline*, 8 September 2022 (accessed 16 September 2022).

[7] DAFF, Submission 73, p. 59; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 11.

- the need for a national biosecurity data and intelligence capability that informs the national collection, processing and dissemination of intelligence;
- improvement of preparedness and responses at the federal level;
- expansion of modelling, including potential economic impacts of an EAD incursion and weather events that could transport LSD to Australia;
- review, rationalisation and modernisation of key response plans and policies by all jurisdictions;
- development of a system-wide workforce capacity and training strategy;
- development of a resource plan (including mission critical supplies);
- additional work on a national approach to interstate border control; and
- quarterly reporting on progress of these recommendations.[8]

Inspector-General of Biosecurity reviews

6.6 Since being formally established in 2016, the IGB has published 20 reviews, with 246 recommendations. Currently, 136 are listed as 'closed' and 110 remain 'open and being progressed' by DAFF (see Appendix 1).[9]

6.7 In February 2021 the IGB completed a key review into the DAFF's operational model, which found:

- Australia's biosecurity system 'is not in a strong position to address the diverse and evolving biosecurity risks and business environment';
- the current administrative structure creates perverse incentives for DAFF officers to 'escalate risks in their own area', in order to compete for resources, leading to a fragmentation of Australia's approach to biosecurity;
- the department is 'better at starting initiatives and promising improvements' than 'delivering the targeted outcomes and locking in completed reforms';
- the department has failed to embrace co-regulation and to work with industry as a partner; and
- the absence of an appropriate biosecurity funding model.[10]

6.8 In November 2021, the Inspector-General released a report on DAFF's implementation of IGB review recommendations. This report concluded that DAFF had:

> … struggled to understand how to handle the independent role of Inspector-General established under the *Biosecurity Act 2015*, the seriousness of Inspectors-General recommendations, and the necessity for the small staff team assigned to support the Inspector-General to also

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[8] DAFF and Home Affairs, *Joint Interagency Taskforce EAD Preparedness: recommendations*, 5 September 2022; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 26 and 34.

[9] Inspector-General of Biosecurity (IGB), *Submission 29*, p. 1.

[10] IGB, *Adequacy of department's operational model to effectively mitigate biosecurity risks in evolving risk and business environments*, February 2021, pp. 4–5 (accessed 8 December 2022).

> provide independent support. … Australia needs the department to be better at what it does in providing biosecurity functions for our nation. That improvement requires better governance, not just more resources and more hard work from its committed workforce.[11]

6.9 The IGB made ten recommendations addressing weaknesses in DAFF's management of its response to reviews, such as: increasing accountability and 'ownership'; improving the timeliness of implementation and reporting of progress; clearer 'verification of completion'; and 'integration of [IGB] recommendations within an overall improvement program'.[12]

6.10 The IGB also suggested that the department implement routine monitoring and progress reporting against review recommendations,[13] 'to maintain strong governance processes that provide the Director of Biosecurity with clear line of sight'.[14] The current IGB, Dr Lloyd Klumpp, also observed that 'it's all very well making recommendations … [and] identifying lessons. We actually need formal processes … to ensure that there's accountability for making things change'.[15]

6.11 Dr Klumpp advised that, as part of his forward work plan, he would be reviewing 'the strategic approaches of the department for system-wide benefit. Rather than focussing on FMD as an example, or varroa mite as an example'. His immediate priorities are to review the use of science and research and development within the department to ensure that it is relevant to the needs of the biosecurity system, and to improve the management and use of data.[16]

Australian National Audit Office

6.12 The ANAO has conducted a number of recent audits relevant to the inquiry, such as the *Responding to non-compliance with biosecurity requirements* audit.[17] This review made several concerning findings in relation to DAFF's compliance frameworks, operational arrangements and use of regulatory tools:

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[11] IGB, *Accountable implementation of Inspectors-General of Biosecurity review recommendations (2015–2021)*, November 2021, pp. 29–30 (accessed 12 September 2022).

[12] IGB, *Accountable implementation of Inspectors-General of Biosecurity review recommendations (2015–2021)*, November 2021, p. 2.

[13] Including reporting to the Portfolio Audit Committee and public annual reporting.

[14] IGB, *Accountable implementation of Inspectors-General of Biosecurity review recommendations (2015–2021)*, November 2021, p. 3.

[15] Dr Lloyd Klumpp, IGB, *Proof Committee Hansard*, 15 November 2022, p. 21.

[16] Dr Lloyd Klumpp, IGB, *Proof Committee Hansard*, 15 November 2022, p. 18.

[17] Australian National Audit Office (ANAO), *Auditor-General Report No.42 of 2020–21, Responding to non-compliance with biosecurity requirements*, 7 June 2021. Also see: ANAO, *Auditor-General Report No.23 of 2018–19, Northern Australia Quarantine Strategy—Follow-on audit*, 17 January 2019 (accessed 15 November 2022).

- arrangements to respond to non-compliance were 'largely inappropriate', citing an 'absence of frameworks, plans or targets';
- was **not** able to demonstrate that its response to noncompliance is effective at managing biosecurity risks;
- detection arrangements were 'partially appropriate'; and
- use of regulatory tools was 'partially effective'.[18]

6.13 The ANAO noted that 'undetected non-compliance' is increasing, despite improvements in some areas. Like the IGB, the ANAO also concluded that the department is failing to 'effectively use the full suite of regulatory tools available' to it.[19] It made eight recommendations, all of which were agreed by government. These included recommendations that the department should provide:

- guidance for its use of intelligence in regulating biosecurity, and improved governance arrangements for information systems;
- a framework to assess and manage risk across the entire biosecurity system and to ensure resources are allocated proportionate to risk;
- a planning framework for biosecurity regulation; and
- a performance framework to 'support the effective use of the full suite of available regulatory tools'.[20]

Australia's Biosecurity Future report

6.14 Another key biosecurity report, published in 2020 by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), was *Australia's Biosecurity Future*.[21] This report created a 'vision for a resilient biosecurity system in 2030' and outlined key actions to achieve that vision. The report made 20 recommendations relevant to system connectivity, shared responsibility and innovation in science and technology. The CSIRO also called for a 'One Biosecurity and 'One Health' approach that incorporates human, agricultural, environmental, and marine biosecurity and promotes 'strong collaboration across governments, industry, research, and the community'.[22]

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[18] ANAO, *Submission 9*, p. 2.

[19] ANAO, *Submission 9*, p. 2.

[20] ANAO, *Submission 9*, pp. 2–4.

[21] Produced in partnership with Animal Health Australia (AHA), Plant Health Australia (PHA) and the Centre for Invasive Species Solutions (CISS).

[22] Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Submission 40*, p. 4.

Parliamentary reviews

6.15 The House of Representatives and the Senate have produced several recent reports into Australia's biosecurity system, many of which considered bills and administrative arrangements for individual agricultural imports.[23]

6.16 Previous inquiries relevant to this inquiry include:

- Inquiry into the biosecurity of Australian honey bees (2017);
- Inquiry into the future of the beekeeping and pollination services industries in Australia (2014);
- Review of the citrus industry in Australia (2013); and
- Australia's biosecurity and quarantine arrangements (2012).[24]

Government response to key reviews

6.17 According to DAFF, while Australia's biosecurity system is 'robust and mature', it must continually evolve over time to respond to new challenges and risks.[25] This evolution can be seen in the department's responses to the key reviews[26] outlined in this chapter.[27]

6.18 A major development was the release of *Commonwealth Biosecurity 2030*, as discussed in Chapter One.[28] *Commonwealth Biosecurity 2030* includes a commitment to releasing annual action plans to guide the delivery of the strategy and 'ensure transparency'. The first annual action plan was released in May 2022.[29] It provides an overview of work undertaken in 2021 and outlines priority activities for 2022 under the nine strategic areas.[30]

6.19 Also resulting from the *Commonwealth Biosecurity 2030* was Australia's first National Biosecurity Strategy (NBS). The strategy is designed to 'provide clear direction to ensure our system remains fit to meet the challenges of the next

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[23] For example: Biosecurity Amendment (Enhanced Risk Management) Bill 2021 (2021); Biosecurity Amendment (Traveller Declarations and Other Measures) Bill 2020 (2020); seafood products (2017); Chinese apples and the cherry trade (2010); and New Zealand apples (2005).

[24] Parliament of Australia, *Register of Senate Committee Reports*, 1970 to 31 October 2022 (accessed 21 November 2022); Standing Committee on Agriculture, *Completed inquiries and reports* (accessed 21 November 2022).

[25] DAFF, *Submission 73*, p. 56.

[26] The department's progress on key reviews is available at Appendix 1.

[27] See for example: DAFF, *Reform of Australia's biosecurity system: An update since the publication of 'One Biosecurity: a working partnership'*, March 2012 (accessed 13 September 2022); DAFF, *Submission 73*, pp. 52–54.

[28] DAFF, *Submission 73*, p. 58.

[29] DAFF, *Submission 73*, pp. 58–59.

[30] DAFF, *Submission 73*, p. 59.

decade and beyond'[31] and was developed collaboratively with states and territories, industry, relevant peak bodies and other key stakeholders.[32]

6.20 The NBS includes 'initial actions under priority areas', as well as a roadmap for a national implementation plan that 'builds upon initial actions and establishes a framework for monitoring and evaluation to ensure accountability'. The strategy will be supported by the NBS Implementation Committee comprising representatives from plant, animal and aquatic industries, freight and logistics, environmental groups, research organisations and Indigenous communities.[33] Stakeholder responses to the strategy are considered below.

6.21 As part of its response the Australian Government has also increased maximum penalties under the *Biosecurity Act 2015* (Biosecurity Act) and regulations in 2021.[34]

6.22 Further amendments to the compliance framework were implemented on 29 November 2022, with the passage of the *Biosecurity Amendment (Strengthening Biosecurity) Act 2022*. This legislation amended the Biosecurity Act to strengthen the management of biosecurity risks posed by goods and by maritime and aviation traveller arrivals and increased a range of civil and criminal penalties.[35]

Response to Inspector-General and ANAO reviews

6.23 DAFF submitted that it has an 'ongoing program of work' underway to address all agreed IGB and ANAO recommendations.[36] While almost half of the Inspector-General's recommendations are still being progressed, none of the recommendations in recent key ANAO reports have been finalised. However, the department submitted that four of these recommendations (out of 11) are 'in the final stages of closure'.[37]

6.24 Dr Klumpp commented that the department is making progress and that:

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[31] Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry, 'Inaugural National Biosecurity Strategy released', *Media release*, 9 August 2022 (accessed 14 September 2022).

[32] Senator the Hon Murray Watt, 'Inaugural National Biosecurity Strategy released', *Media release*, 9 August 2022.

[33] DAFF, *Submission 73*, pp. 56–57.

