The Senate

Rural and Regional Affairs and Transport References Committee

Biosecurity risks associated with the importation of seafood and seafood products (including uncooked prawns and uncooked prawn meat) into Australia

October 2017

ISBN 978-1-76010-676-8

This document was prepared by the Senate Standing Committee on Rural and Regional Affairs and Transport and printed by the Senate Printing Unit, Department of the Senate, Parliament House, Canberra.

Membership of the committee

Members

Senator Glenn Sterle, Chair	Western Australia, ALP
Senator Barry O'Sullivan, Deputy Chair	Queensland, NATS
Senator Chris Back (to 22 June 2017)	Western Australia, LP
Senator Slade Brockman (from 17 August 2017)	Western Australia, LP
Senator David Bushby (from 22 June 2017 to 17 August 2017)	Tasmania, LP
Senator Anthony Chisholm	Queensland, ALP
Senator Malarndirri McCarthy	Northern Territory, ALP
Senator Janet Rice	Victoria, AG

Other Senators participating in this inquiry

Senator David Leyonhjelm	New South Wales, LDP
Senator Murray Watt	Queensland, ALP

Secretariat

Dr Jane Thomson, Secretary
Ms Sarah Redden, Principal Research Officer
Ms Trish Carling, Senior Research Officer
Ms Erin Pynor, Senior Research Officer (to 6 October 2017)
Ms Lillian Tern, Senior Research Officer (from 23 October 2017)
Ms Leonie Lam, Research Officer (to 1 June 2017, from 25 August 2017)
Ms Helen Ulcoq, Research Officer (from 3 July 2017)
Mr Michael Fisher, Administrative Officer

PO Box 6100
Parliament House
Canberra ACT 2600
Ph: 02 6277 3511
Fax: 02 6277 5811
E-mail: rrat.sen@aph.gov.au
Internet: www.aph.gov.au/senate_rrat

Table of contents

Abbreviations

AAHL	Australian Animal Health Laboratory
ABFA	Australian Barramundi Farmers Association
ACPF	Australian Council of Prawn Fisheries
AHPND	Acute hepatopancreatic necrosis disease
ALOP	Appropriate Level of Protection
APFA	Australian Prawn Farmers Association
AqCCEAD	Aquatic Consultative Committee on Emergency Animal Diseases
AQIS	Australian Quarantine and Inspection Service
AQUAVETPLAN	Australian Aquatic Veterinary Emergency Plan
ASEAN	Association of Southeast Asian Nations
CCEAD	Consultative Committee for Emergency Animal Diseases
CDPP	Commonwealth Director of Public Prosecutions
Committee	Rural and Regional Affairs and Transport References Committee
CSPM	Committee on Sanitary and Phytosanitary Measures
CPSU	Community and Public Sector Union
CVO	Chief Veterinary Officer
DAWR	Department of Agriculture and Water Resources
DPIF	Department of Primary Industries and Fisheries, Queensland
EADRA	Emergency Animal Disease Response Agreement
FRDC	Fisheries Research and Development Corporation
GSDA	Global Seafood Distributors Australia
IGB	Inspector-General of Biosecurity
IRA	Generic Import Risk Analysis Report for Prawns and Prawn Products (2009)

NAC	National Aquaculture Council
NATA	National Association of Testing Authorities
NSIA	National Seafood Industry Alliance
NTSC	Northern Territory Seafood Council
NTF	National Taskforce on Imported Fish and Fish Products
OIE	World Organisation for Animal Health *(Office International des Epizooties)*
PCR	Polymerase chain reaction
PL	Post larvae
QDAF	Queensland Department of Agriculture and Fisheries
QSIA	Queensland Seafood Industry Association
RCA	Restaurant & Catering Industry Association
SIAA	Seafood Importers Association of Australasia
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures (1994)
TSV	Taura syndrome virus
WSD	White spot disease
WSSV	White spot syndrome virus
WTO	World Trade Organisation
YHV	Yellowhead virus

List of recommendations

Recommendation 1

6.20 The committee recommends that the Department of Agriculture and Water Resources introduce procedural guidelines that allow it to communicate confidentially with jurisdictional counterparts while pursuing biosecurity investigations. Such procedures should protect the integrity of investigations, while alerting other jurisdictions to heightened disease risk.

Recommendation 2

6.29 The committee recommends that the Minister for Agriculture and Water Resources introduce amendments to the *Biosecurity Act 2015*, which provide the Director of Biosecurity with appropriate secure and advise powers in relation to specified goods or classes of goods.

Recommendation 3

6.40 The committee recommends that the Department of Agriculture and Water Resources implement an ongoing diagnostic testing training program for aquatic diseases with international trading partners, to assist those countries in improving their scientific disease testing capabilities, in line with the testing utilised in Australian laboratories.

Recommendation 4

6.57 The committee recommends that the Department of Agriculture and Water Resources consider regulations and enforcement mechanisms for the improved labelling of imported frozen raw prawns intended for human consumption. Particular consideration should be given to appropriate signage at the point of sale in the retail sector.

Recommendation 5

6.58 The committee recommends that the Minister for Agriculture and Water Resources secure the co-operation of all jurisdictions to undertake an education campaign on the risks associated with using raw prawns intended for human consumption as bait.

Recommendation 6

6.65 The committee recommends that the Department of Agriculture and Water Resources urgently complete its review into the import conditions for prawns and prawn products. The review should consider updates to the 2009 Import Risk Analysis on the basis of scientific evidence and with regard to the views of other jurisdictions.

Recommendation 7

6.66 The committee recommends that the Secretary of the Department Agriculture and Water Resources allocate sufficient resources in order to complete the review of import conditions for prawns and prawn products as soon as is practicable.

Recommendation 8

6.77 The committee recommends that the Department of Agriculture and Water Resources, in collaboration with seafood and aquaculture industries, establish a seafood industry and science consultation group, which has the ability to present its views on biosecurity to relevant state, territory and Commonwealth ministers.

Recommendation 9

6.83 The committee recommends that in developing an aquatic Emergency Animal Disease Response Agreement, Animal Health Australia and the Aquatic Deed Working Group consider alternative options to the 'three thirds' funding arrangements.

Chapter 1

Introduction and context of inquiry

Referral

1.1 On 21 March 2017 the Senate referred the followed matters to the Rural and Regional Affairs and Transport References Committee (the committee) for inquiry and report by 22 June 2017:

> The biosecurity risks associated with the importation of seafood and seafood products (including uncooked prawns and uncooked prawn meat) into Australia, with specific reference to:
>
> (a) management of the emergency response and associated measures implemented to control the outbreak of White Spot Syndrome Virus;
>
> (b) the effectiveness of biosecurity controls imposed on the importation of seafood and seafood products, including, but not limited to, uncooked prawns and prawn meat into Australia, including the import risk analysis process concluded in 2009 that led to these conditions being established;
>
> (c) the adequacy of Commonwealth resourcing of biosecurity measures including Import Risk Assessments;
>
> (d) the effectiveness of post-entry surveillance measures and 'end use' import conditions for seafood products including, but not limited to, uncooked prawns and uncooked prawn meat into Australia, since the import conditions implemented in 2010 were put into place;
>
> (e) the impact of the outbreak on Australia's wild and farm prawn sectors;
>
> (f) the economic impact on Australian wholesalers and retailers;
>
> (g) domestic and foreign trade implications for Australian industries resulting from the suspension of importation of seafood and seafood products, including, but not limited to, uncooked prawns and uncooked prawn meat in Australia;
>
> (h) matters to be satisfied in the management of biosecurity risk before imports of seafood and seafood products, including, but not limited to, uncooked prawns and uncooked prawn meat into Australia could recommence; and
>
> (i) any related matters.[1]

1.2 On 22 June 2017, the committee tabled a substantive interim report. On the same day, the Senate approved an extension of time for the tabling of a final report, to 7 December 2017.[2]

---

1 *Journals of the Senate* No. 32, 21 March 2017, pp. 1106-1107.

2 *Journals of the Senate* No. 48, 22 June 2017, p. 1552.

Conduct of inquiry

1.3 The inquiry was publicly advertised online, including on the committee's website. The committee also directly invited submissions from a number of organisations and individuals with interests and expertise in the seafood industry.

1.4 The committee received 19 submissions. A list of individuals and organisations that made public submissions to the inquiry, together with other information authorised for publication, is at Appendix 1.

1.5 Prior to tabling the interim report, the committee held public hearings in Canberra on 28 March 2017, and in Brisbane on 10 April 2017. The committee has since held public hearings in the following locations:

- Yatala, Queensland on 27 June 2017 (including a site visit to prawn farms along the Logan River);
- Canberra on 28 August 2017; and
- Canberra on 11 September 2017.

1.6 Details of the hearings referred to above can be found in Appendix 2. All public submissions and the Hansard transcript of evidence from the hearings can be accessed through the committee's website.[3]

Acknowledgements

1.7 The committee would like to thank the individuals and organisations who contributed to this inquiry by making submissions, as well as appearing before the committee to give evidence.

1.8 The committee particularly thanks those prawn farmers who allowed the committee to tour their farms during a site visit to the Logan River area, on 27 June 2017.

1.9 Senator Chris Back of Western Australia was a member of the committee until his retirement from the Senate on 22 June 2017. Senator Back provided invaluable expertise to the committee during his time with this and many other rural and regional affairs inquiries. The committee thanks Senator Back for his untiring contribution to the work of this committee and wishes him well in his future endeavours.

Background

1.10 The fisheries and aquaculture industries in Australia are of considerable value. In 2014-15, the production value of these industries was $2.8 billion. However,

3 See www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport.

seafood imports are required to 'fill the gap between consumption and available domestic supply'. In 2014-15, 227 612 tonnes of seafood was imported into Australia and accounted for approximately 67 per cent of Australia's total apparent seafood consumption.[4]

1.11 Australia exports high-value seafood such as rock lobster and abalone, while importing items such as canned fish and frozen prawns. These lesser value products come from countries with lower labour costs, particularly Vietnam, China and Thailand.[5]

1.12 The majority of raw prawn imports to Australia are from Asia. In 2015-16, the major importing countries were China (6 720 tonnes), Malaysia (2 307 tonnes), Vietnam (1 354 tonnes), Indonesia (604 tonnes) and Thailand (197 tonnes). Between 2009-10 and 2015-16, 88 429 tonnes of uncooked prawns were imported into Australia.[6] The value of imported prawns into the Australian market in 2015-16 was $400.87 million.[7]

1.13 Australia produces 20 000 to 25 000 tonnes of prawns annually through prawn aquaculture and wild catch. This volume is not adequate to meet the existing domestic demand for raw, green prawns. Australia would need to double its prawn production to meet this demand.[8]

1.14 With such high volumes of seafood imports required to meet demand, it remains imperative that Australia has effective biosecurity controls to ensure that exotic diseases in any imported products do not enter Australia. As evidenced by the recent white spot disease (WSD) outbreak, such diseases can have disastrous impacts on local seafood industries.

Aquatic diseases

1.15 While the WSD outbreak in 2016 was a central focus of the committee's inquiry, the committee also heard evidence of the potentially devastating impact of aquatic disease incursions on local seafood and aquaculture industries more broadly.

1.16 The NSW Aquaculture Association Inc. noted that raw prawn meat was not the only vector for WSD. The Association submitted that exotic freshwater crayfish

---

4 Australian Bureau of Agricultural and Resource Economics and Sciences, *Australian fisheries and aquaculture statistics 2015*, December 2016, pp. 1-2.

5 Department of Agriculture, *Australian food statistics 2012-13*, June 2014, p. 29.

6 Department of Agriculture and Water Resources, answers to questions on notice, 11 September 2017 (received 26 September 2017).

7 Department of Agriculture and Water Resources, answers to questions on notice, 5 September 2017 (received 18 September 2017).

8 Dr Patrick Hone, Fisheries Research and Development Corporation, answer to question taken on notice, 28 August 2017 (received 5 September 2017).

were being illegally traded within Australia, despite being known carriers of white spot syndrome virus (WSSV). The Association raised a number of concerns regarding the sale of illegal species in Australia, and with a lack of enforcement, coordination and post-entry surveillance by government entities.[9]

1.17 The National Aquaculture Council (NAC) noted that global aquaculture had expanded tenfold over the past 30 years. During this time more than 15 new aquaculture diseases had been described, most of which are exotic to Australia. Regarding biosecurity, the NAC argued that the highest risk products were fresh and frozen seafood produced in overseas aquaculture facilities and imported into Australia.[10]

1.18 Mr Aaron Irving of the NAC argued that:

> the ever-increasing biosecurity risk profile posed by imported seafood products is punctuated with severe ecological and economic consequences on aquaculture, which is a rapidly growing industry section and has already surpassed the $1 billion GDP per annum mark.[11]

1.19 The Northern Territory Seafood Council (NTSC) noted its concerns regarding the potential ecological impacts of pests and diseases entering the Australian ecosystem, and the difficulties in taking action once a disease is established in the environment. The NTSC summarised the impacts that biosecurity breaches can have, stating that:

> Biosecurity breaches impact more than farm production – they can also jeopardise wild harvest fisheries, recreational fishing, Indigenous people's cultural practices and food security, food service and tourism sectors, the consumer's ability to source Australian seafood, as well as more broad-ranging and unpredictable negative impacts on the marine environment, ecology and biodiversity.[12]

1.20 The NTSC argued that with the Northern Territory being one of the largest producers of saltwater barramundi in the country, it held serious concerns about the importation of whole, fresh barramundi and associated waste products into Australia, from 'high risk areas'. The NTSC called for the importation of only cooked barramundi products.[13]

---

9 NSW Aquaculture Association Inc., *Submission 4*.

10 National Aquaculture Council, *Submission 17*, pp. 4, 9.

11 Mr Aaron Irving, National Aquaculture Council, *Committee Hansard*, 28 August 2017, p. 3.

12 Northern Territory Seafood Council, *Submission 7*, p. 1; Northern Territory Seafood Council, *Submission 7.1*, p. 1.

13 Northern Territory Seafood Council, *Submission 7*, pp. 1-2; Northern Territory Seafood Council, *Submission 7.1*, p. 1.

1.21 Further to this, the Australian Barramundi Farmers Association (ABFA) noted that there were serious disease risks to Australia's wild and farmed barramundi stocks and aquatic ecosystems from the 'improperly regulated importation of fish and fish product into Australia'. The ABFA also called for the importation only of cooked barramundi. The ABFA argued that a biosecurity breach:

> will impact the availability of safe, disease free, high quality Australian seafood for the domestic and international markets. This is both a food security and a domestic and international trade issue due to reduced product availability and loss of market access.[14]

Logan River white spot outbreak

1.22 WSD is a crustacean disease of great concern to Australia, given it is the most serious viral pathogen of cultured prawns. It is a highly virulent disease that can spread quickly, causing 100 per cent mortality in farmed prawns within two to seven days of infection.[15] It has been described as 'the disease of prawns that the seafood industry and biosecurity agencies fear the most'.[16]

1.23 As noted by the committee's interim report, WSSV, the virus that causes WSD, is exotic to Australia. Prior to the 2016 outbreak, Australia was one of the few countries in the world with a WSD-free prawn farming industry.[17]

1.24 The evidence which confirmed that Australia was white spot free, prior to 2016, came from multiple sources. It included the absence of clinical disease on farms, passive surveillance on prawn farms, testing of wild caught broodstock, and targeted surveillance of wild caught prawns.[18]

1.25 Prior to the 2016 Logan River outbreak, there had been only one major prior incident involving WSSV in Australia. In 2000, two Darwin aquaculture research facilities accidently used imported WSSV-infected prawns as feed, resulting in prawns and mud crabs testing positive to WSSV. Following destruction of all crustaceans at

---

14 Australian Barramundi Farmers Association, *Submission 12*, pp. 1, 4.

15 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 5.

16 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, p. 8.

Further information on white spot disease, including a description of the disease and its signs and symptoms, can be found in Chapter 1 of the committee's interim report.

17 Department of Agriculture, Disease strategy: White spot disease (Version 2.0), Australian Aquatic Veterinary Emergency Plan (AQUAVETPLAN), 2013, p. 9; Queensland Department of Agriculture and Fisheries, White spot disease information, 2017.

18 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 14.

the facilities, subsequent testing in December 2000 found no evidence of WSSV in wild crustaceans in the vicinity of the research facilities.[19]

Initial outbreak

1.26 The committee's interim report provided some detail on the outbreak and spread of WSD throughout the prawn farms of the Logan River, and into the Moreton Bay area, following initial confirmed detection of the disease on 1 December 2016.

1.27 The white spot outbreak resulted in seven prawn farms along the Logan River losing all their stock, including stock in growout ponds and hatcheries, due to quarantine measures such as chlorination. These farms must remain fallow until the second half of 2018.[20]

1.28 On the detection of white spot in wild prawns in Moreton Bay in March 2017, a movement control order was implemented from Caloundra, Queensland to the NSW border. The order prevented the movement of raw seafood products out of the area. Some amendments to the control order have been made since it was introduced in March, such as allowing the movement of low-risk species like crabs, lobsters and bugs outside the area. However, as of 25 October 2017 yabbies, marine worms and raw prawns remained restricted and could not be removed from the movement control area.[21]

1.29 The committee notes that the details of the white spot outbreak and its spread along the Logan River, and into Moreton Bay, have been thoroughly documented elsewhere. A number of reports have considered the cause of and response to the outbreak, the adequacy of the responses, the economic impact of the outbreak, and the efficacy of import conditions for raw prawn products. The Fisheries Research and Development Corporation (FRDC) in particular supported a number of reports into the outbreak, some of which considered the initial detection and spread of WSD in late 2016.[22]

---

19 Department of Agriculture and Water Resources, response to questions on notice, 5 September 2017 (received 18 September 2017).

20 Further information on the outbreak and spread of WSD can be found in Chapter 1 of the committee's interim report.

21 Queensland Department of Agriculture and Fisheries, *White spot disease*, 20 September 2017, https://www.daf.qld.gov.au/animal-industries/animal-health-and-diseases/a-z-list/white-spot-disease (accessed 10 October 2017).

22 See for example: Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017.

A full list of FRDC white spot reports can be found at: http://frdc.com.au/sitecore/content/frdc/environment/aquatic%20animal%20health%20and%20biosecurity/white%20spot%20syndrome (accessed 29 September 2017).

White spot disease outbreak response

AQUAVETPLAN and white spot

1.30 As highlighted in the committee's interim report, the Australian Aquatic Veterinary Emergency Plan (AQUAVETPLAN) for WSD sets out the disease control principles for use when white spot is suspected, or confirmed as detected, in a prawn population. The AQUAVETPLAN provides three broad options for the control of white spot:

- Eradication – the highest control and could be the most cost-effective in the long-term, aiming to return Australia to freedom from WSSV;
- Containment, control and zoning – containing WSSV to areas where it has become endemic, preventing further spread to uninfected areas; and
- Control and mitigation – management practices to decrease the incidence and severity of clinical disease outbreak (the lowest level control measure and assumes the virus will remain endemic to Australia).[23]

1.31 The AQUAVETPLAN also provides that the Chief Veterinary Officer (CVO) of a jurisdiction where an outbreak occurs must develop an Emergency Animal Disease response plan, which is submitted to the Aquatic Consultative Committee on Emergency Animal Diseases (AqCCEAD) for review prior to implementation.[24]

1.32 During the Logan River WSD outbreak, the AqCCEAD's role was to 'provide technical advice to Biosecurity Queensland on response activities and objectives, facilitate Australia's international reporting obligations and coordinate communications'.[25]

1.33 As WSSV is listed by the World Organisation for Animal Health (OIE) as a disease exotic to Australia, Australian authorities were required to report the Logan River outbreak to the OIE and respond according to pre-agreed procedures.[26]

1.34 Chapter 9.8 of the Aquatic Animal Health Code, established by the OIE, specifies a number of circumstances whereby a country can declare itself free from white spot, known as 'proof of freedom'. Eradication efforts under the

---

23 Department of Agriculture, *Australian Aquatic Veterinary Emergency Plan, Disease Strategy, White spot disease*, Version 2.0, 2013, pp. 29, 46.

Chapter 2 of the committee's interim report details the key legislative and regulatory principles underpinning Australia's biosecurity regime.

24 Department of Agriculture, *Australian Aquatic Veterinary Emergency Plan, Disease Strategy, White spot disease*, Version 2.0, 2013, p. 46.

25 Department of Agriculture and Water Resources, *Submission 9*, p. 43.

26 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, p. 5.

AQUAVETPLAN are therefore directed at establishing proof of freedom from the disease in Australia.[27]

1.35 For Australia to declare it has proof of freedom of white spot, in accordance with the OIE, targeted surveillance and testing must be undertaken for at least two years and must show no detection of WSSV. The two years commence from the date of last detection.[28]

Queensland Government response

1.36 The committee received evidence regarding the response by the Queensland Government to the Logan River WSD outbreak. While the federal Minister for Agriculture and Water Resources, the Hon Barnaby Joyce MP, provided financial assistance to affected prawn farmers, the Department of Agriculture and Water Resources (DAWR) emphasised that the responsibility to respond to pest and disease outbreaks lies with the jurisdiction in which the outbreak occurs.[29]

1.37 Biosecurity Queensland was first advised of a 'minor mortality event' on the first infected Logan River prawn farm on 22 November 2016. It was assumed that this 'was a further manifestation of virus disease issues which had been affecting the industry', and not white spot.[30]

1.38 Three days later, on 25 November 2016, officers from the Queensland Department of Agriculture and Fisheries (QDAF) conducted a site visit on the first infected prawn farm, and confirmed that the farm was not discharging water from the affected pond. On 29 November 2016, QDAF formally advised the farm in writing to cease water discharge from the affected prawn pond. QDAF confirmed with the committee that prior to this, there was no direction given to farmers to stop water discharge, as there was no evidence at that point on which to make such a decision.[31]

---

27 World Organisation for Animal Health, *Aquatic Animal Health Code*, *Chapter 9.8: Infection with white spot syndrome virus*, 2017; Department of Agriculture, *Australian Aquatic Veterinary Emergency Plan, Disease Strategy, White spot disease*, Version 2.0, 2013, p. 57.

28 Dr Allison Crook and Dr Jim Thompson, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 26.

29 Department of Agriculture and Water Resources, response to questions on notice, 28 August 2017 (received 11 September 2017).

30 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 17. The department later clarified that there were bacterial, not viral, diseases of concern in the area; see Dr Allison Crook, Chief Veterinary Officer, Biosecurity Queensland, *Committee Hansard*, 27 June 2017, pp. 19-20.

31 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, pp. 17-18; Dr Jim Thompson, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 23; Queensland Department of Agriculture and Fisheries, correction to evidence given at a public hearing on 27 June 2017, received 27 July 2017.

Therefore, it is possible that water discharge from an infected pond into the Logan River continued while diagnostic testing was being completed.

1.39 On 29 November 2016, the farmer at the first infected farm advised QDAF of 'major losses [of prawns] of around 90 per cent in the pond and that two adjacent ponds had also suffered high mortality'.[32]

1.40 When test results on 30 November 2016 confirmed the presence of white spot on the farm, the Queensland CVO notified the Australian CVO, as required by cooperative arrangements. The Australian Animal Health Laboratory (AAHL) confirmed the presence of white spot on the farm, on 1 December 2016. Following this:

> Emergency powers of inspectors under the Queensland *Biosecurity Act 2014* were activated on that day, 1 December, and on 3 December Queensland's draft response plan was submitted to the AqCCEAD. That committee convened for a second time on 5 December 2016, and at that meeting Queensland's response plan and surveillance plan were endorsed, subject to minor amendments.[33]

1.41 WSD was detected in wild prawns in the lower reaches of the Logan River on 7 December 2016, resulting in the imposition of a movement control order over the Logan River area, effective 8 December 2016.[34]

Surveillance and eradication

1.42 Under the Queensland *Biosecurity Act 2014*, QDAF initiated a Biosecurity Control Program, which commenced on 21 January 2017 and which will continue until 31 December 2017. This Program aims to minimise the risk of WSSV further spreading and establishing, and to eradicate WSSV from the Program area.[35]

1.43 QDAF advised that as of June 2017, it had progressed from the emergency response, disposal and decontamination phases, into the next stage of attempting to reopen the prawn farms. Dr Jim Thompson of QDAF noted that financial assistance from the Commonwealth would support prawn farmers in remaining closed for another season.[36]

---

32 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 18.

33 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 18.

34 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 18.

35 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, p. 13.

36 Dr Jim Thompson, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 22.

1.44 At the end of August 2017, and three months after completing water discharge from the infected farms, QDAF intended to commence a surveillance program in Moreton Bay, in accordance with the AqCCEAD. The surveillance would contribute to proof of freedom surveillance to demonstrate eradication of the disease.[37]

1.45 In line with the AQUAVETPLAN, reports on the WSD outbreak noted that without eradication, efforts would be required to control and contain the disease, with continued surveillance of WSD in wild prawn populations. To this end, farmers would need to determine whether they continue their operations, implementing biosecurity improvements that would help prevent further WSD outbreaks.[38]

1.46 Dr Len Stephens argued that the actions taken by QDAF to eradicate the disease were warranted. He argued that taking an eradication approach greatly reduces the likelihood of future WSD outbreaks. Accordingly, importation protocols needed to be reviewed against the best available current science, in conjunction with a low tolerance for future risk. Dr Stephens summarised the impact on the prawn industry, if eradication was not achieved:

> If WSD was to take a hold in Australia as it has done in most other countries, the cost of prawn farming would rise substantially due to mortalities caused by the disease and the cost of implementing strong biosecurity measures. In addition, there is the risk that the infection might spread to other species that sustain commercial fisheries, such as crabs, rock lobster, Moreton Bay Bugs and to wildlife. There would also certainly be impacts on Australia's international trade in prawns.[39]

1.47 DAWR confirmed that during 2017, surveillance at eleven coastal sites in Queensland, and nine in northern NSW, had resulted in 2837 wild caught prawns being tested for WSSV. All prawns, from both Queensland and NSW, tested negative for white spot.[40]

Interim report

1.48 On 22 June 2017, the committee tabled a substantive interim report as part of its ongoing inquiry. The interim report provided an overview of WSD, and the 2016 outbreak of WSD in the Logan River and Moreton Bay areas.

---

37 Dr Allison Crook, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, pp. 25-26.

38 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, p. 6.

39 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, pp. 8, 20.

40 Department of Agriculture and Water Resources, answers to questions on notice, 5 September 2017 (answered 18 September 2017).

1.49 The committee considered the importation regime for prawns and prawn products into Australia, including Australia's biosecurity obligations, the import suspension determination implemented following the WSD outbreak, and a number of exemptions made to the suspension determination.

1.50 The interim report detailed investigations undertaken by DAWR into importers suspected of non-compliance with Australia's biosecurity regulations. These investigations revealed a considerable amount of WSD-infected prawn product available for retail sale, and led to the suspension of import permits for a number of importers. The committee's interim report also considered the biosecurity testing regime for WSSV, undertaken prior to the WSD outbreak and as part of the enhanced testing regime after the outbreak.

1.51 At the time of the interim report, the committee held a number of serious concerns about various aspects of the WSD outbreak, and stakeholder responses to it. Key concerns included:

- the timeliness of the response from DAWR, considering the increased detection rate of WSD during 2016;
- the timeliness and consistency of communication from DAWR to stakeholders about the response, and the allocation of resources to the response effort;
- the importation of infected prawn products due to inadequate border biosecurity practices and intentional non-compliance by importers;
- the import suspension determination and the various amendments made to that determination, including recommencement of the import of marinated prawns and prawn product;
- the inconsistencies in the WSSV enhanced testing regime and responses to test results showing an increased prevalence of WSSV in Australia; and
- the overall efficacy of Australia's biosecurity regime in dealing with infected seafood products and disease outbreaks.[41]

1.52 Since the interim report, the committee has remained concerned with the efficacy of communication between DAWR and industry. It is also concerned about the recommencement of prawn imports (with the lapsing of the import suspension in July 2017), and with the testing procedures for white spot in Australian laboratories. These and other matters are considered in this report.

41 The committee's interim report can be found here: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Seafoodimportation/Interim_Report

Import conditions

Initial import suspension

1.53 The committee's interim report detailed the conditions and permit requirements of seafood importation. The interim report also detailed the suspension that was implemented from 6 January 2017, on the import of raw prawns and prawn products, and the various amendments made to the suspension order.[42] The decision to suspend prawn imports was the first use of the import suspension powers in the *Biosecurity Act 2015*.[43]

1.54 A number of submitters raised concerns about the import suspension, particularly seafood importers whose products were directly impacted by the changed conditions.

1.55 For example, Global Seafood Distributors Australia (GSDA) had imported prawns and had Australian exported and re-imported prawns in transit when the suspension took effect in January 2017. This resulted in large volumes of GSDA's product being held in storage for testing. This caused a 'major cash flow problem and subsequently caused a significant financial burden', and led to dissatisfied customers seeking alternative products.[44]

1.56 GSDA further advised that a significant amount of its imported product was held for extended periods in biosecurity facilities, after the suspension was implemented. GSDA argued that there was a lack of clear and timely communication from DAWR about directions for further testing or action involving the product.[45]

1.57 Mr Alistair Dick of Gold Coast Marine Aquaculture expressed his concerns with the import suspension. Mr Dick argued that 'the actual outbreak of white spot on the Logan was used as a proxy for biosecurity', and that 'once a virus is in Australia, you cannot use that as a decision-making tool' or as a reason to suspend trade.[46]

Enhanced import conditions

1.58 The import suspension lapsed on 6 July 2017. As of 7 July 2017, enhanced import conditions were applied to 'allow for safe trade in prawns and prawn products, to meet Australia's appropriate level of protection (ALOP)'. The enhanced conditions and testing requirements included:

---

42 Detailed discussion on the import suspension, and the variations to that suspension, can be found in Chapter 3 of the committee's interim report.

43 The Hon Barnaby Joyce MP, Minister for Agriculture and Water Resources, 'Australia suspends raw prawn imports', *Media Release*, 6 January 2017.