[34] DAFF, Submission 73, p. 6; Australian Dairy Farmers, *Submission 56*, Attachment 1, p. 8.

[35] *Explanatory memorandum*, p. 3; Peta Lane, First Assistant Secretary, Biosecurity Strategy and Reform Division, DAFF, *Proof Committee Hansard*, 15 November 2022, p. 28; Parlwork, *Bill details: Biosecurity Amendment (Strengthening Biosecurity) Bill 2022*, 29 November 2022 (accessed 30 November 2022).

[36] DAFF, *Submission 73*, p. 55.

[37] DAFF, *Submission 73*, p. 65.

> As a result of that review [into departmental accountability for implementation of IGB recommendations], the department now has processes in place for accountability for those recommendations … There's also a developing internal assurance framework within the department, which is very encouraging. That internal assurance framework, although immature…offers great promise to ensuring the department has a continuous improvement process within biosecurity.[38]

6.25 The IGB advised that he would again be reviewing the effectiveness of the department's management and implementation of previous IGB recommendations towards the end of his tenure in 2025.[39]

Stakeholder perspectives on government response

6.26 Stakeholders from key industry and non-government organisations were frustrated with the Australian Government's progress on implementing review recommendations, and the pace of reform generally,[40] with some, including the National Farmers' Federation (NFF), also calling for better reporting on the progress of implementation.[41]

6.27 Australian Pork Limited observed that independent reviews into Australia's biosecurity have continued to 'share' the same recurring themes over time, including 'dwindling biosecurity budgets' and the need for sustainable funding, the need for more frontline resources and capacity building, lack of regulatory maturity, and the requirement for better regulatory solutions through co-regulation.[42]

6.28 Australian Pork Limited added that the potential for these reviews to improve the biosecurity system, preparedness and response arrangements will only be realised if 'they are subsequently implemented' and it has joined with other stakeholders to lobby the government on implementation priorities.[43]

6.29 The NFF said reviews show government funding for biosecurity has 'generally been static or in decline', while funds and levies on industry have increased. Data shows a 25 per cent decrease in the number of frontline biosecurity inspection staff between 2013–14 and 2017–18, and a halving of biosecurity detector dogs between 2012 and 2017.[44] In this context, the NFF noted its

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38 Dr Lloyd Klumpp, IGB, *Proof Committee Hansard*, 15 November 2022, p. 19.

39 Dr Lloyd Klumpp, IGB, *Proof Committee Hansard*, 15 November 2022, pp. 18–21; IGB, *Review program: Inspector-General of Biosecurity: 2022–25 review plan* (accessed 21 November 2022).

40 See for instance: National Farmers' Federation (NFF), *Submission 50*, pp. 7–9; Australian Pork Limited, *Submission 74*, p. 18; GrainGrowers, *Submission 20*, [pp. 2–4].

41 NFF, *Submission 50*, p. 12.

42 Australian Pork Limited, *Submission 74*, p. 18.

43 For the full list of priorities according to the meat and livestock sector see Australian Pork Limited, *Submission 74*, p. 18.

44 NFF, *Submission 50*, Attachment: Biosecurity policy statement, p. 3.

'disappointment' at the Government's decision not to progress the introduction of a biosecurity container levy and argued this 'should be progressed as a matter of urgency' (see *Sustainable biosecurity funding* later in this chapter).[45]

6.30 Noting declining confidence in Australia's biosecurity system,[46] GrainGrowers argued there needs to be a 'reset' of the national operating and resourcing model. It called for the recommendations made from biosecurity reviews to 'be seen as opportunities to learn and improve rather than administrative hurdles to be cleared'.[47]

6.31 Other issues highlighted included the strong support for greater Australian Government national leadership and further connectivity within the biosecurity system.[48] The need for greater regional partnerships and wider stakeholder engagement on biosecurity issues was also raised, including with Indigenous communities, agricultural resellers, industry field consultants, pest management technicians, national parks, the resource sector, government land managers, recreational hunters, smallholdings and Defence.[49]

Responses to the National Biosecurity Strategy

6.32 Stakeholders were generally positive about the NBS, seeing it as an opportunity for a reset and refresh of Australia's biosecurity arrangements.[50]

6.33 However, Australian Pork Limited highlighted the need for the strategy to be supported by a comprehensive implementation plan, and 'sustainable funding and governance arrangements'. It recognised that the NBS could deliver 'genuine cultural change' towards a 'one biosecurity' approach to future proof Australia's biosecurity system. To manifest this change Australian Pork Limited called for authentic partnerships between all stakeholders, 'including health, regional development and infrastructure, community services and tourism'.[51]

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45 NFF, *Submission 50*, p. 8.

46 Recent GrainGrowers member surveys indicated just 25 per cent of respondents were 'extremely or moderately confident of keeping pests out of Australia'; 17 per cent were 'extremely or moderately confident of eradicating a pest in the event of an incursion'; and 15 per cent were 'extremely or moderately confident of the management of a pest once eradication is no longer possible'. GrainGrowers, *Submission 20*, [pp. 1–2].

47 GrainGrowers, *Submission 20*, [p. 2].

48 Dr Lloyd Klumpp, IGB, *Proof Committee Hansard*, 15 November 2022, p. 20; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 33.

49 NFF, *Submission 50*, pp. 8–9.

50 See for instance: GrainGrowers, *Submission 20*, [p. 5] and Australian Pork Limited, *Submission 74*, p. 19; Australian Dairy Farmers, *Submission 56*, Attachment 1, p. 1.

51 Australian Pork Limited, *Submission 74*, p. 19.

6.34 The NFF encouraged the committee to consider how government can best support the broad acceptance of the strategy 'by all parties', to ensure its success.[52] The Centre of Excellence for Biosecurity Risk Analysis (CEBRA) recommended governments work together to develop 'a forward plan for future skills bottlenecks', incorporating specific measures to 'identify, recruit, train, and retain' biosecurity specialists.[53]

State government perspectives

6.35 State governments were generally positive about the progress that the Commonwealth has made in recent years towards reforming the national biosecurity system, while noting that 'gaps remain'.[54]

6.36 The Western Australian Department of Primary Industries and Regional Development (WA DPIRD) specifically identified 'skills shortages, traceability, data sharing and use, and laboratory proficiency' as issues, and argued for greater investment, better prioritisation and better coordination of activities across jurisdictions, 'industries and supply chains, and communities'.[55] It thought that this should include better sharing of 'physical and non-physical resources', the use of national modelling to respond to incursions, and the 'centralisation' of specialised skills.[56]

6.37 WAFarmers expressed concern that state governments may not be 'pulling their weight', with state biosecurity funding reportedly at a standstill.[57] WAFarmers recommended this committee benchmark state government biosecurity budget allocations 'since 2017 in respect to the intergovernmental agreement'.[58] WA DPIRD submitted that it is currently reviewing Western Australia's primary biosecurity legislation and developing a Biosecurity Roadmap.[59]

6.38 The Queensland Minister for Agricultural Industry Development and Fisheries submitted that the Queensland government had increased funding and ramped up activity in the biosecurity sector. In this context, the Minister argued that the recommendations of the 2017 Craik review are 'still relevant' and should be 'revisited and re-assessed for implementation'. In particular, the

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52 NFF, *Submission 50*, p. 6.

53 Centre of Excellence for Biosecurity Risk Analysis (CEBRA), *Submission 53*, [p. 4].

54 Western Australia Department of Primary Industries and Regional Development (WA DPIRD), *Submission 80*, p. 2.

55 WA DPIRD, *Submission 80*, p. 2.

56 WA DPIRD, *Submission 80*, p. 4.

57 WAFarmers, *Submission 2*, [p. 1].

58 WAFarmers, *Submission 2*, [p. 1].

59 WA DPIRD, *Submission 80*, p. 3.

Commonwealth should progress action on developing a sustainable funding model, along with increasing research and innovation.[60]

6.39 Other state governments that submitted to the inquiry (Victoria, South Australia and the Northern Territory) did not comment on the adequacy of the government's response.

'Urgency' of action and investment levels

6.40 Key stakeholders and industry bodies acknowledged recent developments, such as the NBS, but argued the Commonwealth is not acting with sufficient urgency.[61] For instance, the Integrity Systems Company (ISC) said stakeholders are concerned about 'complacency' due to the slow pace of reforms.[62]

6.41 During his appearance before the committee on 10 August 2022, Andrew Metcalfe AO, Secretary of DAFF, assured the committee that the department is not sitting on its hands:

> We are never complacent. We fully understand the consequences of these pests and diseases. We have mobilised all available resources, our networks across industry and government, and our international partners to keep Australia FMD and LSD free.[63]

6.42 The department overtly recognised the need to 'accelerate reform' in its strategic roadmap, *Commonwealth Biosecurity 2030*:

> The urgency for accelerating reform is driven by the impacts of globalisation, which continues to rapidly change and add complexity to the environment in which our biosecurity system must operate.
>
> Higher trade, travel and international freight volumes are increasing the number of opportunities for pests and diseases to hitchhike into Australia. There are also more stakeholders involved in global supply chains than ever before, making it more complex to identify potential risks.[64]

6.43 Annual action plans under *Commonwealth Biosecurity 2030* will continue to outline the department's progress and achievements, along with its roadmap for the following year. DAFF submitted:

> 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

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60 The Hon Mark Furner MP, Office of the Minister for Agricultural Industry Development and Fisheries, Queensland, *Submission 69*, pp. 2–3.

61 See, for example: NFF, *Submission 50*, pp. 7–9; Australian Pork Limited, *Submission 74*, p. 18; GrainGrowers, *Submission 20*, [pp. 2–4].

62 Integrity Systems Company (ISC), *Submission 51*, pp. 1–2.

63 Andrew Metcalfe AO, Secretary, DAFF, *Committee Hansard*, 10 August 2022, pp. 3–4.

64 Department of Agriculture, Water and the Environment (DAWE), *Commonwealth Biosecurity 2030*, May 2021, p. 12 (accessed 14 September 2022).

> other national and international agencies, industry and/or further decisions by government.[65]

6.44 CSIRO Biosecurity Mission lead, Dr Andrew Sheppard agreed that transformation of the biosecurity system is vital:

> Since the Craik review, there's been pretty much general acceptance that there is a pressing need to transform the biosecurity system, and just scaling up the current biosecurity system would not deliver the protection that we need as a nation … Throughout the preparation of the [National Biosecurity Strategy] I did my best to make sure that the important need for transformational change, particularly supported by science and technology innovation, was a core component of that strategy, going forward, and I think it is adequately captured.[66]

6.45 Along with implementing the annual action plans, the government established the Agriculture Policy Taskforce in August 2022 to advise the department on 'preparedness for a nationally significant exotic animal disease outbreak'.[67] The Exotic Animal Disease Preparedness Joint Interagency Taskforce has also contributed to Australia's preparedness, as discussed earlier in this chapter,[68] with the department noting that it is focussed on addressing a range of issues covered by the Taskforce's recommendations, in particular in relation to data, crisis communications, workforce capacity and capability and access to critical supplies.[69]

Committee view

6.46 The committee recognises the ongoing work that is being done by the department to address the high complexity and increasing biosecurity challenges, including the development of *Commonwealth Biosecurity 2030,* the annual release of action plans, the inaugural NBS and its future implementation plan.

6.47 However, the committee notes with concern the slow progress and in some cases lack of progress of the implementation of review recommendations. Based on evidence received by the committee, this lack of urgency appears to result from insufficient governance measures, organisational culture, and insufficient staff and financial resources within DAFF.

6.48 The committee endorses the IGB's recommendations in relation to improved governance and reporting arrangements relating to the implementation of

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65 DAFF, *Submission 73*, p. 55.

66 Dr Andrew Sheppard, Biosecurity Mission lead, CSIRO, *Committee Hansard*, 10 August 2022, pp. 34–35.

67 DAFF, *Submission 73*, p. 59.

68 DAFF, *Submission 73*, p. 59.

69 Peta Lane, DAFF, *Proof Committee Hansard*, 15 November 2022, p. 27.

review recommendations and notes the department's progress and increased transparency in this area, through its annual action plans. It also notes that the IGB intends to again review the implementation of IGB recommendations as outlined in the forward review program for 2022–25.[70]

6.49 The committee welcomes the further increased penalties for biosecurity non-compliance that have been proposed, in recognition of the risks posed by weed, pest and disease incursions to Australia and its economic and environmental security. The committee recognises that the department has made significant progress in this area and has improved the transparency of information available to stakeholders. However, the committee remains concerned that DAFF does not appear to be utilising the full suite of regulatory, compliance and enforcement tools it has available.

Sustainable biosecurity funding

6.50 In alignment with previous reviews into the biosecurity system, this inquiry has reinforced the need for sustainable biosecurity funding.

6.51 Given forecast average international passenger increases of around five per cent per annum between 2015 and 2034, and significant increases in mail and cargo arising from the pandemic, DAFF advised that the current biosecurity system is 'unable to continue to provide the same level of protection by simply scaling existing resources'.[71] Modelling of the 'current trajectory' shows that even 'tripling' current investment will still see 'higher residual risk levels for Australia in 2025 than at 2014–15'.[72]

6.52 Mr Metcalfe highlighted the role the NBS has in 'ramping up' the response on a national level, saying the strategy represents 'governments committing to continuing their focus and looking at their funding, their resourcing, their collaborative effort and how we can collectively, as a biosecurity family, work together'. However, funding levels and resource allocation are ultimately a question for each jurisdiction.[73]

6.53 Stakeholders from across the animal, plant and environment biosecurity system collectively called for the creation of new, on-going and sustainable biosecurity funding measures, as an integral element to improving Australia's biosecurity planning and readiness.[74]

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70 IGB, *Review program* (accessed 16 November 2022).

71 DAWE, *Commonwealth Biosecurity 2030*, May 2021, p. 12.

72 DAWE, *Commonwealth Biosecurity 2030*, May 2021, p. 16.

73 Andrew Metcalfe, DAFF, *Committee Hansard*, 10 August 2022, pp. 26–27.

74 See, for example: Cattle Council of Australia (CCA), *Submission 44,* pp. 5 and 7–8; Australian Pork Limited, *Submission 74,* p. 10; Red Meat Advisory Council (RMAC), *Submission 77,* [pp. 6–7]; Invasive Species Council, *Submission 92,* pp. 14–16.

6.54 AgForce Queensland highlighted the challenges of attracting biosecurity preparedness funding—unless there is an imminent or actual biosecurity threat:

> Without a biosecurity threat you don't invest in biosecurity, right? Now we've got a biosecurity threat, so, guess what? We're investing in biosecurity. Isn't that a surprise? Moving forward, how do we make sure that we have enough of a biosecurity threat to invest enough in biosecurity?[75]

6.55 The Biosecurity Collective along with other submitters,[76] called for sustainable biosecurity funding 'to properly prepare and reform Australia's biosecurity' system and 'protect its [Australia's] agriculture, environment, communities and economy from the increasing risk of damaging invasive pests and diseases'. It asserted that whilst preparedness plans and programs are in place, effective implementation is reliant upon adequate funding, with spending on prevention and early detection measures, a more cost-effective approach.[77]

6.56 The Biosecurity Collective argued that '[a] doubling of funding in real terms by 2030 will likely be required, sourced from a variety of government and non-government sources, at the federal and state/territory levels'. Further, it contended that there is a need to consider 'the disparity between ongoing funding for the interlinked components of the national system, beyond the attention given to agricultural productivity and market access'. The Biosecurity Collective also highlighted that '[i]nvestment in environmental biosecurity risks continues to lag behind agricultural risks'.[78]

6.57 Likewise, representatives of the plant industry were concerned at the inequality of biosecurity resources allocation. For example, the Plant Industry Forum (PIF) pointed out that each year Australia is exposed to an average of 40 exotic plant pest incursions, whereas the animal sector experiences less than one. It argued that government-run plant biosecurity services are beyond capacity, as evidenced by the 'high workload … plant biosecurity agencies are exposed to on a day-to-day basis'.[79] PIF asserted that governments' biosecurity funding reveals a 'systemic lack of support for plant industries'.[80]

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[75] William Wilson, Chair, Cattle Board, AgForce Queensland, *Proof Committee Hansard*, 11 October 2022, p. 34.

[76] The Biosecurity Collective is made up of AHA, PHA, Invasive Species Council and the CISS.

See, for example: NFF, *Submission 50*, pp. 7–8; Grain Producers Australia, *Submission 61*, p. 3; Australian Pork Limited, *Submission 74*, p. 10; Invasive Species Council, *Submission 92*, p. 15.

[77] Biosecurity Collective, *Submission 90*, pp. 4–5.

[78] Biosecurity Collective, *Submission 90*, p. 5.

[79] Plant Industry Forum (PIF), *Submission 82*, [p. 2].

[80] PIF, *Submission 82*, [p. 2]. See also: AUSVEG, *Submission 81*, [p. 3].

6.58 DAFF confirmed that the Australian Government was 'committed to implement a sustainable funding mechanism … to strengthen 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'.[81]

Biosecurity Budget measures—2022–23

6.59 In the 2021–22 budget the government flagged $400 million towards biosecurity as part of its *Agriculture 2030* initiative.[82]

6.60 On 25 October 2022, the Australian Government announced a further $134.1 million of four years from 2022–23 (and $3.3 million annually, ongoing) in additional funding to Australia's biosecurity system. Specific measures announced as part of the 2022–23 Budget included:

- $61.6 million over two years to strengthen frontline biosecurity capability through the enhance of measures in northern Australia, and supporting domestic preparedness and biosecurity outcomes in neighbouring countries;
- $46.7 million over three years to improve on-farm biosecurity measures, including a national livestock traceability system;
- $14 million to improve Australia's biosecurity systems, with specific funding to FMD and LSD outbreaks in neighbouring countries; and
- $11.7 million over four years (and $3.3 million per year ongoing from 2026–27) to expand Australia's detector dog capability at its borders.[83]

Biosecurity import levy

6.61 One solution proposed to improve resourcing of Australia's biosecurity system, argued by many witnesses and submitters, was the application of a biosecurity import levy on shipping containers entering Australia.[84] The AHBIC made clear that the current arrangement did not include all parties with any involvement in biosecurity, submitting that:

> … the international transport industry that facilitates the incursion bares no financial responsibility for surveillance operations or incursion eradications. Strangely, it is the recipient industry, and those other horticulture industries impacted most that are footing the bills and paying.[85]

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81 DAFF, *Submission 73*, p. 60; Peter Timson, Acting Deputy Secretary, Biosecurity and Compliance Group, DAFF, *Proof Committee Hansard*, 15 November 2022, pp. 23–24.

82 DAWE, *Budget 2021–22: Biosecurity*, [2021], p. 1 (accessed 17 November 2022).

83 Australian Government, *Budget Measures: Budget Paper No. 2*, 25 October 2022, p. 44.

84 See, for example: Avocados Australia, *Submission 32*, pp. 1–2; Grain Producers Australia, *Submission 61*, p. 3; AUSVEG, *Submission 81*, p. 4; Victorian Farmers Federation, *Submission 91*, p. 7; Invasive Species Council, *Submission 92*, p. 15; AUSVEG, *Submission 81*, [p. 4]; Stephen Fuller, President, NSW Apiarists' Association (NSWAA), *Proof Committee Hansard*, 12 October 2022, p. 8.

85 AHBIC, *Submission 65*, p. 4.

6.62 A biosecurity imports levy was recommended by both the 2017 Craik review and the 2019 Steering Committee.[86] In 2020 after industry consultation and further consideration of the impacts, the Australian Government determined not to proceed with a levy at that time. However, Mr Metcalfe said the then Coalition Government had intended to 'return to the issue' in the future.[87]

6.63 The committee received evidence that called for the Australian Government to recommence consultations with industry to reconsider a viable biosecurity levy model.[88] Grain Producers Australia (GPA) advised the committee that it was not understood 'why the container levy was rejected or not implemented'. However, it speculated that it was a result of practicalities about the system. The committee heard that the GPA remained hopeful that a way forward could be found to overcome objections to the levy and support its implementation, 'given the benefits that it can deliver not only for growers in [the grain] industry but for the broader public as well'.[89]

6.64 Similarly, the NFF submitted that it was 'disappointed that this [proposal] did not progress'. It submitted that it was 'imperative that biosecurity pathways that generate risk contribute to the need for increased biosecurity measures', whilst also emphasising the importance of clarity, transparency, and accountability on how funds are collected and invested into the biosecurity system. More broadly, the NFF highlighted the importance of sustainable long-term funding 'to deliver not only the priority areas of the National Biosecurity Strategy, but [also] the areas of enhanced preparedness'.[90]

6.65 PHA clarified its position on the suitability of a biosecurity import levy and potential pathways forward, having previously written to the then Minister for Agriculture expressing its members' disappointment in the decision not to proceed with the biosecurity levy.[91] Its Chief Executive Officer, Sarah Corcoran explained that PHA supported a 'funding model that brings in other beneficiaries when we have incidents to emergency plant pests', and that the biosecurity levy was one measure that could deliver that outcome.[92] Regarding the Australian Government's consultation with industry on how best to apply

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[86] Wendy Craik, David Palmer and Richard Sheldrake, *Priorities for Australia's biosecurity system*, July 2017 (accessed 8 December 2022).

[87] Andrew Metcalfe, DAFF, *Committee Hansard*, 10 August 2022, p. 17; DAFF, *Onshore Biosecurity Levy* (accessed 17 November 2022).