44 Global Seafood Distributors Australia Pty Ltd, *Submission 11*, pp. 1-3.

45 Global Seafood Distributors Australia Pty Ltd, *Submission 11*, p. 2.

46 Mr Alistair Dick, Gold Coast Marine Aquaculture, *Committee Hansard*, 27 June 2017, p. 9.

- consolidating uncooked prawns, marinated prawns and Australian prawns processed overseas (excluding those processed in an Australian government approved supply chain) into one product class ('uncooked prawns') for biosecurity purposes;
- certification from exporting countries that the prawns have been found free from WSSV and yellowhead virus (YHV), based on sampling and testing methods recognised by the OIE;[47]
- pre-export sampling and testing after processing, and prior to export to Australia; and
- 100 per cent seals intact inspection on arrival in Australia and testing for WSSV and YHV at an Australian screening laboratory, prior to release from biosecurity control.[48]

1.59 Additionally, DAWR determined that some import conditions for marinated and overseas processed prawns could be removed, 'because the department considers that the combination of pre-export and on-arrival testing adequately addresses the biosecurity risks'. The removed conditions included:

- overseas competent authorities no longer needing to certify that prawns had been adequately marinated;
- biosecurity officers no longer checking marination as part of on-arrival assessments;
- for those prawns processed in a non-Australian government approved supply chain, the competent authority would no longer be required to certify that the prawns had been processed in a premises it has approved; and
- breaded, battered and crumbed prawns no longer being subject to pre-export or on-arrival testing given their lower biosecurity risk (100 per cent seals intact inspection would remain).[49]

1.60 DAWR advised it would retain these import conditions, pending the outcomes of a review into the importation of prawns and prawn products, announced on

47 A copy of the model export health certificate required to be completed as 7 July 2017 can be found here: https://members.wto.org/crnattachments/2017/SPS/AUS/17_2994_00_e.PDF.

48 Department of Agriculture and Water Resources, *Biosecurity Advice 2017/12: End of prawn suspension and import conditions for prawns and prawn products for human consumption*, 30 June 2017, p. 1.

49 Department of Agriculture and Water Resources, *Biosecurity Advice 2017/12: End of prawn suspension and import conditions for prawns and prawn products for human consumption*, 30 June 2017, p. 2.

16 May 2017. However, if the biosecurity risks changed, the import conditions would be amended to ensure the ALOP was met.[50]

1.61 As of 11 September 2017, a number of competent authorities had provided written confirmation to DAWR that they could meet the enhanced import conditions for prawns, and therefore trade could be resumed. Countries providing confirmation were Bangladesh, Brunei Darussalam, China, Denmark, India, Malaysia, Thailand, and Vietnam.[51]

1.62 DAWR had also written to the competent authorities in Argentina, Canada, France, Indonesia, Japan, Mexico, Myanmar, Papua New Guinea, the Philippines, Saudi Arabia, Singapore, Taiwan and the United States to ascertain whether these countries could meet the enhanced import conditions for prawns. As of 11 September 2017, these countries had not provided written confirmation to DAWR of meeting the conditions.[52]

1.63 DAWR confirmed to the committee that, in the event it was concerned about certifications from exporting countries, it would 'engage in discussions with the competent authority'. DAWR further stated that:

> If there was an ongoing pattern of behaviour and we could not have confidence in the certification that a country provided us with then we have the option to prevent them from exporting to us anymore and not accepting [the product].[53]

1.64 As of 22 August 2017, 10 consignments had been imported under the enhanced import conditions. Seven of these consignments tested negative for WSSV and YHV and were released from biosecurity control, with the testing results pending for the remaining three consignments.[54]

Ceasing the suspension – industry reaction

1.65 Despite the enhanced import conditions that were put in place from 7 July 2017, the lapse of the import suspension raised concerns amongst some industry stakeholders.

---

50 Department of Agriculture and Water Resources, *Biosecurity Advice 2017/12: End of prawn suspension and import conditions for prawns and prawn products for human consumption*, 30 June 2017, p. 2.

51 Department of Agriculture and Water Resources, answers to questions on notice, 11 September 2017 (received 26 September 2017).

52 Department of Agriculture and Water Resources, answers to questions on notice, 11 September 2017 (received 26 September 2017).

53 Mr Tim Chapman, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 7.

54 Department of Agriculture and Water Resources, *Submission 9.1*, 24 August 2017, p. 5.

1.66 QDAF noted that the Queensland Minister for Agriculture and Fisheries had raised concerns regarding the cessation of the suspension, as ending the suspension 'did not provide sufficient confidence for an industry that was already having to make difficult decisions about the risks of continuing on'.[55]

1.67 The Australian Prawn Farmers Association (APFA) raised its concerns, noting that:

> If DAWR are serious about managing risks associated with the importation of raw prawns they would keep the ban in place until a full and new IRA was performed with consideration given to a range of, false assumptions in the current IRA and altered risk factors in relation to emerging diseases, bait usage and other food safety issues that have now come to light.[56]

1.68 Mr Ian Rossmann of GI Rural prawn farm argued that recommencing the importation of raw imported prawn products was 'purely dangerous', and reduced industry confidence that a white spot outbreak would not occur again.[57]

1.69 A number of submitters told the committee that lifting the import suspension was premature, while highlighting the inconsistency of allowing imports at a time when local product remained tightly controlled.

1.70 Ms Serena Zipf of the Rocky Point Prawn Farm highlighted reports that indicated that white spot eradication was highly unlikely, and yet the importation of raw prawns was able to recommence. Ms Zipf also questioned the efficacy of certification from overseas authorities that imported products were disease-free, stating that this 'screams of outsourcing biosecurity responsibilities'. She noted that the industry did not have confidence that this measure would afford any extra protection.[58]

1.71 Mr Eric Perez of the Queensland Seafood Industry Association (QSIA) stated that the organisation had 'absolutely no confidence in the new testing programs' put in place following the end of the import suspension. Mr Perez questioned why overseas product was entering Australia, while the WSD source remained unknown and locally sourced products remained under movement control orders.[59]

---

55 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 26.

56 Australian Prawn Farmers Association, Supplementary submission, p. 4 (tabled 27 June 2017).

57 Mr Ian Rossmann, GI Rural, *Committee Hansard*, 27 June 2017, p. 6.

58 Ms Serena Zipf, Rocky Point Prawn Farm, *Committee Hansard*, 27 June 2017, pp. 6-7.

59 Mr Eric Perez, Queensland Seafood Industry Association, *Committee Hansard*, 27 June 2017, p. 30.

1.72 Mr Perez also questioned what the scientific basis may have been for re-commencing imports, given investigations were continuing into 'what went wrong at the border'.[60]

1.73 However, DAWR advised the committee that testing of product in the exporting countries for white spot was a new step in the process. It was argued that this additional testing provided greater assurances that the product being imported was free from WSSV.[61]

Report structure

1.74 This chapter provided an overview of the committee's substantive interim report. It has also provided a summary of the WSD outbreak and the Queensland Government response to it. This chapter also examined the enhanced import conditions implemented from 7 July 2017, after the lapsing of the initial January 2017 import suspension.

1.75 Chapter Two examines the impact of the white spot incursion on Australian prawn farmers, the commercial seafood sector and wild catch industries. It also looks at the impact of the disease outbreak on seafood importers and the retail industry. This chapter examines the financial assistance provided to affected industries at both a state and federal level, and the ongoing development of an aquatic Emergency Animal Disease Response Agreement (EADRA).

1.76 Chapter Three examines evidence regarding the five potential disease pathways being considered by DAWR, including the use of imported raw prawns intended for human consumption as bait. It examines claims of biosecurity failures, particularly at the border, and considers developments with genetic testing on the virus to determine its origin.

1.77 In Chapter Four, evidence is considered regarding communication between federal and state jurisdictions, particularly in relation to DAWR's Operation Cattai and the elevated presence of white spot in the retail sector. The chapter presents evidence from industry and stakeholders regarding concerns with Operation Cattai, including how the operation impacted DAWR communication with industry.

1.78 Chapter Five provides background information on the development of the 2009 *Generic Import Risk Analysis Report for Prawns and Prawn Products* (IRA), including the Queensland Government response to the draft IRA. The chapter

---

60 Mr Eric Perez, Queensland Seafood Industry Association, *Committee Hansard*, 27 June 2017, p. 31.

61 Mr Tim Chapman, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 8.

Testing for WSSV is discussed further in Chapter 3 of this report.

considers the overall efficacy of the IRA, and provides evidence received by the committee calling for its urgent revision.

1.79 The final chapter outlines progress that has been made since the outbreak. The chapter also presents the committee's overall views and recommendations.

Chapter 2

The impact of WSD on industries

2.1 Over the course of the inquiry, the committee received significant evidence detailing the impact of WSD on various fisheries and aquaculture businesses. WSD not only directly impacted prawn farmers, but wild catch and commercial seafood and bait operations, and seafood importers and retailers.

2.2 This chapter considers the general concerns raised during the inquiry about the financial and operational impact of WSD on prawn farmers. The impact on the wild catch sector is also considered, along with the impact on importers. The chapter outlines the financial assistance offered to affected industries, and the ongoing discussions around the development of an aquatic Emergency Animal Disease Response Agreement (EADRA).

General concerns

2.3 The committee heard of the far-reaching consequences of the WSD outbreak, from a number of submitters and witnesses. The evidence showed that a number of stakeholders hold serious concerns for the impacts of WSSV on various industries.

2.4 It was suggested to the committee that the WSD incursion into Australia was a 'highly predictable event'. A WSD incursion had been forecast for a number of years by industry stakeholders, who have made repeated submissions to government to express their concerns about raw prawn importation.[1]

2.5 The Australian Recreational Fishing Foundation voiced concern about the potential for white spot to spread to other crustacean species, such as crabs and lobsters. The Foundation argued that the disease poses a significant threat to the recreational fishing community and associated businesses, especially if marine waterways were quarantined.[2]

2.6 The NTSC raised similar concerns. The NTSC noted that the Northern Territory mud crab industry was 'extremely concerned' over biosecurity risks, given the susceptibility of mud crabs to WSSV and the fact that most seafood product from the Northern Territory was live, fresh or frozen.[3]

2.7 Dr Richard Smullen of the Ridley Corporation advised the committee of the far-reaching implications of the WSD outbreak. Dr Smullen stated that:

---

1 Mr Aaron Irving, National Aquaculture Council, *Committee Hansard*, 28 August 2017, p. 5.

2 Australian Recreational Fishing Foundation, *Submission 3*.

3 Northern Territory Seafood Council, *Submission 7*, p. 1.

> The Logan white spot infection has not only hit the prawn farmers in the locality; it has severely impacted other farmers throughout Australia and has reverberated through the supply chain, affecting freight companies, consumable and hardware equipment supply companies, seafood wholesalers, retailers and their communities, as well as Ridley as a feed company.[4]

2.8 The Australian Council of Prawn Fisheries (ACPF) argued that the WSD outbreak had caused substantial financial losses in a number of industry sectors, and had undermined consumer confidence and the 'clean green' reputation of Australian prawns. The ACPF also stated that the outbreak 'called into question [the] Government's ability to keep Australian fisheries, farms and the aquatic environment free from exotic foreign disease through the current biosecurity regime'.[5]

Impact on prawn farmers

2.9 The 2016 outbreak of WSD directly impacted seven prawn farms along the Logan River in Queensland. The outbreak resulted in these farms losing all stock, including hatchery and breeding stock, and suffering significant financial losses.

Financial impact

2.10 The committee heard evidence from prawn farmers about the cost of responding to the WSD outbreak, and the costs involved in changing farm infrastructure to implement more stringent biosecurity controls.

2.11 A summary report into the economic impact of the WSD outbreak noted the outbreak created 'complex social and economic impact on farmers, fishers, their communities and supply chain partners'. This complexity would determine the final financial impact of the outbreak. Further, the outbreak occurred at a time when farmers were nearing the seasonal productivity peak for 2016-17.[6]

2.12 The report on the economic impact of the outbreak, by Ridge Partners, was completed shortly after the outbreak. Final data on the economic impact is still being compiled. The Ridge Partners report determined the following financial impacts as a result of the outbreak:

- 2016-17 crop market value lost: $23.5 million;
- biosecurity infrastructure upgrades to Logan River farms: $12.6 million; and

4 Dr Richard Smullen, Ridley Corporation, *Committee Hansard*, 27 June 2017, p. 12.

5 Australian Council of Prawn Fisheries, *Submission 14*, p. 5.

6 Ridge Partners, *Summary Overview: Economic Impact of 2016 White Spot Disease Outbreak*, Fisheries Research and Development Corporation, 2017, p. 3.

- decommissioning farms for 18 months and establishing a care and maintenance program: $11.9 million.[7]

2.13 Overall, the report determined an estimated total loss of $49.5 million to prawn farms, in addition to the potential permanent loss of 122 jobs.[8]

2.14 Mr Daniel Rossmann of DS Farms advised the committee that the estimated total cost of new disease vector controls on his prawn farm's 17 ponds and inlet channels, would be in excess of $1 million. Mr Rossmann stated that the farm ponds would require plastic lining, crab fencing and bird netting, in addition to water treatment requiring ozone equipment and filtration systems. Mr Rossmann advised that these steps were required to farm prawns once more. He warned that even with those measures, a further WSD outbreak could end the farm's operations.[9]

2.15 Mr Rossman further submitted that, following detection of white spot on his Logan River prawn farm, he received advice that only those ponds testing positive for white spot would be chlorinated, allowing uninfected ponds to be harvested. However, those ponds ready for harvesting were also chlorinated, resulting in a reduction of production from an expected 200 tonnes to 2 tonnes.[10]

Operational impact

2.16 Evidence was received by the committee from prawn farmers regarding the timeframes involved in recommencing farming and trade. Mr Stephen Parker, Managing Director, Prawn Park, advised that:

> We are standing down for this year [2017], and I think that that is a good idea, because we are going to give nature and the environment a chance to sort some of this out themselves. Therefore, just on the calendar side of things, by this time next year let's assume and hope—I am a fairly bullish person—that the northern farms have a great crop and everything works out well this year. They then will have a second go by next year. We will have two winters behind us here. Lower water temperatures, hopefully, might help. And then, in August 2018, those of us who have the money to put the infrastructure together to change the way we farm—obviously water treatment and biosecurity are the things we believe are necessary to do, to upgrade the farms to a certain extent—can go in again and hopefully, again being bullish, get through. Then by February or March of 2019 we would have our next crop.

---

7 Ridge Partners, *Summary Overview: Economic Impact of 2016 White Spot Disease Outbreak*, Fisheries Research and Development Corporation, 2017, pp. 6-8.

8 Ridge Partners, *Summary Overview: Economic Impact of 2016 White Spot Disease Outbreak*, Fisheries Research and Development Corporation, 2017, p. 9.

9 Mr Daniel Rossmann, DS Farms, *Committee Hansard*, 27 June 2017, p. 4.

10 DS Farms Pty Ltd, *Submission 5*, p.1.

> Therefore, you have three possible seasons and crops in this industry between now and then. That would coincide with the two-year Biosecurity Queensland timing regarding February and March of the last positives that have been found, and assuming there are none found in between. Then: perfect—it is okay. I personally believe that if anything happens to the detriment of that, or one of the farms up north [Queensland] goes, then the industry is finished; it is gone, all over. That is where we stand. That is the reality of it. That is the commercial end result.[11]

2.17 These timeframes were supported by evidence from QDAF. Its officers stated that to meet OIE requirements for proof of freedom from the disease, it would be two years before Australia could be declared free from WSD. Dr Jim Thompson, Chief Biosecurity Officer, QDAF, explained that:

> For Australia to prove freedom from white spot, we are saying that from the last detection we need two years of testing to say that we cannot find it. That does not mean farms cannot get back into production. The risk we run is if farms go back into production and white spot re-occurs—and it may be that all bets are off at that point, but those decisions have to be made.[12]

2.18 In reports about the WSD outbreak, it was noted that better biosecurity outcomes would occur if the prawn farms infected with white spot remained fallow until the 2018 season. This would allow more time for eradication of the disease and for modifications to farms to achieve better biosecurity outcomes. However, as noted in Chapter 1, remaining fallow would only be possible with government financial assistance.[13]

Impact on commercial operators

2.19 The committee heard evidence from commercial seafood operators in the Logan River and Moreton Bay areas who were directly impacted by the WSD outbreak, and by the movement control orders that were put in place after the outbreak.