[88] Plant Industries Forum, *Submission 82*, p. 5; Mr Nathan Hancock, Chair, Plant Industry Forum; and Chief Executive Officer, Citrus Australia, *Proof Committee Hansard,* 12 October 2022, pp. 18–19.

[89] Colin Bettles, Chief Executive, Grain Producers Australia, *Proof Committee Hansard,* 8 September 2022, p. 22.

[90] National Farmers Federation, *Submission 50*, p. 8.

[91] Grain Producers Australia, *Submission 61 — Attachment 1*, p. 1.

[92] Sarah Corcoran, Chief Executive Officer, PHA, *Proof Committee Hansard,* 8 September 2022, p. 13.

the levy, PHA recommended that an extensive consultation process recommence:

> I understand the consultation around that levy was not as good as what it could have been; hence, there was the feeling of not being brought along on the journey when the discussions were had. That doesn't preclude us from thinking about doing something similar, in the future, and, in terms of rolling out that process, the recommendation would be an extensive consultation process.[93]

6.66 The Australian Government is currently conducting further consultation on a sustainable funding mechanism for biosecurity, with consultations closing at the end of November 2022, and recommendations to be made to the government in 2023.[94]

6.67 The department noted that 'there's no specific model defined as yet' and that the purpose of the discussion paper is 'to seek views from the broader public', including views about the adequacy or otherwise of current funding.[95] Options canvassed with stakeholders included increases to budget appropriations, co-funding and investment strategies with partners, levies paid for by risk creators and/or beneficiaries,[96] and cost recovery arrangements.[97]

Committee view

6.68 It is apparent to the committee that the premier matter of concern for **all** stakeholders of the biosecurity system is access to adequate and long-term funding. This concern has been reflected time and again in the findings of various reviews and reports into Australia's biosecurity system.

6.69 Australia's world-class biosecurity system must be adequately funded to ensure its optimal functionality, and reflect the growing risks associated with globalisation and the changing climate. As demonstrated in this report, prevention and early detection are key areas of focus, highlighted by the FMD and LSD outbreak in our region and the detection of varroa mite in New South Wales (NSW). The failure of prevention and detection measures, through inadequate funding, will have profound and widespread impacts on the Australian economy, the agricultural sector, regional and rural communities, and Australia's unique ecosystem.

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93 Sarah Corcoran, PHA, *Proof Committee Hansard,* 8 September 2022, p. 13.

94 DAFF, *Have your say: making national biosecurity funding sustainable* (accessed 17 November 2022); DAFF, *Sustainable funding and investment to strengthen biosecurity: discussion paper*, 2022 p. 3 (accessed 17 November 2022).

95 Peta Lane, DAFF, *Proof Committee Hansard,* 15 November 2022, p. 34.

96 See, for example: AHBIC, *Submission 65*, pp. 4–5; CCA, *Submission 44,* p. 7; South Australian Apiarists' Association, *Submission 46*, p. 2; Almond Board of Australia, *Submission 62*, [p. 4]; Invasive Species Council, *Submission 92*, p. 15.

97 DAFF, *Sustainable funding and investment to strengthen biosecurity: discussion paper*, 2022 p. 9.

6.70 The committee is encouraged that the Australian Government has recommenced consultations to explore sustainable and long-term biosecurity funding options. The committee agrees that potential pathways forward for developing a sustainable and long-term funding arrangement include through budget appropriation to increase real base funding levels, and through the application of a biosecurity import levy. It is a rational conclusion that the freight sector, which is the creator of a major biosecurity risk, should contribute funds to biosecurity control measures. However, it is equally important that such a levy is applied fairly, is proportionate to risk profiles and committed to biosecurity measures.

Recommendation 21

6.71 The committee recommends that the Australian federal, state and territory governments commit to a sustainable biosecurity funding model to reflect the changing risk profile of pests and diseases to Australia's agriculture and environment and overall way of life.

6.72 Finally, the committee sees significant benefit of biosecurity funding being adequately and appropriately allocated to reflect the interconnectivity and risk profiles across animal, plant, environmental and even human health and biosecurity. As exemplified by the FMD and LSD outbreak in Indonesia, a major vulnerability is a potential outbreak within wild animal populations. Similarly, a plant biosecurity incursion may have broader impacts on both animal and environmental biosecurity.

6.73 The committee considers a fully functional biosecurity system as one that is cognisant of the interconnectivity of biosecurity risks, is adequately and appropriately resourced across all risk pathways, and is informed by economic, agricultural and environmental impact considerations. In this respect, the committee considers it timely to conduct a review of biosecurity system to ensure future biosecurity funding is holistically allocated and in accordance with risk profiles.

Recommendation 22

6.74 The committee recommends the Australian Government, in partnership with animal, plant and environment biosecurity stakeholders, conducts a review of how biosecurity funding is allocated to ensure that it is adequate and equitable.

Workforce capability and development

6.75 The committee were told of industry support for a biosecurity workforce capability and skills framework, skills surveys, assessments and registers, and

workforce capability planning to ensure Australia has a skilled biosecurity workforce ready to respond to threats.[98]

6.76 The need to bolster Australia's biosecurity workforce is clear and DAFF has committed to the development of a national biosecurity workforce strategy, including identifying skills needs, improving retention, strengthening professional development, and building existing partnerships.[99]

6.77 Submitters also advocated for a greater focus on biosecurity and technical specialist training and education, including ongoing professional development, within the vocational education and training and university sectors, in partnership with industry, research and other education providers.[100] The Australian Academy of Technology and Engineering (ATSE) called for long term investment in engaging younger people in science, technology, engineering and medical areas to ensure Australia's future biosecurity workforce.[101]

6.78 Australian Pork and Australian Dairy Farmers also observed the increasing role of technology and data in biosecurity and the need for professionals with data science, statistics, risk analysis and information, communications, and technology skills.[102] Similarly, Horticulture Innovation Australia (Hort Innovation) called for the development of a biosecurity workforce skilled in the use of 'innovative technologies and apply them effectively across the biosecurity spectrum' to address labour shortfalls.[103]

6.79 Witnesses and submitters recognised the need to increase the capacity and capability of the biosecurity workforce across all jurisdictions and all sectors, and risks associated with lack of workforce surge capacity which would be

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98 CEBRA, *Submission 53,* [p. 4]; Jim Fletcher, *Submission 11,* Attachment 1, p. 27; WA DPIRD, *Submission 80,* p. 7.

99 DAFF, *National Biosecurity Strategy 2022–2032, 2022*, pp. 8, 27 and 32 (accessed 16 September 2022); DAFF, *Submission 73*, pp. 56–58.

100 Australian Pork Limited, *Submission 74,* pp. 11–12; AWU, *Submission 31,* [p. 3]; Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 1; WoolProducers Australia, *Submission 67,* p. 4; RMAC, *Submission 77,* [p. 5]; Australian Academy of Technology and Engineering (ATSE), *Submission 12,* pp. 1–2; ANAO, *Submission 9,* p. 8; Charles Sturt University, *Submission 28,* p. 2.

101 ATSE, *Submission 12,* p. 2.

102 Australian Pork Limited, *Submission 74,* p. 11; Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 1. See also: Charles Sturt University, *Submission 28,* p. 5; AHA, *Submission 83,* p. 17.

103 Horticulture Innovation Australia (Hort Innovation), *Submission 55*, pp. 11–12.

required during a large response, an issue also identified by the Joint Interagency Taskforce.[104]

6.80 In particular the committee noted evidence relating to insufficient numbers of biosecurity officers and inspectors, as demonstrated by workforce shortages impacting on the response to the varroa mite incursion in NSW.[105] In this respect, bee industry representatives highlighted the lack of biosecurity compliance officers and trained personnel with necessary skills to effectively respond to an incursion. These stakeholders called for an increase in state and territory biosecurity officers and training programs available to industry to support biosecurity activities.[106]

6.81 In relation to rural livestock veterinarians, the Australian Veterinary Association (AVA), the NFF and Dr Ken Jacobs told the committee of 'critical [veterinary] workforce shortages and other sustainability challenges, especially in rural and regional areas.'[107] The NFF submitted that the rationalisation of government veterinary services, a change in emphasis from livestock to companion animals, an ageing workforce, and the sustainability of rural vet practices have contributed to shortages.[108] Submitters warned of the risks associated with insufficient front-line vets available to diagnose, trace and eradicate diseases as early in an outbreak as possible.[109]

6.82 The committee was told that measures could be put in place to address these shortages, including:

- greater resourcing for public-private partnerships between the government and private veterinary sectors;
- the development of a coordinated framework to ensure veterinary capability;[110]

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104 Jim Fletcher, *Submission 11,* Attachment 1, p. 27; WA DPIRD, *Submission 80,* p. 7; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 27 and 35–36.

105 PHA, *Submission 85*, [pp. 3-4].

106 Daniel Le Feuvre, Chief Executive Officer, AHBIC, *Proof Committee Hansard,* 8 September 2022, p. 8; South Australian Apiarists' Association, *Submission 46*, pp. 1–2; Tasmanian Beekeepers Association, *Submission 34*, p. 1; Stephen Fuller, NSWAA, *Proof Committee Hansard,* 12 October 2022, p. 2; Sheila Stokes, President, Amateur Beekeepers Australia, *Proof Committee Hansard,* 12 October 2022, p. 10.

107 Australian Veterinary Association (AVA), *Submission 18,* p. 2; Dr Ken Jacobs, *Submission 16,* pp. 1–2; NFF, *Submission 50,* p. 10.

108 NFF, *Submission 50,* p. 10.

109 Dr Ken Jacobs, *Submission 16,* pp. 1–2; AVA, *Submission 18,* p. 2–4; NFF, *Submission 50,* p. 10; AHA, *Submission 83,* p. 17.

110 AVA, *Submission 18,* pp. 3–4.

- compensation for private vets for loss of earnings and maintenance of infrastructure in the event of an EAD response;
- the expansion of public-private surveillance initiatives to ensure financial viability of rural practices;[111]
- enhancements to encourage veterinary studies and rural practice incentives for early career veterinarians.[112]

6.83 The committee heard that DAFF's biosecurity workforce has not increased to match the increasing workload,[113] as well as increasing biosecurity threats, with the Community and Public Sector Union (CPSU) alleging that 'the Department has been unable to meet increasing and changing workload demands with not enough staff to manage its core functions adequately'.[114] It's members have warned that high workloads and shortcuts are impacting the effective operation of Australia's biosecurity system biosecurity policies and resulting in an 'inability to manage current risks'.[115]

6.84 Witnesses called for an expansion of the department's biosecurity workforce, with a greater emphasis on attracting and retaining skilled staff, including surveillance officers, diagnosticians, and detector dogs and handlers.[116]

Committee view

6.85 Based on the evidence received by the committee, it is clear the current biosecurity workforce has neither the capacity nor the full capability to address the current risks, with no surge capacity should there be multiple incursions across multiple jurisdictions. The committee supports the development of a national biosecurity workforce strategy to identify skills needs and bolster capability and capacity, and supports the inclusion of an audit of existing capabilities and training to inform the development of the strategy.[117]

6.86 In particular, the committee notes the ongoing delays and industry costs in relation to cargo screening and assessment. While the establishment of a rapid response team is welcomed, additional biosecurity officers are required and further development of technology and systems is needed to ensure pests and diseases are captured at the border, with minimal impact.

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111 AVA, *Submission 18,* pp. 3–4. See also: AHA, *Submission 83,* p. 14.

112 AVA, *Submission 18,* pp. 4–5; NFF, *Submission 50,* p. 10; AHA, *Submission 83,* p. 17.

113 Community and Public Sector Union (CPSU), *Submission 76,* [pp. 1–2].

114 CPSU, *Submission 76,* [p. 2].

115 CPSU, *Submission 76,* [pp. 3–4].

116 CPSU, *Submission 76,* [pp. 3–4]; RMAC, *Submission 77,* [p. 5]; NFF, *Submission 50,* Attachment 1, p. 4; Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 7.

117 As suggested by Australian Pork Limited, *Submission 74,* pp. 11–12.

Recommendation 23

6.87 The committee recommends that the Department of Agriculture, Fisheries and Forestry incorporate an audit of existing skills and gaps in the development of the national biosecurity workforce strategy.

Recommendation 24

6.88 The committee recommends that the Australian Government support and prioritise biosecurity officers' capacity and capability development to improve border responses and reduce delays for passengers and importers, and improve Australia's overall biosecurity readiness.

6.89 The rural veterinary profession appears to be in crisis, especially in remote areas. Veterinarians are an essential part of Australia's biosecurity system—holding key front-line defence roles in monitoring and surveillance, disease detection, EAD preparedness and response and animal welfare. Veterinarians bear significant pressures in any EAD response, and there needs to be sufficient capacity to meet initial and potentially extended response measures. Attracting and retaining rural vets is clearly challenging and complex, and will require a coordinated response between government and industry to address shortfalls in the medium-long term.

Recommendation 25

6.90 The committee recommends that the Australian Government work with relevant industry bodies to design and implement measures to improve the capacity and capability of production animal veterinarians, particularly in rural and remote areas, including:

- **enhancement of veterinarian attraction and retention strategies and initiatives such as graduate and rural practice incentives;**
- **compensation paid to veterinarians in the event of their involvement in an EAD response; and**
- **increased utilisation of rural and remote veterinarians in surveillance and monitoring activities.**

6.91 The committee commends the work of DPI officials and bee industry personnel, including volunteers, for their extensive and hard work since the start of the eradication response. The varroa mite incursion has demonstrated vulnerabilities with respect to human resourcing and deployment, whether it be the number of personnel available, or gaps in qualifications and training. Many valuable lessons have been learnt through this process, which should be analysed and shared widely within the bee biosecurity sector and other stakeholders of the biosecurity system.

Stakeholder engagement, awareness and communications

6.92 Meat and Livestock Australia (MLA) acknowledged the unprecedented levels of collaboration that have been seen across a wide range of stakeholders in response to the regional FMD and LSD incursions.[118]

6.93 However, various submissions highlighted that the Australian Government could do more to engage with stakeholders and raise biosecurity awareness, including through ongoing and targeted communications and initiatives like disease identification training through the supply chain.[119] A key element of the Joint Interagency Taskforce's work has been to identify, map and bring together a wider range of stakeholders in the context of an EAD outbreak.[120]

6.94 Specifically engagement needs to be improved in relation to industry, the environmental sector, First Nations peoples, communities, and the general public.[121] The Biosecurity Collective noted in their submission that:

> Too often there is poor communication, typified by one-directional communication from governments and lack of openness to stakeholder views. This traditional model of government making decisions and advising industry and the community is not aligned with the shared responsibility model or a true partnership in managing biosecurity threats and preparing for future incursions.[122]

6.95 Furthermore, the committee was told that decision making needs to be more transparent,[123] and roles and responsibilities need to be clarified and communicated.[124]

6.96 The Plant Industries Forum (PIF) referenced the lack of industry representation within biosecurity committees as a key concern. It argued that

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[118] Jason Strong, Managing Director, Meat and Livestock Australia (MLA), *Proof Committee Hansard,* 11 October 2022, pp. 10 and 12.

[119] See, for example: NFF, *Submission 50,* pp. 11–12; NFF, *Submission 50,* Attachment 1, p. 6; Australian Pork Limited, *Submission 74,* p. 5 and 17; Matthew Journeaux, Acting Federal Secretary, Australasian Meat Industry Employees Union (AMIEU), *Proof Committee Hansard,* 15 November 2022, p. 16; DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, p. 30.

[120] DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 31–32.

[121] See, for example: CCA, *Submission 6*, pp. 6; NFF, *Submission 50,* pp. 8–9; Australian Land Conservation Alliance, *Submission 36,* [pp. 2–3]; The Biosecurity Collective, *Submission 90,* pp. 7–8; Invasive Species Council, *Submission 92,* pp. 2–3; WoolProducers Australia, *Submission 67,* pp. 5–6.

[122] Biosecurity Collective, *Submission 90,* p. 7.

[123] Australian Dairy Farmers, *Submission 56,* Attachment 1, pp. 1–2; The Biosecurity Collective, *Submission 90,* p. 7; Invasive Species Council, *Submission 92,* p. 3 and 10–11. See also: ALTRA, *Submission 78*, pp. 8–9; GrainGrowers, *Submission 20*, [p. 6].

[124] Australian Dairy Farmers, *Submission 56,* Attachment 1, pp. 1–2; WoolProducers Australia, *Submission 67,* p. 6; Woolworths Group, *Submission 100,* [p. 3].

those committees are exclusively made up of government representatives, with PHA and AHA occasionally invited as observers. The PIF called for greater inclusivity of industry into these decision-making bodies (such as the NBS Implementation Committee), rather than 'being held at arm's length'.[125]

6.97 Several submitters suggested that the Commonwealth play a greater coordination role to improve communications, with the NFF and Australian Pork Limited suggesting that further support be given to established mechanisms such as the National Biosecurity Communications and Engagement Network (NBCEN).[126] The Exotic Animal Disease Preparedness Joint Interagency Taskforce also made recommendations to improve crisis communications, including through the NBCEN, particularly given the role of social media, and work on national communications and engagement plans has begun.[127]

6.98 Animal Medicines Australia (AMA) insisted that 'biosecurity must embed communication at the heart of all activities'.[128] GrainGrowers reinforced the need for improved communications:

> Effective communication needs to be underpinned by industry trust and confidence in the biosecurity system, which needs to be an ongoing area of attention and cannot be built during an incursion response. Clear proactive communication by government that responds quickly to concerns raised by industry and can engage through social media in real time will be useful to allay fears and counter misinformation.[129]

6.99 Several submitters observed that communications need to be clear and factual to maintain trust and confidence in decision-making and to ensure that biosecurity does not become an ideological battleground.[130] The committee heard that some media attention in relation to FMD and LSD has been unhelpful. Patrick Hutchinson from the Australian Meat Industry Council (AMIC), advised that 'the amount of media that occurred that was

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[125] Nathan Hancock, Chair, Plant Industry Forum; and Chief Executive Officer, Citrus Australia, *Proof Committee Hansard,* 12 October 2022, pp. 17, 20 and 23.

[126] AHBIC, *Submission 65,* p. 6; NFF, *Submission 50,* pp. 11–12; NFF, *Submission 50,* Attachment 1, p. 6; Australian Pork, *Submission 74,* p. 5 and 17.

[127] DAFF and Home Affairs, *Joint Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 29–30 and 33.

[128] Animal Medicines Australia (AMA), *Submission 35,* p. 7.

[129] GrainGrowers Limited, *Submission 20,* p. [4].

[130] CCA, *Submission 44,* p. 9; WoolProducers Australia, *Submission 67,* p. 5; RMAC, *Submission 77,* [p. 4].

exceptionally ignorant, in having limited to no idea … got to a point where … it was overload of an epic proportion'.[131]

6.100 Red meat industry representatives emphasised the importance of clear communications and the value of addressing media and communications in response planning:

> A lot of the fear in the industry was that nothing was happening, so it was very much a communication strategy to say, 'Things are happening' and we need to make sure that we're working with the Commonwealth government. And I have to say the Commonwealth government has been fantastic …[132]

6.101 WoolProducers Australia called for enhanced communications and awareness campaigns aimed at the public so that biosecurity becomes 'business as usual',[133] while the Woolworths Group highlighted the importance of 'early, authoritative and consistent safety messaging' in relation to food safety in to shore up consumer confidence.[134]

Committee view

6.102 The committee heard of the important roles that stakeholder engagement, awareness and communications play in enabling and supporting Australia's biosecurity system. In particular, the committee notes the value of broad stakeholder engagement and collaboration across the entire production supply chain to ensure that risks are understood and appropriately mitigated, and that all parties are aware of their roles and responsibilities in the event of an incursion.

Recommendation 26

6.103 The committee recommends that government departments, Animal Health Australia and Plant Health Australia consult a wider range of stakeholders from across the supply chain, including the transport and livestock transport sectors and the retail sector.

6.104 A number of witnesses told the committee of critical need for clear communications and messaging aimed at the general public in order to engender trust and confidence in Australia's biosecurity system. The experience of FMD in Indonesia and elements of the media's reporting appears

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131 Patrick Hutchinson, Chief Executive Officer, Australian Meat Industry Council (AMIC), *Proof Committee Hansard,* 15 November 2022, p. 13.

132 John McKillop, Independent Chair, RMAC, *Proof Committee Hansard,* 15 November 2022, p. 7; Patrick Hutchinson, AMIC, *Proof Committee Hansard,* 15 November 2022, p. 13; Matthew Journeaux, AMIEU, *Proof Committee Hansard,* 15 November 2022, pp. 15–16.

133 WoolProducers Australia, *Submission 67,* p. 5.

134 Woolworths Group, *Submission 100,* [p. 3].

to have highlighted the importance of communications to the department and biosecurity stakeholders. The committee therefore welcomes the heightened emphasis placed in this area by the department and industry.