2.20 The Ridge Partners report examined the economic impact of the movement control order between Caloundra and the NSW border on commercial wild catch fisheries. The fisheries industries within the movement control order include, among other things, bloodworms, yabbies and mud crabs. Ridge Partners estimated the cost to the gross value of production as $20.5 million.[14]

---

11 Mr Stephen Parker, Prawn Park, *Committee Hansard*, 27 June 2017, p. 10.

12 Dr Jim Thompson, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 26.

13 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, pp. 6, 20-21.

14 Ridge Partners, *Summary Overview: Economic Impact of 2016 White Spot Disease Outbreak*, Fisheries Research and Development Corporation, 2017, p. 10.

2.21 The National Seafood Industry Alliance (NSIA) stated that the detection of white spot in November 2016 had resulted in 'an immediate loss of livelihoods of several commercial fishers operating in the Logan River'.[15]

2.22 Mr Eric Perez of QSIA advised that the commercial fishing industry was 'seriously impacted' by the WSD outbreak, with a loss of bait and live crustacean markets in Queensland and other jurisdictions. Mr Perez argued on behalf of the industry that during the response efforts to WSD it felt 'abandoned in the process', and that it was 'not getting help from any level of government'.[16]

2.23 As with the prawn farmers, it was argued by QSIA that when the outbreak occurred, fishers were nearing the peak of the 2016-17 season and looking to achieve optimum demand and prices for their product. Mr Perez noted that as of June 2017, 291 businesses had been impacted by the WSD outbreak and the movement control orders put in place. Mr Perez stated that:

> They are businesses across the crustacean fishery—so, crab, bugs, prawns and bloodworm, as well as beachworm—that have been impacted by this. And it is the change to our markets that we are not getting compensated for. There is a change to how we have to do business.[17]

2.24 Ms Nicole Dymock of East Coast Live Bait Wholesalers advised that WSD had 'effectively destroyed' the bloodworm businesses in the Moreton Bay area. Local bloodworm diggers were out of work or on heavily reduced incomes, with movement control orders preventing the sale of bloodworms to more lucrative areas outside the control area. The bloodworm diggers were suffering significant financial hardship and stress. Ms Dymock supported measures to stop the spread of WSD, but argued for a level playing field for affected businesses.[18]

2.25 Mr Ian Hamilton, an independent seafood retailer from south-east Queensland, argued that there had been a significant, negative impact on consumer confidence in the wild catch sector because of white spot. Mr Hamilton stated that some consumers had ceased buying prawns that were both farmed and wild-caught, due to a lack of confidence in the product. With the presence of the disease and the restricted areas in which locally-caught product could be sold, Mr Hamilton advised

---

15 Mr Johnathon Davey, National Seafood Industry Alliance, *Committee Hansard*, 28 August 2017, p. 1.

16 Mr Eric Perez, Queensland Seafood Industry Association, *Committee Hansard*, 27 June 2017, pp. 30-31.

17 Queensland Seafood Industry Association, *Submission 15*, p. 19; Mr Eric Perez, Queensland Seafood Industry Association, *Committee Hansard*, 27 June 2017, p. 30.

18 Ms Nicole Dymock, East Coast Live Bait Wholesalers, *Committee Hansard*, 27 June 2017, p. 31.

that the wild catch sector had to accept prices that were the lowest he had seen in 37 years in the retail industry.[19]

2.26 Mr Lionel Riesenweber, a crabber on the Logan River, advised the committee that due to WSD, he was unable to access the Logan River at the most profitable time of the year, from the start of December 2016 to 15 March 2017. While product could be sold within the movement control area, Mr Riesenweber advised that the product was receiving below-average prices because it was coming from the Logan River region.[20]

2.27 Following the lifting of the import suspension in July 2017, the Moreton Bay seafood industry argued for a 'level playing field' with importers. Local operators were unable to sell their products outside of movement control areas, despite the import of overseas product recommencing from early July. Retailers argued that if the testing processes at the border were adequate for importers, they should also be adequate for the movement of local product.[21]

2.28 Dr Ben Diggles argued that the movement control orders put in place by some jurisdictions after the WSD outbreak, particularly Western Australia and South Australia, 'highlighted a remarkable inconsistency in what is considered an Appropriate Level of Protection (ALOP) by state governments in Australia, compared to federal governments current [pre-import suspension] position on imported prawn products'. Dr Diggles stated:

> Having stricter controls requiring cooking of Australian prawns moved domestically from WSSV positive regions, yet still allowing uncooked imported prawns entry at the border from WSSV positive regions is an extraordinary situation that highlights exactly where the real risks lie.[22]

Impact on seafood importers and retailers

Importers

2.29 The Seafood Importers Association of Australasia (SIAA) argued that the debate around the efficacy of border biosecurity controls after the outbreak was 'extremely producer-centric' and unbalanced. The SIAA stated that prawn aquaculture amounted to approximately 30 farms, whereas there were 40 000 foodservice

---

19 Mr Ian Hamilton, Private capacity, *Committee Hansard*, 27 June 2017, p. 33.

20 Mr Lionel Riesenweber, Private capacity, *Committee Hansard*, 27 June 2017, pp. 32-33.

21 Kylie Knight, 'Moreton Bay seafood industry pleads for "level playing field" in white spot disease regulations', *Courier-Mail*, 19 July 2017, http://www.couriermail.com.au/questnews/moreton/moreton-bay-seafood-industry-pleads-for-level-playing-field-in-white-spot-disease-regulations/news-story/64500c4e9ba96638ef9b1a9715e3775f (accessed 19 July 2017).

22 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 47.

businesses depending on imported prawns, with importers supplying 75 per cent or more of the seafood consumed in Australia.[23]

2.30 SIAA submitted that the import suspension resulted in the loss of several thousand tonnes of seafood product that would otherwise have been sold in Australia. The six-month suspension was estimated by SIAA to cost $383 million to Australian businesses, with consequent price rises for consumers.[24]

2.31 SIAA highlighted the long, successful record of seafood importation into Australia with its members providing a sufficient and constant supply of seafood to Australia. It noted, moreover, the difficult conditions under which its members operated, being in 'foreign countries, in foreign cultures and under foreign laws'. SIAA questioned:

> why the major biosecurity firewalls should not be more focussed on the farms, or in the immediate vicinity of farms, rather than applying conditions that add considerable costs to, restrict, and frequently disrupt, these tens of thousands of Australian businesses, mostly located thousands of kilometres from the nearest prawn farm.
>
> It should be understood that Australian importers, wholesalers and foodservice outlets have all been victims of this biosecurity event, with many individual enterprises suffering financial losses measured in tens of thousands of dollars. Many people in these sectors have lost their jobs as a result. Although some importers have been implicated in breaches of biosecurity regulations, the vast majority of these businesses were not at fault. It should also be noted that when biosecurity costs are imposed on importers, those costs are being imposed on the Australian community.[25]

2.32 GSDA emphasised the need to support importers with a good record of compliance with biosecurity measures. GSDA stated that:

> Responsible importers who have continually shown to be importing seafood with a good record of compliance from certified overseas processors should qualify for recognition of their standing through lower levels of inspection. Department resources could then be more heavily weighted to importers who do not have this track record to ensure that less experienced importers are complying with required standards.[26]

Retailers

2.33 In a submission to the inquiry, the Restaurant and Catering Industry Association (RCA) called for a balance between biosecurity needs and the interests of the tourism and hospitality industry. RCA raised concerns about the import

---

23 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 2.

24 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 10.

25 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 2.

26 Global Seafood Distributors Australia Pty Ltd, *Submission 11*, p. 4.

suspension of January 2017, as it had resulted in 'chronic shortages of supply and unsustainable price increases'. Regarding the suspension, RCA also stated the need for 'greater advice, coordination and communication with importers regarding the timing and results of quarantine and testing'. [27]

2.34 The RCA detailed the economic impact of the import suspension on the tourism and hospitality sector, based on increased costs and reduced sales. The RCA stated that it:

> remains deeply concerned about the significant economic effects on café and restaurant businesses which are already experiencing over 100% increases in the price of prawns which, if absorbed as expected, will result in a decrease in the average restaurant's net profit of 25.1%.[28]

Assistance to farmers

2.35 Both the Queensland and federal governments have provided funding for WSD response measures, and financial compensation for the affected farmers.

Queensland Government funding

2.36 QDAF advised that the WSD outbreak in the Logan River area led to the 'largest aquatic disease response in Queensland'. Between 1 December 2016 and 14 April 2017, approximately 160 QDAF staff were deployed to work on the WSD response, with the Queensland Government providing $17.6 million in 2016-17 for the operational response.[29]

2.37 The funding in 2016-17 was provided to:

- treat infected properties to eradicate WSSV from prawn production systems;
- undertake bird mitigation to minimise the spread of the disease;
- undertake WSSV surveillance in the wild environment along the east coast of Queensland, to inform decisions around the likelihood of eradication; and
- complete a comprehensive communication strategy to inform about the response and actions people should take to comply with regulations.[30]

---

27 Restaurant & Catering Industry Association, *Submission 6*, p. 1.

28 Restaurant & Catering Industry Association, *Submission 6*, p. 1.

29 Queensland Parliament Agriculture and Environment Committee, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, Response to Government Question on Notice No. 6, 28 June 2017.

A breakdown on the allocation of this funding can be found within the Queensland Department of Agriculture and Fisheries, answer to question taken on notice, 27 June 2017 (received 27 July 2017).

30 Queensland Parliament Agriculture and Environment Committee, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, Response to Government Question on Notice No. 6, 28 June 2017.

2.38 A further $9 million over the 2017-18 and 2018-19 financial years has been made available to conduct proof of freedom surveillance and other activities aimed at recommencing production on farms.[31]

2.39 On 21 July 2017, the Queensland Minister for Agriculture and Fisheries, the Hon Bill Byrne MP, announced the availability of $20 million to go towards low interest loans for prawn farmers in the Logan and Albert River catchment areas. This was in addition to $10 million already available in low interest loans.[32]

2.40 The loans, administered by the Queensland Rural and Industry Development Authority, are aimed to help 'affected farmers get back on their feet by providing the means for them to implement systems and practices that will help their aquaculture enterprises to recover'. The White Spot Disease Concessional Loans are available for up to $3 million, on a loan term of up to 20 years, with no fees or charges and low interest rates.[33]

2.41 It was also hoped that the concessional loan scheme would help prawn farmers to improve biosecurity controls, diversify their farming with other marine species, and improve productivity and viability.[34]

2.42 With regards to cost sharing, Mr Byrne stated that he 'refused to countenance cost-sharing because the Commonwealth engaged in a litany of cover-ups and secrecy on what its agents knew about positive samples of white spot in retail prawns'.[35]

Commercial fishers

2.43 In December 2016, Minister Byrne ruled out compensation for prawn farmers and commercial fishers who operated in the Logan River. While QSIA had requested financial assistance for prawn trawler operators affected by movement control orders, the Minister stated that the control orders were a response to a biosecurity incident.

---

31 Queensland Parliament Agriculture and Environment Committee, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, Response to Government Question on Notice No. 6, 28 June 2017.

32 Queensland Parliament Agriculture and Environment Committee, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, Response to Government Question on Notice No. 6, 28 June 2017.

33 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, 'Up to $3 million available for prawn farmers affected by White Spot', *Media Release*, 21 July 2017.

34 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, 'Up to $3 million available for prawn farmers affected by White Spot', *Media Release*, 21 July 2017.

35 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Rural Economic Development, 'Queenslanders deserve better from Commonwealth on white spot', *Media Release*, 5 May 2017.

The Minister advised that 'there is no compensation mechanism in legislation and we are not operating under a national deed' that would provide financial assistance.[36]

2.44 The Queensland Minister later advised, in June 2017, that commercial fishers in the Moreton Bay area could seek financial assistance from the state government, through the Primary Industry Productivity Enhancement Scheme program.[37]

Commonwealth funding

2.45 As detailed in the committee's interim report, the Commonwealth has provided financial assistance in response to the WSD outbreak. Funding has included:

- $1.74 million to assist Queensland and the industry respond to the outbreak, including up to $400 000 in direct support to farmers;
- $221 000 to the APFA to improve WSD management within the industry; and
- $220 000 to QSIA to engage biosecurity liaison officers and implement biosecurity programs, to better prepare the wild harvest industry.[38]

2.46 The Hon Barnaby Joyce MP, Minister for Agriculture and Water Resources, also advised that affected farmers may be eligible for the Farm Household Allowance and Rural Financial Counselling Services.[39]

2.47 In March 2017, Minister Joyce contacted QSIA to seek advice on how the Commonwealth could assist the Association. In June 2017, the Minister again asked QSIA for suggestions on what financial support would assist the organisation.[40]

2.48 Following a Commonwealth funding announcement in May 2017, the Queensland Government noted its concern that, prior to that point, it had provided the majority of the resources and finance required to address the WSD outbreak. While it welcomed the additional Commonwealth funding, the Queensland Government

---

36 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, 'Assistance for prawn farmers hit by White Spot Disease', *Media Release*, 12 December 2016.

37 Queensland Parliament Agriculture and Environment Committee, Minister for Agriculture and Fisheries and Minister for Rural Economic Development, Response to Government Question on Notice No. 6, 28 June 2017.

38 The Hon Barnaby Joyce MP, Deputy Prime Minister and Minster for Agriculture and Water Resources, 'Emergency assistance for prawn disease response', *Media Release*, 26 January 2017.

39 The Hon Barnaby Joyce MP, Deputy Prime Minister and Minster for Agriculture and Water Resources, 'Australia suspends raw prawn imports', *Media Release*, 6 January 2017.

40 *Committee Hansard*, 27 June 2017, pp. 35-36.

argued that the funding should have been provided earlier, and should not be considered as part of a cost-sharing arrangement.[41]

2.49 On 15 August 2017, Minister Joyce announced that contracts were being finalised for a $20 million assistance package for six Logan River prawn farms. The financial assistance would be used to reimburse costs for the initial response to the WSD outbreak, including destroyed stock, and the costs for a missed season of production. As part of the funding, up to $4 million would be repaid by a levy on prawn farmers, once production had resumed.[42]

2.50 DAWR confirmed to the committee that, as of early September 2017, agreements under the $20 million assistance package had been provided to all prawn farmers on the Logan River. Five agreements had been signed and payments had commenced to those prawn farmers.[43]

Aquatic EADRA

2.51 An Emergency Animal Disease Response Agreement (EADRA) is a contractual agreement between the Commonwealth, state and territory governments, and livestock industry groups, to prepare and respond to 66 categorised emergency animal diseases. All parties under the EADRA enter into a cost-sharing arrangement, with contributions 'commensurate with their respective resource base and status as a beneficiary of the response'. Animal Health Australia (AHA) manages the EADRA.[44]

2.52 The committee understands that while there is currently no EADRA for aquatic industries, AHA has been progressing development of an aquatic EADRA since October 2014.[45] A draft aquatic EADRA was due to be completed in 2018. However, it was brought forward to the end of 2017. DAWR submitted that this was:

> in part due to the number of recent aquatic disease outbreaks and increasing need for certainty for governments and aquatic animal industries, making

---

41 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Rural Economic Development, 'Queenslanders deserve better from Commonwealth on white spot', *Media Release*, 5 May 2017.