Research and innovation

6.105 A key defence of Australia's biosecurity system is the development and integration of new and emerging technologies. Various submitters and witnesses highlighted the importance of biosecurity research, development and extension (RD&E) into animal and plant biosecurity. The integration of such technologies into the biosecurity system creates efficiencies throughout the system, including in relation trade imports, surveillance, diagnostics, and the treatment of pests and diseases.[135] As described by Hort Innovation, the use of innovative technologies supports a system and workforce that 'work[s] smarter rather than harder'.[136]

6.106 The need for greater emphasis on research and innovation was identified by the CSIRO in its 2020 *Australian Biosecurity Future* report. The report proposed key recommendations relating to innovation in science and technology, including the setting of national biosecurity innovation priorities—incorporating major risks and research and development priorities—and the development, investment, commercialisation, and manufacture of innovative biosecurity technologies.[137]

6.107 The NBS recognises the need for ongoing research and innovation, identifying 'integration supported by technology, research and data' as a priority area, with increased stakeholder coordination, building of science and research capacity, and the development of private sector investment.[138]

6.108 The committee heard from a range of witnesses who advised that further support and funding is needed for multi-disciplinary biosecurity research and innovation, and the implementation of data and information technology and tools to improve surveillance, diagnostics, and disease preparedness, decision-making and response.[139]

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[135] See, for example: NFF, *Submission 50,* p. 9; GRDC, *Submission 42,* p. 5; AVA, *Submission 18,* pp. 6–7; Council of Rural Research and Development Corporations, *Submission 21,* [p. 2]; SW Labs, *Submission 25,* [pp. 1–2]; Charles Sturt University, *Submission 28,* p. 5; CSIRO, *Submission 40,* pp. 3 and 9; GPA, *Submission 61,* [p. 3]; Illumina, *Submission 64,* [pp. 1–3].

[136] Hort Innovation, *Submission 55*, p. 12.

[137] CSIRO, *Submission 40,* p. 4; CSIRO, *Australia's biosecurity future*, 2020, pp. v and 33 (accessed 24 October 2022).

[138] DAFF, *National biosecurity strategy 2022–2032,* 2022, p. 9.

[139] NFF, *Submission 50,* pp. 6–10; ATSE *Submission 12,* p. 2. See also: Dr Ron Glanville, *Submission 4,* pp. 3–4; AVA, *Submission 18,* pp. 7–8; Rural Research and Development Corporations, *Submission 21,* [pp. 1–2]; Charles Sturt University, *Submission 28,* pp. 4–5.

6.109 Charles Sturt University highlighted the complexity of the biosecurity system and called for improvements in the 'identification of gaps and risks, supported in part by social science research.'[140] The AHA noted current potential gaps in RD&E, including in relation to traceability, disposal, destruction and decontamination, and the training of detector dogs.[141] The committee heard of other potential gaps in relation to the impacts of climate change on biosecurity, wildlife health and surveillance, and environmental biosecurity.[142]

6.110 Hort Innovation highlighted the importance of sustainable research funding models, adding that industry-led investment into plant and bee biosecurity research plays a key part in the funding ecosystem. However, Hort Innovation described a key challenge in progressing big-picture changes, such as large-scale infrastructure requirements and cross-jurisdictional data access.[143] Charles Sturt University also drew attention to the difficulties in building and maintaining research infrastructure and capacity in regional areas and the need for additional funding.[144]

Committee view

6.111 The committee appreciates the value of RD&E to understanding biosecurity risks, pests and diseases and how to prepare for and eradicate or treat incursions. RD&E will also result in advances in biosecurity that improve the quality of tests and treatments and improve the productivity of the workforce.

6.112 However, evidence provided to the committee appears to indicate a need for a national approach to RD&E to ensure that research priorities are identified and aligned, gaps are identified and addressed. Better integration between research and industry to support the development and commercialisation of Australia's research is also required. The committee heard that this needs to be underpinned by a long-term funding strategy to ensure that the strategy continues to meet stakeholder needs, and that key initiatives can be implemented.

Recommendation 27

6.113 The committee recommends that the department, in consultation with stakeholders, coordinate the development of a strategy for biosecurity research development and extension which includes:

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140 Charles Sturt University, *Submission 28,* p. 8; CSIRO, *Australia's biosecurity future*, 2020, p. v.

141 AHA, *National animal biosecurity RD&E strategy*, 2019, pp. 11–14 (accessed 27 October 2022).

142 Dr Ron Glanville, *Submission 4,* p. 3; Invasive Species Council, *Submission 92,* pp. 2–3, 8; RSPCA, *Submission 47,* pp. 3–4.

143 Hort Innovation, *Submission 55*, p. 18.

144 Charles Sturt University, *Submission 28,* p. 7.

- **a long-term funding mechanism for biosecurity research;**
- **approaches to identify research, development and extension gaps and national priorities across the biosecurity continuum;**
- **strategies to develop better integrations between industry and research organisations; and**
- **mechanisms to support the commercialisation of research, development and extension outputs.**

Information systems and data

6.114 The committee heard that DAFF and the Department of Home Affairs share technology, data, business, and technical expertise improve border assessment and screening, and that these developments have reduced the need for manual identification and screening efforts, improving operational efficiency.[145]

6.115 However, the committee also received evidence that departmental systems and data analytics capabilities are not as integrated and effective as they could be.[146] The need to improve data and systems was also flagged by the Joint Interagency Taskforce as 'critical to inform the response to an outbreak'. Participants specifically identified the National Joint Common Operating Picture as a valuable platform for analysing, displaying and sharing data about nationally significant disasters and crisis events.[147]

6.116 Technology and data are priority areas in the NBS and the department has flagged investment in and implementation of new technologies, active data sharing, and the development of national information management frameworks as key actions.[148]

6.117 Submitters recommended that a range of measures to improve biosecurity outcomes and enable productivity gains, including:

- the development of national data-sharing frameworks, agreements, standards, networks and platforms;[149]

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145 Home Affairs, *Submission 43,* p. 3.

146 See, for example: IGB, *Efficacy and adequacy of department's X-ray scanning and detector dog screening techniques to prevent the entry of biosecurity risk material into Australia*, Review report no. 2022–23/03, 2022, p. 16 (accessed 19 September 2022); ANAO, *Responding to Non-Compliance with Biosecurity Requirements*, Report no. 42, 2021, pp. [6 and 8]; The Hon Mark Furner MP, *Submission 69,* p. 5; Wilmot Cattle Company, *Submission 88,* p. 2.

147 DAFF and Home Affairs, Jo*int Interagency Taskforce: Exotic Animal Disease Preparedness Report*, 5 September 2022, pp. 27 and 34.

148 DAFF, *National Biosecurity Strategy*, 2022, pp. 9 and 32–33 (accessed 7 October 2022).

149 Australian Pork, *Submission 74,* pp. 5 and 14. See also: AVA, *Submission 18,* pp. 6–7; Charles Sturt University, *Submission 28,* pp. 8–9; CEBRA, *Submission 53,* [p. 4]; Illumina, *Submission 64,* [p. 2]; WA DPIRD, *Submission 80,* pp. 2 and 5–6; Invasive Species Council, *Submission 92,* p. 13; Hort Innovation, *Submission 55,* p. 20.

- closer partnerships with industry to help improve technological infrastructure for biosecurity screening; and
- the implementation of open, modern, and flexible import systems.[150]

6.118 Charles Sturt University, in particular, noted that data management, sharing and analysis were 'areas in which there is considerable room for improvement'.[151] The university noted that, while it is working with MLA to establish a national agricultural industry data exchange platform through the Australian AgriFood Data Exchange:

> At present in Australia this kind of data [impacted producers and businesses, source of the threat, vectors, conditions and threat spread] exists but is contained in disconnected, isolated or incompatible datasets managed by individual producers and businesses, industry bodies and local, state and national government agencies, limiting our preparedness for responding to biosecurity threats.[152]

6.119 Michael Beer from AgriFutures Australia told the committee of the importance of national systems for data collection, telling the committee that the formation of a business case for a national data resource is nearing completion:

> …we are aware of the opportunity for the harmonisation and bringing together of data across supply chains. So, in that light, we are supporting that view of getting better at bringing our digital resources together and across the supply chain, and that would have the key benefit for application areas like biosecurity, traceability systems and other information requirements for market access.[153]

6.120 Data sharing between governments and industries is essential for Australia's biosecurity system. However, as noted by Hort Innovation, data sharing requires a high degree of trust because '[g]overnments and industry are both wary that their data is not misused or used against them'. It noted that progress is still needed for data sharing arrangements to become routine.[154]

6.121 According to Hort Innovation, further impediments are the misalignment between data systems, particularly those old systems that are 'incompatible with new ones, data quality is highly variable, and a lot of data cleaning may be required before data can be shared, which is resource intensive'.

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[150] The Hon Mark Furner MP, *Submission 69,* p. 6; Australian Pork Limited, *Submission 74,* p. 14; Australian Dairy Farmers, *Submission 56,* Attachment 1, p. 1; Name withheld, *Submission 59,* p. 1; Angus Hobson, *Submission 63,* p. 6; NFF, *Submission 50,* Attachment 1, p. 4.

[151] Charles Sturt University, *Submission 28*, p. 9.

[152] Charles Sturt University, *Submission 28*, p. 9.

[153] Michael Beer, General Manger, Business Development, AgriFutures Australia, *Proof Committee Hansard,* 12 October 2022, p. 29.

[154] Hort Innovation, *Submission 55*, p. 19.

Hort Innovation added that '[d]ata sovereignty is a potential roadblock if governance arrangements are not adequately addressed early'.[155]

AUSPestCheck

6.122 AUSPestCheck is an innovative system that has facilitated data sharing arrangements for plant pest and disease surveillance. Developed by PHA as a surveillance tool 'to collect, analyse and display plant pest surveillance data', the AUSPestCheck provides a real-time picture of the spread and number of a pest, with data inputted from 'both general and targeted surveillance activities in agriculture and environmental settings'. Data is held securely in the cloud, incorporating citrus surveillance data and information from the National Bee Pest Surveillance Program (NBPSP).[156]

6.123 Hort Innovation referenced AUSPestCheck as a good model for a future system that incorporates increased functionality that 'allows storing many types of data, which may involve multiple components that are brought together in a central interface' bringing 'significant value to the biosecurity system'. This increased functionality would transform the system beyond its current primary purpose as a market access tool.[157]

6.124 Whilst AUSPestCheck has potential to enhance surveillance activities, Citrus Australia outlined the challenges of integrating its data into AUSPestCheck, stating that 'it requires funding and leadership to make it a valuable tool for biosecurity data management'. It recommended that government, PHA and R&D corporations 'require industry to conduct exotic species surveillance activity to … meet a minimum quality standard in future funded projects'.[158]

Committee view

6.125 There is considerable work that needs to be done to improve data and information systems, standards, connectivity and sharing to enable and support Australia's biosecurity system. Further, this work needs to occur in a nationally integrated and consultative way. The committee welcomes that this is a priority area of the NBS. In order to deliver a robust biosecurity system and productivity gains, it is vital that the department remain focussed on the development of governance standards, protocols, arrangements and systems, as well as its own data analytics and systems development.