42 The Hon Barnaby Joyce MP, Deputy Prime Minister and Minster for Agriculture and Water Resources, 'Logan River prawn farmers reel in federal financial support', *Media Release*, 15 August 2017.

43 Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, pp. 1-2.

44 Animal Health Australia, *EAD Response Agreement*, 31 July 2017, https://www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/ead-response-agreement/ (accessed 7 September 2017).

45 Animal Health Australia, *Development of an Aquatic Emergency Animal Disease Response Agreement*, 29 June 2017, https://www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/development-emergency-aquatic-animal-disease-response-arrangements/ (accessed 4 August 2017).

> the Aquatic Deed project a national priority. All levels of government, all major aquaculture sectors and some fisheries sectors are involved in developing the Aquatic Deed.[46]

2.53 According to AHA, the draft aquatic EADRA proposes a 'three thirds' cost sharing approach, with one third paid by the Commonwealth, one third by states and territories (in aggregate) and one third by affected industries. As part of the development of the agreement, an Aquatic Deed Working Group has been looking at options for apportionment of the costs among affected industries.[47]

2.54 As it currently stands, and in the absence of an aquatic EADRA, DAWR has stated that in managing aquatic animal diseases, 'reimbursement of costs for lost stock will not be available to affected parties'.[48]

Concerns with the aquatic EADRA

2.55 QDAF advised the committee that 'the deed is very difficult to get to a point of finalisation because some of the industries we work with are smaller industries and they are concerned about the risks that might be there if they sign up to a deed'.[49]

2.56 The point was also made that unless an industry scheme were operating where industry contributed to compensation, there would be no coverage for farmer's costs such as loss of revenue and loss of stock.[50]

2.57 A number of other submissions raised issues with an aquatic EADRA in relation to the wild caught sector.

2.58 In its submission to the inquiry, QSIA argued that it was 'impossible' for the fishing industry to develop an aquatic EADRA, due to the 'variation in species, jurisdictions and geographical spread' of aquaculture industries.[51]

---

46 Department of Agriculture and Water Resources, response to written questions on notice, 28 August 2017 (received 11 September 2017).

47 Animal Health Australia, *Development of an Aquatic Deed – project update: June 2017*, p. 2, https://www.animalhealthaustralia.com.au/wp-content/uploads/Aquatic-Deed-update-for-stakeholders-June-2017.pdf (accessed 7 September 2017).

48 Marty McCarthy, 'White spot outbreak a 'wake-up call' for Australia's biosecurity system, as prawn farmers claim imports are to blame', *ABC Rural*, 23 December 2016, http://www.abc.net.au/news/rural/2016-12-23/qld-prawn-farmers-blame-white-spot-outbreak-on-imported-prawns/8144876 (accessed 19 July 2017).

49 Dr Jim Thompson, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 25.

50 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 18.

51 Queensland Seafood Industry Association, *Submission 15*, p. 28.

2.59 Mr Eric Perez of QSIA argued that an EADRA would not assist the wild harvest seafood sector in Queensland. He noted that farmers, such as prawn farmers, have tenure over their land, whereas the wild harvest sector does not own the sea waters where fishing occurs, having instead a right to fish in a particular area. This made it difficult to repair the aquatic environment and receive compensation in the event of a disease incursion. Mr Perez argued that the industry contribution system under an EADRA would therefore not be suitable for the wild harvest sector.[52]

2.60 A similar view was put forward by Mr Johnathon Davey of the NSIA. He raised concerns about how appropriate an aquatic EADRA would be for the wild catch sector. Mr Davey stated that:

> the deed is not applicable or acceptable to wild catch unless it can be demonstrated that there is value and benefit in providing for lost opportunity to fish and by providing compensation for reduced catches in subsequent years due to disease incursion, noting that eradication and containment is limited in the open aquatic environment.[53]

2.61 However some submitters, such as the APFC, argued that it was in its best interest to ensure that the wild catch prawn industry was represented in discussions about the aquatic EADRA. This would allow the benefits and risks to the wild catch sector to be fully explored. At the same time, the APFC suggested that as the wild catch industry does not have any control over the environment, it should not have to contribute financially in responding to disease outbreaks out of its control.[54]

2.62 The NAC has participated in the development of the aquatic EADRA and acknowledged the benefits of it, including cost sharing, financial compensation, and response management. However, the NAC raised similar concerns to other submitters, arguing that development of the aquatic EADRA was a challenging process as the terrestrial context does not readily apply to the aquatic context.[55]

2.63 Mr Aaron Irving of the NAC urged caution over considering an aquatic EADRA as a biosecurity platform. Mr Irving noted that any parties to the aquatic EADRA would hope that its provisions would not be triggered, due to the 'successful functioning of our biosecurity system pre-border, at the border and inside Australia'.[56]

2.64 Dr Len Stephens noted is his March 2017 report that there would be many benefits to the industry in developing an EADRA, including the assistance of expert

---

52 Mr Eric Perez, Queensland Seafood Industry Association, *Committee Hansard*, 27 June 2017, p. 32.

53 Mr Johnathon Davey, National Seafood Industry Alliance, *Committee Hansard*, 28 August 2017, p. 2.

54 Australian Council of Prawn Fisheries, *Submission 14*, pp. 19-20; Ms Annie Jarrett, Australian Council of Prawn Fisheries, *Committee Hansard*, 10 April 2017, p. 28.

55 National Aquaculture Council, *Submission 17*, p. 16.

56 Mr Aaron Irving, National Aquaculture Council, *Committee Hansard*, 28 August 2017, p. 3.

biosecurity groups and participation in the management of Australia's biosecurity system. However, in relation to immediate disease response funding, any cost sharing agreement would be 'limited by the small size of the prawn farming industry'. An aquaculture EADRA would be difficult to implement, given the industries are small, with a large potential for loss from disease. Dr Stephens therefore argued that it would be consistent with EADRA principles to cap the maximum industry repayment amount.[57]

57 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, pp. 7, 25, 27.

Chapter 3

Seafood imports and potential disease pathways

3.1 The committee's interim report provided information on WSSV, including its virulency, hosts and the ways in which the virus can be transmitted.[1] As the inquiry continued, the committee heard evidence regarding the possible pathways by which WSSV may have entered the country, and therefore how the WSD outbreak occurred in Queensland.

3.2 Since the outbreak of WSD in the Logan River prawn farms, there has been ongoing discussion and speculation as to how the white spot virus may have entered Australia, given it is an exotic disease to the country. As many of the countries that import seafood product into Australia have white spot in their prawn populations, importation has received significant attention as a possible disease pathway.

3.3 This chapter considers importation and other possible pathways that may have introduced white spot into Australian prawn populations, including five pathways specifically being considered by DAWR. There is also discussion of biosecurity failures that may have led to white spot entering Australia.

3.4 Genetic testing may provide information as to the origin of the recent WSD outbreak. The findings to date of genetic testing are presented in this chapter.

Five possible pathways

3.5 DAWR advised the committee that it was considering five possible pathways that may have led to the introduction of WSSV into Australia. The pathways being considered for the entry of WSSV into Australia are:

- that the virus could have already been present in Australia without prior detection;
- via imported aquatic feed or feed supplements;
- via diseased broodstock or their progeny;
- through a human element, including the importation of associated equipment; or
- via raw imported prawns being used as bait.[2]

---

1 Background information on WSSV can be found in Chapter 1 of the committee's interim report.

2 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim Report*, May 2017, p. 6.

3.6 Further, in a report from May 2017, DAWR submitted that the spread of WSD could be attributed to a number of factors including 'common water exposure, movement by wild animals and birds, sharing of equipment and common production inputs', as well as water run-off and oral transmission (for example, prawns and crabs eating infected species).[3]

3.7 However, DAWR considered that the risks associated with vessel ballast water and biofouling as pathways for the introduction of WSSV to Australia were 'very low to negligible', especially in light of ballast water management practices implemented from 2001.[4]

3.8 As of 11 September 2017, DAWR had yet to determine a definitive cause of the outbreak, and was continuing to examine the variety of possible pathways. It was also continuing genetic testing to identify any link between the infected prawns and overseas strains of the white spot virus.[5]

Pathway 1: Present in Australia without prior detection

3.9 The committee heard some evidence that, despite no clear detection, WSSV may have been present in wild seafood populations in Australia for some time at very low levels, prior to the 2016 incursion. Therefore, this may have been a pathway to the WSD outbreak.

3.10 In response to questioning from the committee, DAWR advised that as part of the development of the 2009 IRA, the department considered whether white spot could establish and maintain itself in the wild. Dr Andrew Cupit of DAWR acknowledged that there was 'every possibility' that white spot may not be able to maintain itself in the wild, and noted that in the wild, the disease would also be subject to natural predators. DAWR noted that it had now established surveillance in wild prawn populations to try and more definitively ascertain the likelihood of this pathway.[6]

3.11 Dr Patrick Hone of the FRDC noted that there was a low probability that the disease had existed undetected in the wild, prior to the outbreak. Dr Hone stated that if it had been present in the wild for some time, there would have been 'so many

---

3 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, pp. 7-8.

4 Department of Agriculture and Water Resources, answers to questions on notice, 5 September 2017 (answered 18 September 2017).

5 Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 2.

6 Dr Andrew Cupit, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 5.

opportunities for it to express itself as a disease, through either farms or other avenues, that we would have probably seen some mortality event'.[7]

3.12 This position was also put forward by Dr Ben Diggles, who argued that this was one of the least likely pathways, 'as if this were true, WSSV outbreaks would have been observed on the Logan River and elsewhere before November 2016'.[8]

3.13 DAWR additionally noted that until genetic testing on WSSV in Australia was completed, it was not possible to draw any conclusions about the origin of the outbreak or the period of time it may have been present in Australia.[9]

Pathway 2: Aquatic feed or feed supplements

3.14 It was suggested that prawn feeds and associated products could be the source of WSSV entering Australia.

3.15 The Ridley Corporation provides approximately 80 per cent of the prawn feed market in Australia. The Ridley Corporation provided evidence that WSSV is highly heat sensitive, with heat treatments shown to kill the virus. The Ridley Corporation advised that 'heat treatment has been validated globally on many occasions as a standard means of deactivation of white spot virus and other pathogens in feed and other biological materials including uncooked prawns'.[10]

3.16 The Ridley Corporation advised that the OIE considers that white spot is destroyed by heating it to 60 degrees Celsius for one minute, or 70 degrees Celsius for 0.2 minutes. In response to claims that white spot may have entered Australia via infected prawn feed, Dr Richard Smullen of Ridley Corporation advised the committee that:

> All our feed is heat treated to between 85 and 110 degrees for 45 minutes. All our marine raw materials that are imported are also heat treated to a very high level. We also, just to be 100 per cent sure, do not use any farmed crustacean material in our feeds. Although, there is evidence that, even if farmed prawns that have white spot have been put into feed experimentally

7 Dr Patrick Hone, Fisheries Research and Development Corporation, *Committee Hansard*, 28 August 2017, pp. 16-17.

8 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 44.

9 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 15.

10 Ridley Corporation, opening statement, p. 2 (tabled 27 June 2017).

> and then the feed made using the normal process, it is not possible to transfer that disease to the prawns.[11]

3.17 Dr Smullen argued that as Ridley feed product was distributed throughout Australia and overseas, and no other prawn farms developed white spot, the recent disease outbreak could not be attributed to prawn feed. If feed did transfer WSSV, it would be expected that all farms in Australia would be infected with WSD. Similarly, as feed is distributed across all prawn ponds on a farm simultaneously, it would be expected that an outbreak would likewise occur in all ponds simultaneously, and this was not the case in the Logan River farms.[12]

3.18 In testing the feed used on the farms, DAWR found that WSSV DNA fragments were present in prawn feed pellets produced by one feed supplier. However, the DNA was fragmented due to heat treatments and other manufacturing processes, rendering the virus unviable. DAWR noted that feed, additives and similar products should be treated, stored and transported appropriately to reduce the risk of disease.[13]

3.19 However, DAWR did not rule out this pathway as being responsible for the Logan River outbreak, and argued that:

> the illegal transport and use of these products has been known to occur and cannot be ruled out. This is because samples and small quantities of products can be easily moved between countries and it can be difficult for regulatory authorities to detect. Previous investigations conducted by the department uncovered hatchery feed products being illegally imported into Australia. The companies responsible were prosecuted. Illegally imported feed represents a high risk pathway for WSSV and cannot be ruled out as a possible pathway for the Logan River area outbreak.[14]

Pathway 3: Diseased broodstock

3.20 For prawn farms to begin production each year, they require ponds to be stocked with juvenile prawns, known as 'post larvae' (PLs). PLs are produced in hatcheries from adult, broodstock prawns. Farmers may either run their own hatcheries, or purchase PLs from other farms or commercial hatcheries. Of the Logan

---

11 Ridley Corporation, opening statement, p. 2 (tabled 27 June 2017), Dr Richard Smullen, Ridley Corporation, *Committee Hansard*, 27 June 2017, p. 12.

12 Dr Richard Smullen, Ridley Corporation, *Committee Hansard*, 27 June 2017, p. 14.

13 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, pp. 11-12.

14 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 12.

River prawn farms infected, three also operated hatcheries to produce PLs to stock their farms.[15]

3.21 DAWR advised that broodstock used by the hatcheries were sourced from wild caught stock sourced from Australia's northern prawn fishery waters. When 10 per cent of these wild-caught prawns were tested for WSSV as part of standard screening processes, the virus was not detected. However, DAWR warned that the 'collection of wild broodstock to produce PLs for domestic grow out purposes is not recommended industry practice for biosecurity reasons', and warned that the remaining 90 per cent of product was not tested.[16]

3.22 Given that all farms outside the Logan River area that received PLs remained uninfected with white spot, it was suggested by DAWR that PLs might not be the source of the outbreak. However, as broodstock and PLs 'represent the most direct pathway for entry, exposure, vertical transmission of disease, establishment and spread of disease', it could not be discounted as the original source of the infection.[17]

3.23 However, Dr Diggles argued that broodstock being the cause of the WSD outbreak was 'extremely unlikely', as a number of prawn farms outside the Logan River area had been supplied with hatchery stock from a Logan River farm, and remained negative for WSSV. Additionally, the prawn farms along the Logan River obtained PLs from different sources.[18]

3.24 In his March 2017 report, Dr Len Stephens argued that the reliance on wild caught, rather than farmed broodstock was now an 'unacceptable risk for the industry'. Dr Stephens noted that in relation to wild broodstock, 'extensive testing of broodstock for WSD and other diseases is essential to prevent disease entering production farms and nurseries'.[19]

---

15 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, p. 10.

16 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 13.

17 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 13.

18 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 44.

19 Dr Len Stephens, *Final Report: Prawn White Spot Disease Response Plan*, Fisheries and Research Development Corporation, March 2017, pp. 6, 17.

Pathway 4: Human activity and farming equipment

3.25 DAWR investigations into the potential pathways of the white spot outbreak included the virus being introduced into Australia via infected farming equipment or direct human intervention.

3.26 Dr R Parry Monckton, of Monckton Consulting, argued that the use of contaminated equipment was a significant transmission route between prawn ponds and hatcheries, as was the movement of people in and out of prawn farming facilities. Dr Monckton stated that modern prawn facilities have 'rigid biosecurity protocols to prevent any uncontrolled people movement', but some Australian prawn farm facilities did not appear to have such biosecurity protocols.[20]

3.27 A similar argument was put forward by DAWR. DAWR submitted that its investigations had found that:

> on most farms, on-farm biosecurity for movement control of people and equipment was below international best practice. On some farms it was non-existent, and no evidence could be collected that demonstrated visitation or biosecurity measures. On enquiry, farm staff confirmed that some equipment is shared between farms, for example, prawns from other farms are cooked on their premises to share processing equipment. Farm staff also confirmed that their farms are visited by peripheral industry representatives including feed manufacturers, equipment salesmen, production consultants and various sales representatives from Australia and overseas.[21]

3.28 Overall, DAWR's investigations found no evidence that contaminated equipment or direct human involvement introduced the disease to the Logan River area. The disease was 'unlikely to remain viable on dry equipment or clothing'.[22]

3.29 However, DAWR noted that some prawn farms had hosted two foreign visitors on 25 November 2016, three days after the first signs of WSD on the first infected property. While not considered significant to its investigations, DAWR stated that it was continuing its enquiries in this area.[23]

---

20 Monckton Consulting Pty Ltd, *Submission 10*, p. 3.

21 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 14.

22 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 14.

23 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 14.

3.30 In response to the claim that overseas visitors may have brought white spot into the country, the APFA argued that it was 'disingenuous to put this forward as a genuine line of inquiry'. The APFA noted that it had not observed any behaviour that would support the position that overseas visitors had 'any possible involvement in the WSSV incursion'.[24]

Pathway 5: Imported raw prawns used as bait

3.31 As highlighted in the committee's interim report, a number of witnesses submitted that imported infected raw prawns, intended for human consumption, were the cause of the outbreak. It was argued that infected raw prawns that were used as bait in the Logan River introduced the disease to those waterways used by prawn farmers.

3.32 As part of its investigations, in December 2016 DAWR officers visited a number of sites along the Logan River commonly used by anglers to determine if raw prawns were being used as bait in the river. Two recreational fishermen were found to be fishing with raw imported vannamei prawns, intended for human consumption. The prawns being used as bait were tested for WSSV, returning positive results from multiple laboratories. DAWR stated that:

> The fishermen admitted that this was the third occasion that they had fished in the river using prawns for human consumption but claimed they were unaware that prawns of this nature should not be used as bait. The prawns used by the fishermen on this occasion were from a bag that was labelled 'for human consumption'.[25]

3.33 In January 2017, DAWR conducted further surveys of fishermen on the Logan River, and found that out of 144 anglers interviewed, nine reported using raw prawns intended for human consumption as bait. DAWR concluded that:

> it is evident that some raw imported prawns recovered from retail outlets proximal to the infected properties tested positive to WSSV. It is also known that to some extent these WSSV infected prawns are used by fishermen in the river and also discarded or fed to birds following the fishing activity. Using prawns as bait for fish represents a possible entry and exposure pathway for susceptible crustaceans.[26]

3.34 DAWR's findings were supported by evidence in other reports about the outbreak. In a February 2017 report, Dr Diggles noted that the major risk factor for

---

24 Australian Prawn Farmers Association, Supplementary submission, p. 3 (tabled 27 June 2017).

25 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 9.

26 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 10.

farm infection 'appeared to be water intake from the [Logan] River or Moreton Bay'. Dr Diggles presented evidence that infected bait in the waterways was a plausible pathway, arguing that:

> the epidemiology and chronology of disease spread together with evidence of significant recreational fishing effort in and adjacent to the intake canal at [the first infected farm], strongly suggests, in my professional opinion, that the incursion pathway was most likely introduction of WSSV via the [first infected property] intake canal. Indeed, surveys by Fisheries officers allegedly found several groups of recreational fishers using imported green prawns as bait within 500 meters of the intake of [the third infected farm], and of these 33% of bait samples were positive for WSSV. This pathway is plausible given evidence that; 1. Increasing numbers of recreational fishers are using imported prawns as bait, and 2. Biosecurity breakdowns at the international border resulting in c. 50-54% of imported green prawns sold at the retail counter being WSSV positive in the leadup to Christmas/New Year 2016.[27]

3.35 Dr Diggles therefore concluded that 'there is a strong possibility that the disease incursions in the Logan River and Moreton Bay were caused by use of imported uncooked prawns as bait or burley by recreational anglers'. Dr Diggles reinforced this view by stating that it was unlikely that the WSSV disease pathway was via ballast water discharge, biofouling of shipping, infected broodstock prawns, or aquaculture feed.[28]

3.36 Dr Diggles argued that the intake canals for prawn farms have limited water exchange and are accessed by large numbers of potential disease hosts such as prawns, crabs and plankton. Given the semi-isolated nature of the canals, they are 'perfect for establishment of WSSV infection in wild reservoir hosts and vectors'.[29]

3.37 The APFA drew on the findings of Dr Diggles and presented its view that the outbreak of WSD was most likely due to the importation of raw prawns infected with WSSV, subsequently used as bait in the Logan River.[30]

3.38 The committee put to QDAF the possibility that the virus was building up in the Logan River as a result of contaminated bait being used in its waters. Contaminated river water would then be drawn into the first prawn farm, noting that in most instances of infection, the first pond infected was the first to be filled by river

---

27 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, pp. 4, 43.

28 DigsFish Services Pty Ltd, *Submission 1*, p. 7.

29 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 46.

30 Australian Prawn Farmers Association, *Submission 2*, p. 9.

water. The virus would then concentrate in the pond, be released back into the river, where the same activity at the next farm would further concentrate the virus prior to re-release into the river. QDAF considered this to be a 'plausible pathway'.[31]

3.39 Mr Ian Rossmann, of the GI Rural prawn farm, has publicly stated his view that the infection was a result of imported prawn product, and that the infection took hold in the Logan River. Mr Rossmann told media that:

> I'm very confident it came from the [Logan] River, we pump water into the farm from the river and tests have shown it is positive in the river…We have been very concerned about white spot introduction into Australia through green prawn imports and we believe 100 per cent that that is where it came from. Anyone who purchases a green prawn from overseas from a white spot infected country, that can get into our waterways by bait, crab bait or even just throwing it into the water.[32]

3.40 SIAA expressed its 'amazement' that recreational fishers and the general public were able to achieve such close proximity to the Logan River prawn farms, 'when the biosecurity risk was so well known to industry and State government regulators'. SIAA argued that closing this pathway would be very effective in blocking a disease incursion from this source.[33]

Regulating bait usage

3.41 The IRA provides that labelling imported prawns as 'for human consumption only' and 'not to be used as bait or feed for aquatic animals' may reduce the likelihood of WSSV exposure to the environment. However, the IRA goes on to state that 'as this labelling would not necessary apply at retail sale, the general public may be unaware of this requirement' and therefore by itself, this labelling was 'not considered likely to reduce the overall risk to an acceptable level'.[34]

3.42 Supporting this view, the committee heard concerns that there was a lack of education in the recreational fishing and broader retail market about the implications of using raw imported prawns for bait. This included removing marinade coverings from raw prawns so that they could be used as bait.

3.43 In his submission to the inquiry, Dr Diggles observed that in visiting retail outlets over the Christmas period in 2016-17, 'not one of them were selling imported

---

31 Senator Chris Back and Dr Allison Crook, Chief Veterinary Officer, Biosecurity Queensland, *Committee Hansard*, 27 June 2017, p. 20.

32 Marty McCarthy, 'White spot outbreak a 'wake-up call for Australia's biosecurity system, as prawn farmers claim imports are to blame', *ABC Rural*, 23 December 2016, http://www.abc.net.au/news/rural/2016-12-23/qld-prawn-farmers-blame-white-spot-outbreak-on-imported-prawns/8144876 (accessed 19 July 2017).

33 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 21.

34 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 182.

prawns over the delicatessen counter with warnings to customers that they should not be used as bait'. Further, some outlets had placed bait freezers in close proximity to the seafood section, 'encouraging consumers to relate the two together'.[35]

3.44 The committee was concerned by evidence suggesting that in some forums, fishing industry participants were encouraging the use of raw supermarket prawns intended for human consumption as bait. In these forums it was argued that these raw prawns were cheaper than prawns sold specifically for bait usage.[36]

3.45 The committee queried whether there was capacity to place restrictions on bait usage, particularly in the Logan River area. In response, prawn farmers indicated that this would be a very difficult task. Ms Serena Zipf of the Rocky Point Prawn Farm stated that, even after fishing activities were banned around the farm's property following the WSD outbreak, recreational fishers continued to fish in quarantined areas and 'in our channels with imported bait'.[37]

3.46 With regards to bait use restrictions, Ms Zipf also noted that:

> the rule is only as good as the policing effort that you are prepared to put behind it. We could spend all weekend policing our channels and we would not catch every fisherman who was trespassing on our properties with bait which should not be used as such. So the answer is it is impossible to police.[38]

3.47 This position was supported by QDAF, who advised that it was very challenging to enforce bait use restrictions, and would require compliance or enforcement officers to prove that raw prawns being used as bait were not local prawns. Additionally, QDAF argued that educational campaigns were challenging, and noted that the decision to use raw prawns intended for human consumption as bait was often driven by price.[39]

3.48 Mr Eric Perez of QSIA argued that it was 'almost an impossibility' to control how seafood bought at a retail level was used. Mr Perez went on to state that:

> Once imported, seafood has been sold at the retail level. You cannot control its use or where and when it is used. We do not know how you could do that. Obviously risk reduction in the seafood supply chain must be applied before retail or at the retail counter. Once it is sold, it is too late, and you

35 DigsFish Services Pty Ltd, *Submission 1*, pp. 14 -16.

36 Ms Serena Zipf, Rocky Point Prawn Farm, *Committee Hansard*, 27 June 2017, p. 7.

37 Ms Serena Zipf, Rocky Point Prawn Farm, *Committee Hansard*, 27 June 2017, p. 7.

38 Ms Serena Zipf, Rocky Point Prawn Farm, *Committee Hansard*, 27 June 2017, p. 7.

39 Mr Scott Spencer, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, pp. 23-24.

> will never educate the masses that a seafood product that is safe to eat is not safe to use as bait.[40]

3.49 The NSIA supported this view, stating that the only proper way to control risk in the supply chain was pre-border or at the border. NSIA argued that once imported seafood products 'clear quarantine, and are sold across the retail counter, all control of the end use is lost'.[41]

3.50 GSDA argued that imported prawn products should be accompanied by a statement, declaring that it is illegal for the prawns to be used as bait. Such a statement should be included regardless of the type of processing or packaging of the prawns. GSDA also called for the development of an easily identifiable packaging logo to emphasise the risk.[42]

3.51 In March 2017, the NSW Minister for Primary Industries, the Hon Niall Blair, called for a 'national co-ordinated strategy to educate stakeholders' on movement control orders and the biosecurity risks associated with using raw prawns as bait. Minister Blair noted that NSW had tested over 17 000 wild prawn samples as part of an ongoing surveillance program. NSW would also 'contribute funding towards a multi-media campaign to ensure everyone in the fishing community is aware of the risks [of white spot]'.[43]

On-farm biosecurity practices

3.52 During the course of the inquiry, evidence was submitted to suggest that poor on-farm biosecurity practices at prawn farms were a potential cause of the WSD outbreak, or that Australian prawn farms were not appropriately equipped to deal with disease incursions.

3.53 As part of its report into the cause of the 2016 WSD outbreak, DAWR noted that effective on-farm biosecurity management and practices were necessary to reduce the risk of pest and disease incursions. In relation to the Logan River prawn farms, DAWR stated that:

> The production and biosecurity practices of each infected premises were observed, highlighting not only the differences across the seven infected premises but also the standard exhibited on the Logan River properties compared with the farming and biosecurity techniques recommended for use in modern prawn farming operations. There were few biosecurity infrastructure and/or practices in place capable of preventing the disease

---

40 Mr Eric Perez, Queensland Seafood Industry Association, *Committee Hansard*, 27 June 2017, p. 30.

41 National Seafood Industry Alliance, *Submission 16*, p. 11.

42 Global Seafood Distributors Australia Pty Ltd, *Submission 11*, p. 4.

43 The Hon Niall Blair MLC, Minister for Primary Industries, Regional Water and Trade and Industry, 'White spot top priority for fisheries ministers', *Media Release*, 31 March 2017.

> transmission (apart from some water filtering, pond fallowing and probiotic use), which is in stark contrast to modern-day farming techniques and the biosecurity practices that are put in place to prevent disease outbreak.[44]

3.54 DAWR further argued that poor on-farm biosecurity measures on some farms may have contributed to the WSD outbreak or in the spread of the disease. DAWR called for prawn farms to implement effective biosecurity measures, including appropriate strategies for crab and bird mitigation (as both animals can play a role in spreading WSSV), and water filtration.[45]

3.55 SIAA suggested that the prawn farms on the Logan River had not invested appropriately in biosecurity infrastructure, including closed water systems. Further, management systems were required on the farms to prevent and manage serious disease events. SIAA noted that these statements were 'consistent with advice given to the prawn farmers by biosecurity experts advising them on recovery and future phases'.[46]

3.56 SIAA called for all stakeholders to consider the location, design and management of prawn farms, given that intensive prawn farming can escalate exotic diseases from low prevalence to an epidemic, which can then spread to the environment. SIAA encouraged Australian prawn farms to implement the same biosecurity standards of many prawn farms that it had observed overseas, where WSSV is endemic but effectively managed.[47]

3.57 The ACPF acknowledged that intensive prawn farming is a known disease vector and that 'proximity of prawn farms to wild prawn populations requires careful biosecurity management by prawn farming businesses'. The ACPF supported calls for prawn farms to use new infrastructure and better practices to improve on-farm biosecurity.[48]

3.58 In response to claims of poor on-farm biosecurity practices, Mr Alistair Dick, Gold Coast Marine Aquaculture, argued that this line of inquiry 'fails to recognise the extreme lengths that people need to go to to protect themselves against white spot', and that such processes would not be entered into lightly. Mr Dick stated that the

---

44 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 15.

45 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, pp. 15-17.

46 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 20.

47 Seafood Importers Association of Australasia Inc., *Submission 13*, pp. 16-17.

48 Australian Council of Prawn Fisheries, *Submission 14*, p. 17.

argument of poor farming practices was viewed as 'quite offensive' by the prawn farming industry.[49]

3.59 This position was also put forward by Ms Serena Zipf of the Rocky Point Prawn Farm, who stated that:

> that exact phrase, 'poor on-farm biosecurity', was in fact the subject of a press release by DAWR the day after the prawn farmers left Canberra after we met with the department. We obviously did not take very kindly to the timing of that press release or the insinuation contained in the release.[50]

3.60 The prawn farmers expressed their concern to the committee that reporting on the outbreak had, intentionally or otherwise, placed blame for the outbreak on farming practices. Farmers felt that media had reported on the progress of the virus among the farms and may not have given sufficient consideration to the role of the river in spreading the infection, and thus for the farms 'the stigma was there right from the word go'.[51]

Genetic testing

3.61 Both the Queensland and federal biosecurity departments are undertaking genetic testing on the white spot virus responsible for the outbreak in the Logan River in 2016.