6.126 The committee notes that an important element in data sharing arrangements between governments and industry is trust. It is also imperative that intentions

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155 Hort Innovation, *Submission 55*, p. 19.

156 Hort Innovation, *Submission 55*, p. 19; PHA, *AusPestCheck* (accessed 25 October 2022).

157 Hort Innovation, *Submission 55*, p. 20; Dr Greg Chandler, Research and Development Manager for Biosecurity, Hort Innovation, *Proof Committee Hansard,* 12 October 2022, p. 28.

158 Citrus Australia, *Submission 93*, pp. 8–9.

and expectations about data sharing arrangements are aligned and clearly understood. These clear parameters will help instil trust between stakeholders and prevent misuse of data sharing systems.

Recommendation 28

6.127 The committee recommends that the Department of Agriculture, Fisheries and Forestry coordinate the development of national data and information standards, and sharing protocols in relation to biosecurity.

6.128 Whilst the committee is optimistic that the current varroa mite incursion will be eradicated, it seems timely to consider whether the functionality of existing national data-sharing systems is fit-for-purpose. The committee acknowledges that there are challenges in aligning data across government and industry stakeholders—this alignment process takes time and may delay the use of data in a central system. For this reason, it seems prudent for governments and industry to commence work on integrating such data requirements into the AUSPestCheck system, which could act as a vital tool for the management and mapping of any varroa mite spread.

Recommendation 29

6.129 The committee recommends that Plant Health Australia in partnership with the bee industry and other stakeholders of AUSPestCheck, consider the platform's capability and data sharing arrangements for tracking varroa mite should it become endemic.

Additional Comments - Australian Greens

1.1 The Australian Greens broadly welcome the outcome of this inquiry, and in particular the attention and seriousness given to varroa mite and its implications for the bee-keeping industry in Australia.

1.2 The Australian Greens acknowledge the work of the secretariat in undertaking this inquiry, the professional presentation of the report, and their hard work in coordinating public hearings, submissions, and other actions of the inquiry.

1.3 We acknowledge the contributors to the inquiry, thanking them for their input and candour.

The inquiry conclusions and recommendations

1.4 The Australian Greens accept the recommendations made by the committee, and note that, in terms of specific reference, varroa mite is the most heavily featured of the specific biosecurity concerns.

1.5 Many submissions from the beekeeping industry made specific reference to a container levy. We feel that it is a fair point to make that responsibility for managing a problem that is sourced externally should not lie solely with the industry at the receiving end of that problem.

1.6 Commitments to long-term funding and sustainability are welcome, but we feel there should be reference to the government incorporating a specific response to the question of a container levy.

1.7 The Australian Greens note that the Australian Government recently undertook public consultation on a discussion paper relating to 'Sustainable funding and investment to strengthen biosecurity',[1] and that this paper referred to a container levy. However, we feel that there was a lack of detailed context for public submissions and that this issue requires more focus and attention.

Recommendation 1

1.8 The Australian Greens recommends the Australian Government provide specific commentary on the feasibility of a container levy and outline whether it intends to consider introducing one in this term of government.

1.9 Many contributions noted issues with state-based policies and implementation of biosecurity measures. Recognising that these are largely beyond the remit of the Australian Government to act on, we nonetheless encourage increased partnership with state and territory governments on biosecurity matters.

[1] See: Department of Agriculture, Fisheries and Forestry (DAFF), *Have your say: making national biosecurity funding sustainable* (accessed 7 December 2022).

Recommendation 2

1.10 The Australian Greens recommend that the Australian Government include discussion of state- and territory-based biosecurity issues arising from this inquiry in future Agriculture Minister Meetings.

1.11 Ensuring consistency of training and support across states and territories is critical to developing responses to invasive species and diseases, particularly where cross-border contamination may occur.

Recommendation 3

1.12 In relation to inquiry Recommendation 22, The Australian Greens recommend that the Australian Government include specific reference to improvements in training, including the feasibility of formalising and expanding the Biosecurity Emergency Response Training Australia initiative.[2]

1.13 While there has been emphasis on plant and animal health biosecurity arrangements, it is noted that environmental biosecurity has lagged behind. As noted by the Invasive Species Council submission:

> A significant gap in Australia's biosecurity system is that of environmental biosecurity. Australia has made progress to address the identified gap, but environmental biosecurity preparedness still considerably lags that for primary industries. The essential mechanisms have been in place for plant and health industries for at least 10–20 years longer than for the environmental sector and the industry sectors continue to be far better resourced.[3]

1.14 We welcome inquiry recommendations 20 and 21 that call for increased biosecurity funding, and make specific reference to environment biosecurity funding.

Recommendation 4

1.15 The Australian Greens recommend that the Australian Government provide an update on the progress of implementation of the National Invasive Ants Biosecurity Plan 2018–2028.[4]

Recommendation 5

1.16 The Australian Greens recommend that the Australian Government publish an update on the implementation of recommendations from the 2017 review

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[2] See: Animal Health Australia, *Biosecurity Emergency Response Training Australia* (accessed 7 December 2022).

[3] Invasive Species Council, *Submission 92*, p. 2.

[4] See: Department of Energy and the Environment, *National Invasive Ant Biosecurity Plan 2018-2028* (accessed 7 December 2022).

of the Intergovernmental Agreement on Biosecurity (IGAB review) and the reports of the Inspector-General of Biosecurity.[5]

Recommendation 6

1.17 The Australian Greens recommend that the Australian Government establishes a Productivity Commission inquiry into the economic and environmental benefits of long-term control of feral animals.

Senator Peter Whish-Wilson
Greens Senator for Tasmania

[5] See: DAFF, *Intergovernmental Agreement on Biosecurity Review* (accessed 7 December 2022); Inspector-General of Biosecurity, *Current and completed review* (accessed 7 December 2022).

Appendix 1
Implementation status of key review recommendations

Implementation status of Inspector-General of Biosecurity review recommendations

Review title	Date[1]	Total	Closed	Open
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)	July 2022	2	2	0
Effectiveness of preventative 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)	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	0	19
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 Department of Agriculture and Water Resources management of biosecurity risks posed by invasive vector mosquitoes	May 2017	11	11	0
	Total	**246**	**136**	**110**

[1] The month and year when a review was signed and hence finalised by the Inspector-General of Biosecurity.

As of August 2022, Inspector-General of Biosecurity, Submission 29, p. 2; reviews from May 2017 to July 2022. DAFF's submission identified 109 still in progress.

Implementation status of ANAO review 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.

As of August 2022, from DAFF, Submission 73, p. 65.

Implementation status of Craik review recommendations

Status	No. of recommendations (Cth lead)
Complete	17 (2)
Requiring enduring effort	12 (4)
In progress	8 (2)
No Further Action	4 (2)
On hold	1 (0)

As of 15 August 2022, from DAFF, Answers to questions taken on notice by DAFF at a public hearing on 10 August 2022 (received 22 August 2022)—Biosecurity, [p. 1].

Appendix 2
Submissions and additional information

1 D2D Global Logistics
2 WAFarmers
3 Mr Benjamin Cronshaw
4 Dr Ron Glanville
5 Australian Wool Innovation
6 Department for Infrastructure and Transport, Government of South Australia
7 Centre for Market Design
8 Farmer Power
9 Australian National Audit Office
10 Australian Stud Sheep Breeders Association
11 Mr Jim Fletcher
- Attachment 1

12 Australian Academy of Technological Sciences & Engineering
13 Australian Chicken Meat Federation
14 The Bee Collective
15 Department of Foreign Affairs and Trade
16 Dr Ken Jacobs
17 Mr Kevin Tracy
18 Australian Veterinary Association
19 Freight & Trade Alliance (FTA)
20 GrainGrowers
21 Council of Rural Research and Development Corporations
22 Australian Barramundi Farmers' Association
23 Property Rights Australia
24 Save the Bees Australia
25 Safework Laboratories
26 SAFEMEAT
27 CropLife Australia
28 Charles Sturt University
29 Inspector-General of Biosecurity
30 *Name Withheld*
31 Australian Workers' Union
32 Avocados Australia Limited
33 Melons Australia
34 Tasmanian Beekeepers Association
35 Animal Medicines Australia
36 Australian Land Conservation Alliance
37 Australian Pesticides and Veterinary Medicines Authority

38 Tasmanian Farmers & Graziers Association
39 Cruise Lines International Association
40 CSIRO
41 Queensland Beekeepers Association
42 Grains Research and Development Corporation
43 Department of Home Affairs
44 Cattle Council of Australia
45 Frog Safe, Inc.
46 South Australian Apiarists' Association
47 RSPCA Australia
48 Fisheries Research and Development Corporation
49 CTL International Pty Ltd
50 National Farmers' Federation
51 Integrity Systems Company
52 Beekeepers' Society of South Australia
53 Centre of Excellence for Biosecurity Risk Analysis (CEBRA)
54 Port of Melbourne Operations Pty Ltd
55 Horticulture Innovation Australia
56 Australian Dairy Farmers
- Attachment 1

57 *Name Withheld*
58 *Name Withheld*
59 *Name Withheld*
60 Green Shirts Movement
61 Grain Producers Australia
- Attachment 1

62 Almond Board of Australia
63 Angus Hobson
64 Illumina
65 Australian Honey Bee Industry Council
66 Carnival Australia
67 WoolProducers Australia
68 Amateur Beekeepers Australia
69 The Hon Mark Furner MP, Office of the Minister for Agricultural Industry Development and Fisheries, Queensland
70 Mr Peter Mew
71 Ms Clare Mcpherson
72 AgriFutures Australia
73 Department of Agriculture, Fisheries and Forestry
74 Australian Pork Limited
75 Primary Producers SA
76 Community and Public Sector Union
77 Red Meat Advisory Council

78 Australian Livestock and Rural Transporters Association
79 Queensland Farmers' Federation
80 Western Australia Department of Primary Industries and Regional Development
81 AUSVEG
82 Plant Industries Forum
83 Animal Health Australia
84 Greenlife Industry Australia
85 Plant Health Australia
86 Australasian Meat Industry Employees' Union
87 LiveCorp
88 Wilmot Cattle Co
- Attachment 1

89 NSW Apiarists Association
90 Biosecurity Collective
91 Victorian Farmers Federation
92 Invasive Species Council
- 92.1 Supplementary to submission 92

93 Citrus Australia
94 Northern Territory Department of Industry, Tourism and Trade
95 Victorian Department of Jobs, Precincts and Regions
96 Victorian Apiarists' Association
97 *Confidential*
98 *Confidential*
99 Centre for Invasive Species Solutions
100 Woolworths Group
101 Mr Christopher Iffland
102 Gold Coast Regional Beekeepers Inc.
103 Mr Dolfi Benesh
- Additional Information 1
- Additional Information 2
- Additional Information 3