3.62 In a submission to the inquiry, Associate Professor Wayne Knibb advised of genetic testing on WSSV being completed by the University of the Sunshine Coast (USC), Queensland. Associate Professor Knibb contended that understanding the source of the infection would assist the industry in preparing for the future, depending on whether the source was determined as local, or from overseas.[52]

3.63 Associate Professor Knibb advised that WSSV DNA sequences were obtained from a Logan River aquaculture farm, during the outbreak in late 2016. Further samples were examined from overseas areas with current WSSV outbreaks, and from imported highly processed prawn products. Associate Professor Knibb advised that 'by far the best hypothesis that fits the data is that the Logan River WSSV is a very recent arrival from overseas'. Some DNA sequences were found to be 'nearly exact matches' for 'one overseas region'.[53]

3.64 Having argued that WSSV entered Australia via an overseas source, the submission further stated that:

---

49 Mr Alistair Dick, Gold Coast Marine Aquaculture, *Committee Hansard*, 27 June 2017, p. 2.

50 Ms Serena Zipf, Rocky Point Prawn Farm, *Committee Hansard*, 27 June 2017, p. 3.

51 Mr Ian Rossmann, GI Rural, *Committee Hansard*, 27 June 2017, p. 3.

52 Associate Professor Wayne Knibb, *Submission 19*, p. 1.

53 Associate Professor Wayne Knibb, *Submission 19*, p. 2.

> Notwithstanding further testing of overseas samples which will be ongoing, we believe we now have a match (analogous to matching bullets from the same gun), and our research will shift focus to discovery of the exact pathway of entry (we need to find the "gun"); accordingly our research will now focus on testing Australian retail samples from the "region of interest".[54]

3.65 In response to the genetic testing undertaken by USC, DAWR stated that it would welcome detailed information from the researchers about their findings and methods. A DAWR spokesperson said that USC 'have not made the methodology or data associated with this report available to the department. The department is unable to provide an informed comment on these assertions'. The spokesperson also argued that confirming the origin of the virus would not demonstrate the pathway by which the outbreak occurred.[55]

3.66 Associate Professor Knibb argued that the authorities had access to the same technology used by his team, and greater financial resources, and should therefore be able to complete the same testing to help determine a possible source country of the infected product.[56]

3.67 However, at a hearing on 11 September 2017, DAWR confirmed to the committee that investigations to date had not confirmed the cause or pathway of the outbreak. The department was continuing with genetic analysis to identify any link between infected prawns in Australia and overseas WSSV strains; however this work was not yet complete.[57]

3.68 DAWR was able to advise that preliminary DNA analysis of two samples from infected farms, and one from northern Moreton Bay, indicate that the samples share more than 99.9 per cent nucleotide identity with each other. These results suggest that the viruses are from a single source, and not from multiple WSSV incursions.[58]

---

54 Associate Professor Wayne Knibb, *Submission 19*, p. 2.

55 Marty McCarthy, 'Aquatic researchers say they have proven white spot outbreak in prawns came from overseas', *ABC Rural*, 19 June 2017, http://www.abc.net.au/news/rural/2017-06-19/white-spot-research-blames-imported-prawns/8629918 (accessed 19 June 2017).

56 Marty McCarthy, 'Aquatic researchers say they have proven white spot outbreak in prawns came from overseas', *ABC Rural*, 19 June 2017.

57 Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 2.

58 Department of Agriculture and Water Resources, answers to questions on notice, 5 September 2017 (answered 18 September 2017).

Chapter 4

Operation Cattai and stakeholder communication

4.1 As highlighted in the committee's interim report, industry stakeholders raised concerns about the communication from DAWR to them, during and after the WSD outbreak. In particular, stakeholders questioned the timeliness and transparency of the communications from DAWR.

4.2 Further concerns were raised about communication between the Commonwealth and Queensland governments, particularly with regards to Operation Cattai and the elevated presence of WSSV in the retail sector throughout 2016.

4.3 This chapter presents the views of the Queensland Government about communication from the Commonwealth. It also provides an update on the outcomes of Operation Cattai, and the reaction of industry stakeholders to the operation. The chapter also presents the views of stakeholders regarding overall failures in the biosecurity system and screening processes at the Australian border.

Federal and state communication

4.4 In January 2017, a media release by the Hon Barnaby Joyce MP noted that responsibility for containing the WSD outbreak lay with the Queensland Government. The Commonwealth offered to work with Queensland, and provided experts to assist the Queensland response, while also considering applications for financial assistance.[1]

4.5 In February 2017, the Commonwealth and the Queensland Government 'reaffirmed their shared commitment to support prawn farmers impacted by white spot virus and pledged to continue to work together to eradicate the disease'. A commitment was also made to reach agreement with the industry on financial assistance.[2]

4.6 However, in late April 2017, the Hon Bill Byrne, Queensland Minister for Agriculture and Fisheries, argued that the liability for responding to the outbreak and the on-going costs associated with WSD 'lies squarely at the feet of Barnaby Joyce and the Commonwealth'. Minister Byrne put forward the Queensland Government position that the Commonwealth 'must accept sole responsibility' for the outbreak, as

1 The Hon Barnaby Joyce MP, Deputy Prime Minister and Minster for Agriculture and Water Resources, 'Australia suspends raw prawn imports', *Media Release*, 6 January 2017.

2 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Rural Economic Development, 'Australian and Queensland governments working together to respond to white spot outbreak', *Media Release*, 17 February 2017.

DAWR had 'deliberately withheld information that might have prevented the outbreak'.[3]

4.7 Minister Byrne further argued against a cost-sharing arrangement with the Commonwealth, stating that 'the industry has rejected cost sharing on the grounds prawn farmers did nothing wrong and I fully support their position'.[4]

4.8 The Queensland Government upheld the view that it had borne the costs of failures in border biosecurity by the Commonwealth. During the Queensland Estimates process in July 2017, Minister Byrne said that:

> It is clear that the Commonwealth failed in its responsibilities and compounded this failure by failing to inform the Queensland government or industry that they had concerns about white spot coming in on imported green prawns. The Commonwealth should acknowledge that it did not live up to the expectation that intelligence regarding biosecurity threats are shared with all relevant stakeholders and, in this particular case, [Queensland] as a stakeholder jurisdiction.[5]

4.9 On 27 June 2017, prior to the lapsing of the import suspension, Minister Byrne wrote to Minister Joyce, seeking assurances that 'prawns infected with WSSV will be detected and not present any further risk to Queensland'. Minister Byrne also sought assurance that:

- the standards and protocols implemented for prawns processed overseas will ensure product is not infected with WSSV
- the frequency of testing ensures confidence that infected prawns will be identified and prohibited from entry
- border inspection processes and rates ensure processed prawns meet all import requirements
- DAWR will immediately share information of any border biosecurity control breaches.[6]

Operation Cattai and heightened disease risk

4.10 As detailed in the committee's interim report, Operation Cattai was conducted by DAWR throughout 2016, to investigate non-compliant seafood importers and undertake targeted compliance inspections.

---

3 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Rural Economic Development, 'It's time for Barnaby to put up on White Spot', *Media Release*, 28 April 2017.

4 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries and Rural Economic Development, 'It's time for Barnaby to put up on White Spot', *Media Release*, 28 April 2017.

5 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries, Queensland Parliament Estimates, Agriculture and Environment Committee, *Proof Transcript*, 21 July 2017, p. 14.

6 The Hon Bill Byrne MP, answer to Government Question on Notice No. 7, Queensland Agriculture and Environment Committee, 28 June 2017.

4.11 Throughout the inquiry, the committee heard concerns from various stakeholders about a lack of communication from DAWR regarding the operation and its potential impact on them. Concerns were also raised that the heightened risk of a disease outbreak was not communicated to farmers, thus precluding them from taking preventative actions that could have impeded a white spot incursion.

Findings of Operation Cattai

4.12 In mid-2016, Operation Cattai detected elevated levels of WSSV in retail outlets in a number of locations, together with serious biosecurity breaches at the border regarding raw prawns and prawn products. The operation found:

- imported raw prawns available for retail sale infected with white spot, between Melbourne and Brisbane;
- deliberate evasion of biosecurity and quarantine controls by some seafood importers;
- use of imported raw prawns intended for human consumption as bait by recreational fishers; and
- biosecurity officers at the border not following proper work procedures in relation to inspecting and testing imported raw prawns and prawn product.

4.13 Operation Cattai led to the suspension of import permits and approved arrangements for a number of seafood importers, and to a brief of evidence being submitted to the Commonwealth Director of Public Prosecutions (CDPP).[7]

Developments from Operation Cattai

4.14 DAWR advised that as of September 2017, nine importing entities had their approved arrangements with the department, and their import permits, revoked or suspended. Further, DAWR had focussed its investigations on five entities, with two investigations remaining active. The majority of activities being investigated by DAWR occurred on Australia's eastern seaboard.[8]

4.15 At that time, DAWR was preparing a new brief of evidence for the CDPP for evaluation in the coming months. With regards to the matter already referred to the CDPP, DAWR advised in September 2017 that:

> that matter was before the court in late August. It's been adjourned to late November. That involves one particular trading entity and two directors from that entity in relation to a number of charges concerning taking steps

7 Detailed discussion on Operation Cattai can be found in Chapters 3 and 5 of the committee's interim report.

8 Department of Agriculture and Water Resources, response to written questions on notice, 28 August 2017 (received 11 September 2017); Mr Wayne Terpstra, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 10.

> deliberately to attempt to subvert or make our [inspection and testing] role more difficult.[9]

4.16 DAWR maintained the position that the Logan River outbreak and Operation Cattai were not necessarily related. It was stressed to the committee that while there was a white spot outbreak in the Logan River farms, any non-compliance by seafood importers was a separate issue. Without a proven link between the two, it could not be said that the Logan River outbreak was related to non-compliant importer behaviour.[10] However, many witnesses to the inquiry held the opposing view.

Communication with other jurisdictions

4.17 DAWR advised the committee that it determined to not share information about the findings of Operation Cattai with jurisdictional counterparts, as this may have led to changes in importer behaviour, making it more difficult to detect and deal with infected or other risk products.[11]

4.18 Despite this, a number of stakeholders raised concerns that DAWR did not advise other jurisdictions about the elevated presence of white spot in Australia, in order for jurisdictions to undertake necessary precautionary actions. Additionally, there have been criticisms that DAWR did not act with appropriate urgency given the elevated detection rate of WSSV in Australia.

4.19 Minister Byrne maintained that the matter of most concern to the Queensland Government was that the Commonwealth knew of imported product with WSSV and failed to inform Queensland biosecurity officers. Minister Byrne stated that:

> I was appalled to find the Department of Agriculture and Water Resources was in possession of enough evidence more than 12 months ago to approve a compliance program on the importation of imported green prawns, Operation Cattai, but not concerned enough to let state authorities know what might be happening. Perhaps the litany of cover-ups and secrecy continued unabated when in June 2016 positive samples of white spot were found in retail prawns…At no point was the Queensland government told of these concerns, even though we raised concerns of this nature back more than a decade ago.[12]

---

9 Mr Wayne Terpstra, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 9.

10 Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Estimates Hansard*, 28 February 2017, pp. 118-119.

11 Mr Wayne Terpstra, Department of Agriculture and Water Resources, *Committee Hansard*, 28 March 2017, p. 11.

12 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries, Queensland Parliament Estimates, Agriculture and Environment Committee, *Proof Transcript*, 21 July 2017, p. 14.

4.20 Dr Jim Thompson, Chief Biosecurity Officer of QDAF, advised that QDAF first heard of concerns about white spot-infected prawns at the border on 16 December 2016. This was after the positive detection of white spot in the Logan River. QDAF was more formally advised on 4 January 2017, prior to Commonwealth announcements on the outcomes of Operation Cattai.[13]

4.21 Dr Elizabeth Woods, the Director-General of QDAF, confirmed to the committee that prior to these dates, the department did not have any advice regarding outcomes of investigations happening at a federal level.[14]

4.22 In response, DAWR argued that while some information about ongoing biosecurity risks had been shared with other jurisdictions, specific details were not provided. DAWR stated that:

> Specific information concerning the identities or behaviours of non-compliant importers has not been shared. The department understands this information is of no value to state and territories in helping them to manage risk according to their jurisdictional obligations.[15]

4.23 Witnesses before the committee did not dispute this proposition. What they did dispute, however, was that the increased risk due to the heightened presence of WSSV was not communicated to them at all.

4.24 In his February 2017 report for the FRDC, Dr Diggles noted that 'preparedness and heightened surveillance for exotic diseases could have been facilitated if federal authorities had communicated the increased risk [of WSD] to state authorities'.[16]

4.25 Yet, DAWR advised that the focus of its investigations was the prevention of prawns entering the country that did not comply with import requirements. DAWR stated that:

> The department was unaware of what additional risk management measures the prawn farmers could or would have put in place if they had been informed that WSDV [sic] positive prawns had entered the country when they were already of the view that this was a risk.[17]

---

13 Dr Jim Thompson, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, pp. 22-23.

14 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 23.

15 Department of Agriculture and Water Resources, response to written questions on notice, 28 August 2017 (received 11 September 2017).

16 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 40.

17 Department of Agriculture and Water Resources, response to written questions on notice, 28 August 2017 (received 11 September 2017).

4.26 However, DAWR also acknowledged that it might inform its counterparts in a more timely fashion in a similar circumstance in the future:

> Faced with the same circumstances in future the department would advise state counterparts on a confidential basis, noting that at the time…the department had the view that the risks were low.[18]

Reaction from industry and stakeholders

4.27 Mr Nick Moore of Gold Coast Marine Aquaculture argued that had the Queensland Government been advised of Operation Cattai and the presence of raw infected prawns for sale in the Logan River area, 'alarm bells would have rung that first day' when the first infected farm contacted Biosecurity Queensland. Mr Moore advised that farmers could have responded differently if they were aware that white spot was present in the area. Mr Moore continued that:

> I am 100 per cent convinced that, had the state government been aware of Cattai, been aware of the involvement, then we would possibly not even be sitting here today…I think the state government did what they could. I think they did what they could with the powers that they had, the experience that they had and the resources that they had, which were very limited. They have to be given everything they need. But, if the farmers had known that white spot was in the area for months before we stocked, we probably would not be sitting here.[19]

4.28 Mr Moore also noted the view of the industry that the infected farms were not to blame for the outbreak, particularly given the state government was unaware of the prevalence of white spot. Mr Moore asserted that:

> These guys [the farmers] did everything right. There is not one farm on the Logan or one farmer that I know of in Australia that blames them at all—not one bit. I can guarantee that. They did everything they could. They could have done more had they known.[20]

4.29 The NSIA argued that the failure of DAWR to communicate with state counterparts and with industry about Operation Cattai for ten months, including the increased disease risk at a retail level, could have increased the likelihood of incursion of WSSV and other prawn diseases. Had prawn farmers received earlier, timely communication about the increased prevalence of WSSV in the retail chain, on-farm biosecurity measures could have been increased to reduce the risk of a disease outbreak. Likewise, jurisdictional biosecurity officers would have been more

---

18 Department of Agriculture and Water Resources, response to written questions on notice, 28 August 2017 (received 11 September 2017).