104 Pete Connor

Additional Information

1 Answers to questions taken on notice by DAFF at a private briefing on 04 August 2022 (received 09 August 2022)
2 Answers to questions taken on notice by DAFF at a private briefing on 04 August 2022 (received 09 August 2022)
3 Additional information provided by CSIRO in relation to the public hearing on 10 August 2022 (received 17 August 2022)

4 Additional information provided by NSW DPI in relation to the public hearing on 12 October 2022 (received 31 October 2022)
5 Additional information provided by DAFF in relation to the public hearing on 15 November 2022 (received 22 November 2022)

Answer to Question on Notice

1 Answers to questions taken on notice by CSIRO at a public hearing on 10 August 2022 (received 22 August 2022)
2 Answers to questions taken on notice by DAFF at a public hearing on 10 August 2022 (received 22 August 2022) - Biosecurity
3 Answers to questions taken on notice by DAFF at a public hearing on 10 August 2022 (received 22 August 2022) - FMD
4 Answers to questions taken on notice by DAFF at a public hearing on 10 August 2022 (received 22 August 2022) - Varroa mite
5 Answers to written questions on notice from Senator Canavan by DAFF after a public hearing on 10 August 2022 (received 22 August 2022) - Biosecurity
6 Answers to written questions on notice from Senator Canavan by DAFF after a public hearing on 10 August 2022 (received 22 August 2022) - FMD
7 Answers to written questions on notice from Senator Canavan by DAFF after a public hearing on 10 August 2022 (received 22 August 2022) - LSD
8 Answers to questions taken on notice by Grain Producers Australia at a public hearing on 8 September 2022 (received 23 September 2022)
9 Answers to questions taken on notice by Plant Health Australia at a public hearing on 8 September 2022 (received 23 September 2022)
10 Answers to questions taken on notice by ALRTA at a public hearing on 11 October 2022 (received 27 August 2022)
11 Answers to questions taken on notice by AgriFutures at a public hearing on 12 October 2022 (received 28 October 2022)
12 Answers to questions taken on notice by APVMA after a public hearing on 12 October 2022 (received 28 October 2022)
13 Answers to questions taken on notice by DAFF at a public hearing on 11 October 2022 (received 28 October 2022)
14 Answers to questions taken on notice by Woolproducers at a public hearing on 13 October 2022 (received 31 October 2022)
15 Answers to questions taken on notice by SAFEMEAT at a public hearing on 13 October 2022 (received 1 November 2022)
16 Answers to questions taken on notice by CCA at a public hearing on 15 November 2022 (received 18 November 2022).
17 Answer to question taken on notice by CSIRO at a public hearing on 15 November 2022 (received 24 November 2022)
18 Answer to question taken on notice by DAFF at a public hearing on 15 November 2022 (received 24 November 2022)

Tabled Documents

1 Commonwealth Biosecurity 2030 Action Plan 2022, tabled at a public hearing in Canberra on 10 August 2022 by Department of Agriculture, Water and the Environment.

2 National Biosecurity Strategy, tabled at a public hearing in Canberra on 10 August 2022, by the Department Agriculture, Fisheries and Forestry.

Appendix 3
Public hearings and witnesses

Wednesday, 10 August 2022
Parliament House
Canberra

Department of Agriculture, Fisheries and Forestry

- Andrew Metcalfe AO, Secretary, Department of Agriculture, Fisheries and Forestry
- Dr Chris Locke, Deputy Secretary, Biosecurity and Compliance Group
- Monica Collins, First Assistant Secretary (acting), Biosecurity Plant Division
- Nicola Hinder PSM, First Assistant Secretary, Exports and Veterinary Services Division
- Colin Hunter, First Assistant Secretary, Biosecurity Operations Division
- Peta Lane, First Assistant Secretary, Biosecurity Strategy and Reform Division
- Dr Robyn Martin, First Assistant Secretary, Biosecurity Animal Division
- Dr Chris Parker, First Assistant Secretary, National Animal Disease Preparedness Coordinator
- Dr Beth Cookson, Deputy Chief Veterinary Officer
- Dr Gabrielle Vivian-Smith, Chief Plant Protection Officer

Department of Home Affairs (via videoconference)

- Erin Dale, Assistant Commissioner, Australian Border Force

Department of Foreign Affairs and Trade

- Robert Fergusson, Assistant Secretary, Indonesia Branch
- Emily Follett, Assistant Secretary Agriculture and Non-Tariff Barriers Branch

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

- Kirsten Rose, Senior Executive, Future Industries
- Dr Trevor Drew, Director, Australian Centre for Disease Preparedness
- Dr Andy Sheppard, Senior Principal Research Scientist, Biological Invasions
- Dr Wilna Vosloo, Group Leader, Disease Mitigation Technologies
- Dr Raghu Sathyamurthy, Principal Research Scientist (Ecology & Management of Invasive Plants), Biosecurity

Thursday, 8 September 2022
Parliament House
Canberra

Australian Honey Bee Industry Council
- Daniel Le Feuvre, Chief Executive Officer
- Stephen Targett, Chairman

Plant Health Australia
- Sarah Corcoran, Chief Executive Officer
- Dr Susanna Driessen, General Manager, Emergency Response

Grain Producers Australia
- Colin Bettles, Chief Executive
- Andrew Weidemann AM, Research and Development Spokesman

Almond Board of Australia (via videoconference)
- Tim Jackson, Chief Executive Officer

Tuesday, 11 October 2022
Rockhampton Leagues Club
Cambridge St
Rockhampton

Australian Livestock Export Corporation (LiveCorp)
- Wayne Collier, Chief Executive Officer

Meat and Livestock Australia
- Jason Strong, Managing Director

Integrity Systems Company (via teleconference)
- Dr Jane Weatherley, Chief Executive Officer

Australian Livestock and Rural Transporters Association
- Mathew Munro, Executive Director
- Athol Carter, Executive Member. ALTRA/Compliance Manager, Frasers Livestock Transport

AgForce Central Queensland
- William Wilson, Cattle President, Calliope Station
- David Hill, Chair Cattle Council Working Group on FMD and LSD, Clarkwood Station

Queensland Department of Agriculture and Fisheries (via teleconference)

- Dr Allison Crook, General Manager & Chief Veterinary Officer, Animal Biosecurity & Welfare

Wednesday, 12 October 2022
NEX Newcastle
309 King St
Newcastle West

NSW Apiarists' Association
- Stephen Fuller, President
- Matthew Skinner, Executive Councillor

Amateur Beekeepers Australia
- Sheila Stokes, President
- Michael Allerton, Biosecurity Officer

Plant Industries Forum Committee/Citrus Australia
- Nathan Hancock, Chair of Plant Industries Forum Committee/ Chief Executive Officer, Citrus Australia

Horticulture Innovation Australia
- Brett Fifield, Chief Executive Officer
- Dr Greg Chandler, Biosecurity Research and Development Manager
- Ashley Zamek, Research and Development Manager

AgriFutures Australia — via teleconference
- Michael Beer, General Manager, Business Development
- John Smith, General Manager, Research
- Amanda Olthof, Senior Manager, Levied Industries — Research

NSW Department of Primary Industries — via teleconference
- Scott Hansen, Director General
- Dr John Tracey, Deputy Director General, Biosecurity and Food Safety
- Chris Anderson, Manager Plant Biosecurity Prevention and Preparedness and NSW Deputy Chief Plant Protection Officer

Australian Pesticides and Veterinary Medicines Authority
- Lisa Croft, Chief Executive Officer
- Dr Sheila Logan, Executive Director, Risk Assessment Capability
- Dr Jason Lutze, Deputy Chief Executive Officer (teleconference)
- Dr Maria Trainer, A/g Executive Director (teleconference)

Thursday, 13 October 2022
Parliament House
Canberra

WoolProducers Australia
- Ed Storey, President (videoconference)
- Jo Hall, Chief Executive Officer
- Adam Dawes, General Manager (videoconference)

Australian Pork Limited
- Margo Andrae, Chief Executive Officer

Animal Health Australia
- Kathleen Plowman, Chief Executive Officer
- Dr Samantha Allan, General Manager, Emergency Preparedness and Biosecurity

SAFEMEAT Advisory Council
- Andrew Henderson, Independent Chair
- Allan Bloxsom, Chairman, SAFEMEAT Partners, AUS-MEAT Limited

Australian Dairy Farmers Limited
- Rick Gladigau, President (videoconference)
- Jo Coombe, Policy Lead, Animal Health and Welfare
- Justin Toohey, Animal Health, Welfare and Biosecurity Advisor

National Farmers' Federation
- Tony Mahar, Chief Executive Officer
- Christopher Young, General Manager, Rural Affairs

Tuesday, 15 November 2022
Committee Room 2S3
Australian Parliament House
Canberra

Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Kirsten Rose, CSIRO Senior Executive, Future Industries
- Dr Dwane O'Brien, Research Director for the Australian Centre for Disease Preparedness
- Dr Andy Sheppard, Senior Principal Research Scientist, Biological Invasions
- Dr Wilna Vosloo, Group Leader, Disease Mitigation Technologies
- Dr Raghu Sathyamurthy, Biosecurity Research Program Director

Meat industry representatives panel

- John McKillop, Independent Chair, Red Meat Advisory Council confirmed (via videoconference)
- Alastair James, Chief Executive Officer, Red Meat Advisory Council
- Mark Harvey-Sutton, Chief Executive Officer, Australian Livestock Exporters' Council (ALEC)
- Verity Price, Manager – Policy, Australian Lot Feeders' Association (ALFA)
- Patrick Hutchinson, Chief Executive Officer, Australian Meat Industry Council (AMIC)
- Michael Darby, Biosecurity Policy Manager, Cattle Council of Australia (CCA)
- Bonnie Skinner, Chief Executive Officer, Sheep Producers Australia (via videoconference)

Australasian Meat Industry Employees' Union

- Matthew Journeaux, a/g Federal Secretary

Inspector-General of Biosecurity

- Dr Lloyd Klumpp, Inspector-General of Biosecurity

Department of Agriculture, Fisheries and Forestry

- Peter Timson, A/g Deputy Secretary, Biosecurity and Compliance Group
- Nicola Hinder, A/g Deputy Secretary, Agricultural Trade Group
- Dr Gabrielle Vivian-Smith, Australian Chief Plant Protection Officer
- Dr Chris Parker, First Assistant Secretary, Biosecurity Animal Division
- Monica Collins, A/g First Assistant Secretary, Biosecurity Plant and Science Services
- Colin Hunter, First Assistant Secretary, Biosecurity Operations Division
- Peta Lane, First Assistant Secretary, Biosecurity Strategy and Reform Division
- Mark Simpson, Assistant Secretary, Biosecurity Response and Reform Division