19 Mr Nick Moore, Gold Coast Marine Aquaculture, *Committee Hansard*, 27 June 2017, pp. 5, 9.

20 Mr Nick Moore, Gold Coast Marine Aquaculture, *Committee Hansard*, 27 June 2017, p. 5.

aware of the risks of an exotic disease incursion and therefore able to undertake more appropriate diagnostic testing.[21]

4.30 The ACPF submitted that while it appreciated the sensitivities involved in compliance activities, it was possible that had more information been made available at the appropriate time, 'the disease pathways may have been closed much sooner'.[22]

4.31 The NAC asserted that the decision of DAWR to not inform industry or other jurisdictions about Operation Cattai had 'significantly damaged trust on many levels within the biosecurity chain'. It had also raised serious questions for those in the industry regarding DAWR's ability to manage risks at the border. The NAC indicated that:

> Similarly, the apparent willingness of many prawn importers to flout biosecurity controls and the culture in DAWR that allowed it to happen has reduced the confidence in Australia's import biosecurity framework for aquaculture products.[23]

4.32 Moving forward, the APFA argued that the prosecution of some importers and new import controls would not completely solve the problems. The APFA called for the continued surveillance of prawns in retail outlets, and for an ongoing awareness of the possibility of corruption when monitoring prawn import controls.[24]

Failures in biosecurity practices

4.33 Throughout the inquiry, a number of witnesses noted the importance of biosecurity border testing, and raised concerns over the apparent failure of the biosecurity screening practices of DAWR at the border.

4.34 In July 2017, Minister Byrne argued that the most likely cause of the WSD incursion appeared to be failures of border security practices, allowing infected prawn products into the country. Minister Byrne went on to state that:

> There must be a rethink of how Australia deals with biosecurity threats, rather than an expectation that states and producers can continue to wear the costs of systemic border failures. The first step is that the Commonwealth must be open and honest with state governments and industry over biosecurity threats and what intelligence the Commonwealth has, which must be shared.[25]

---

21 National Seafood Industry Alliance, *Submission 16*, p. 5.

22 Australian Council of Prawn Fisheries, *Submission 14*, p. 7.

23 National Aquaculture Council, *Submission 17*, p. 6.

24 Australian Prawn Farmers Association, *Submission 2*, p. 22.

25 The Hon Bill Byrne MP, Minister for Agriculture and Fisheries, Queensland Parliament Estimates, Agriculture and Environment Committee, *Proof Transcript*, 21 July 2017, p. 14.

4.35 QSIA asserted that the commercial wild catch sector deserved compensation from the Commonwealth for DAWR's 'gross mismanagement' of biosecurity risks. QSIA further maintained that the WSSV incursion into Queensland was:

> a fundamental failure of the Australian biosecurity system producing catastrophic impacts from prawn mortality on Logan River prawn farms and business disruption to wild-catch seafood producers from subsequent disease-containment measures.[26]

4.36 The NSIA submitted that it had:

> serious concerns regarding fundamental flaws in the risk analysis, border quarantine and testing processes that have caused a catastrophic biosecurity failure which has placed us in this situation.[27]

4.37 The NSIA noted the importance of disease testing at the border, particularly with reference to the whole seafood supply chain. Mr Johnathon Davey of the NSIA argued that while imported product enters wholesale, supermarket and retail sectors, these sectors have no testing requirements or disease identification processes, as this only occurred at the border. Thus, testing at the border was 'the one point we have to stamp [disease] out'.[28]

Biosecurity staff training and procedure

4.38 As noted in the committee's interim report, DAWR had examined the operations of biosecurity officers at the border. It was noted that in some instances, staff were not following proper operational procedures and were not randomly selecting prawn products for WSSV testing.[29]

4.39 In a submission to the inquiry, Dr Monckton argued that inadequately trained and informed front line biosecurity staff would lead to the failure of the whole testing and sampling biosecurity regime. Dr Monckton stated that high staff turnover within DAWR reduced knowledge of proper processes within the department, resulting in inadequate or improper product sampling. Further, Dr Monckton expressed concern that there was a lack of understanding of the importance of the IRA, and its scientific meaning.[30]

4.40 DAWR advised in a supplementary submission in August that it had sought to address issues with biosecurity staff training and inspection procedures. Updated instructional material had been implemented and:

---

26 Queensland Seafood Industry Association, *Submission 15*, p. 10.

27 National Seafood Industry Alliance, *Submission 16*, p. 4.

28 Mr Johnathon Davey, National Seafood Industry Alliance, *Committee Hansard*, 28 August 2017, p. 6.

29 See the discussion on Operation Cattai in Chapter 3 of the committee's interim report.

30 Monckton Consulting, *Submission 10*, p. 7.

> All relevant staff have been formally trained on these arrangements and there is an ongoing verification process underway to ensure that these are being consistently applied at a national level…
>
> Given the significant additional workload associated with the enhanced inspection arrangements for prawns, the department sought and gained approval for 105 additional staff. Of these 74 staff are associated with frontline inspection and assessment activities and the remainder are associated with compliance, enforcement, policy and supporting roles.[31]

4.41 Further, while DAWR had not identified any fraudulent or corrupt behaviour by staff with regards to import inspections and testing, it 'continued to work with ACLEI, the Australian Commission for Law Enforcement Integrity, to investigate any allegations of fraudulent or corrupt behaviour and to review the actions of our staff'.[32]

4.42 SIAA advised the committee that, in prior years, DAWR had sought assistance from industry associations to help biosecurity policy and compliance staff better understand importer issues and the 'potential for cheating'. SIAA argued that such engagement would help address issues with inexperienced staff and assist biosecurity officers to better identify and address irregularities as they occur.[33]

Approved arrangements

4.43 As part of its biosecurity practices, DAWR can enter 'approved arrangements' with operators, such as importers. These arrangements allow operators to assess goods, using their own premises, facilities, equipment and personnel, in accordance with DAWR requirements and with 'occasional compliance monitoring or auditing' by DAWR.[34]

4.44 The Community and Public Sector Union (CPSU) noted its ongoing concerns with approved arrangements. The CPSU argued that self-regulation by industry creates unacceptable levels of risk, undermines the effectiveness of biosecurity controls and has adverse impacts on quarantine outcomes. The CPSU further argued that approved arrangements shift biosecurity functions onto industry participants, and away from biosecurity officers.[35]

---

31 Department of Agriculture and Water Resources, *Supplementary Submission*, 24 August 2017, p. 6.

32 Ms Lyn O'Connell, Department of Agriculture and Water Resource, *Committee Hansard*, 11 September 2017, p. 2.

33 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 14.

34 Department of Agriculture and Water Resources, *Approved arrangements*, 9 March 2017, http://www.agriculture.gov.au/import/arrival/arrangements (accessed 7 September 2017).

35 Community and Public Sector Union, *Submission 8*, pp. 3-4.

Enhanced diagnostic testing regime

4.45 In its interim report, the committee examined the process of testing for WSSV in Australian laboratories, and the enhanced testing regime that was implemented after the 2016 outbreak of WSD.

4.46 Following the outbreak, the Australian Animal Health Laboratory (AAHL) developed enhanced WSSV testing processes, and was used by DAWR as the primary white spot testing laboratory. In March 2017, DAWR confirmed that the enhanced testing used by AAHL was returning higher levels of positive WSSV results after the outbreak, and that results in prior years could have been higher had enhanced testing then been in place.

4.47 Throughout the inquiry, the committee heard evidence that dissimilar approaches taken by laboratories in testing for WSSV resulted in different standards for positive and negative results. This also raised the possibility of false positives and negatives. The committee raised its concerns with DAWR about inconsistencies in the enhanced testing regime, and the fact that AAHL processes were unable to be verified by other testing facilities.[36]

AAHL testing procedure

4.48 As the inquiry continued, the committee was advised that the AAHL white spot testing process was based on international standards developed by the OIE. The method prescribed by the OIE would be considered the 'standard test for white spot', with AAHL developing 'improvements' to the testing technology.[37]

4.49 In particular, the committee heard that AAHL was using 45 cycles in its real-time polymerase chain reaction (PCR) testing for white spot, whereas the standard developed by the OIE called for 40 cycles. It was suggested that while still adhering to OIE standards, these different cycles led to laboratories applying different cut-off values to determine negative results for WSSV.[38]

4.50 DAWR has since advised the committee that the confirmatory testing conducted by AAHL did 'help identify that there were some inconsistencies in testing across laboratories', with some prawns testing negative for WSSV at screening laboratories, then testing positive at AAHL under the enhanced testing conditions.

---

36 Detailed discussion on the WSSV testing regime can be found in Chapter 4 of the committee's interim report.

37 Dr Patrick Hone, Fisheries Research and Development Corporation, *Committee Hansard*, 28 August 2017, p. 15.

38 Department of Agriculture and Water Resources, *Submission 9.1*, pp. 2-3. Further information on OIE white spot testing procedures can be found in Chapter 2.2.8 – White spot disease, *OIE Manual of Diagnostic Tests for Aquatic Animals*, 2017, http://www.oie.int/fileadmin/Home/eng/Health_standards/aahm/current/chapitre_wsd.pdf.

Accordingly, DAWR identified that a 'more prescriptive and standardised procedure' was required to better manage biosecurity risks.[39]

4.51 A workshop was held on 17 May 2017 with AAHL and the three approved screening laboratories – AgriGen, Advanced Analytics Australia, and the Elizabeth Macarthur Agricultural Institute. At the workshop:

> it was agreed a more standardised testing protocol should be developed and adopted by all laboratories, including the use of a consistent cut-off value for determining positive or negative results across all laboratories. The department agreed to lead the development of a standardised testing procedure for WSSV.[40]

4.52 The standardised testing procedure developed by DAWR for WSSV aimed to reduce inconsistencies and ensure more robust procedures were in place. The testing procedure has since been adopted by all approved laboratories testing prawn imports, with laboratories then assessed by the National Association of Testing Authorities (NATA). Further, DAWR has 'provided comments to the OIE, recommending the WSSV section in the OIE manual of diagnostic tests be updated'.[41]

4.53 DAWR did acknowledge that the standardised procedure would use the 45 PCR cycles, but Australia could not insist that other countries adopt the same approach. While DAWR was informing other countries of its testing approach, it noted that the PCR cycles were just one part of the testing process. DAWR explained that:

> We use the OIE as a guideline, but then we also work with other countries considerably through exchange of information and expertise. Part of our plan has been to make sure that we have officers going over there on familiarisation visits to work with the other countries. We've had teleconferences with the other countries, and that helps with the understanding to make sure we have fewer of these problems. We have our technical experts speaking to their technical experts.[42]

4.54 DAWR advised the committee that it was informing trading partners and importers of the new standardised testing requirements, while making all information available online. Further, work was underway with overseas trading partners 'so that they fully understand our test, what we do and how we do it so that they can apply the same regime'.[43]

---

39 Department of Agriculture and Water Resources, *Submission 9.1*, p. 1.

40 Department of Agriculture and Water Resources, *Submission 9.1*, p. 3.

41 Department of Agriculture and Water Resources, *Submission 9.1*, pp. 2-3.

42 Dr Andrew Cupit, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 4.

43 Dr Andrew Cupit and Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, pp. 3, 4, 7.

4.55 DAWR also acknowledged that the pre-export testing regime was a new requirement, as previously there had been no requirement for product to be tested prior to export to Australia. Mr Tim Chapman of DAWR argued that while the combination of pre-export and on arrival testing 'does raise the bar', it also 'provides a level of certainty'.[44]

4.56 In the event that an exporting country certifies, in good faith, that prawns are free from white spot, and then test positive for white spot in Australia, DAWR will immediately contact the exporting country. DAWR advised that it would exchange technical information with the exporting country and attempt to identify the issues that led to the discrepancy.[45]

4.57 DAWR also advised that it was providing the testing procedure to relevant trading partners, and developing a short training program in testing techniques. The training focuses on the standardised practices and will be 'offered to laboratory technicians responsible for WSSV testing in major prawn exporting countries'.[46]

4.58 Dr Patrick Hone of the FRDC supported such measures. Dr Hone stressed that:

> One of the best things that we could do with science is work with things like ACIAR, Australian Centre for International Agricultural Research, which works through Foreign Affairs and Trade, to push out our science capability into our neighbouring countries. If we can up the capability of Vietnam, Thailand, Malaysia, the Philippines, Indonesia—all of those countries—that's in Australia's interest.[47]

Testing adequacy

4.59 The committee heard directly from importers who highlighted the consequences for them of conflicting testing results, which they saw as unreliable, confusing and which undermined their confidence, and the confidence of the exporting country, in Australia's disease testing regime.

4.60 One particular instance involved the seafood importer Red Chamber Company. The company had imported Argentinian raw prawns to Australia, via Thailand for processing. While the results from the AgriGen laboratory indicated that the imported prawns were negative for white spot, subsequent testing at AAHL

---

44 Mr Tim Chapman, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 8.

45 Mr Tim Chapman, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 7.

46 Department of Agriculture and Water Resources, *Supplementary Submission*, 24 August 2017, p. 4.

47 Dr Patrick Hone, Fisheries Research and Development Corporation, *Committee Hansard*, 28 August 2017, p. 13.

produced both a negative and positive result for WSSV. As a result, Red Chamber had a significant volume of product held in biosecurity storage and was prevented from selling the product in Australia.[48]

4.61 The committee expressed its concern to DAWR that the enhanced testing regime, the 45 PCR cycles, and the differences between testing laboratories had created considerable frustration amongst importers, and had resulted in substantial delays in releasing product from biosecurity control.[49]

4.62 Some submitters raised concerns with the overall approach to testing. For example, the SIAA noted that it was impossible to test every prawn arriving in Australia for disease. Accordingly, testing would only be 'as good as the sampling regime allows it to be', and some degree of risk would remain, regardless of testing and sampling processes.[50]

4.63 SIAA considered that if DAWR engaged in 'multilateral or bilateral agreements on disease testing methods and standards to allow recognition of supplier nation PCR testing', this would effectively screen imports before their arrival in Australia. This was considered 'an infinitely safer and more commercially acceptable approach'. SIAA strongly argued for pre-export testing to help ensure that imported product met with Australia's ALOP .[51]

4.64 As noted, DAWR has since implemented pre-export testing as part of the enhanced import conditions, and engaged with trading partners to provide training in PCR testing methods. This new process will go some way to addressing the concerns raised by the SIAA.

4.65 The APFA recommended the dismantling of import controls that were based on disease testing. The APFA stated that the 'predictive value of the testing standards set by the import risk assessment for imported prawns is too low to prevent an influx of diseased prawns'. Further, testing would not detect new and emerging diseases. Given the considerable cost and time involved in disease testing, the APFA argued that 'dismantling this system would achieve significant savings for government and industry throughout the supply chain'.[52]

48 *Committee Hansard*, 28 March 2017, pp. 4-5.

49 *Committee Hansard*, 28 March 2017, p. 5; *Committee Hansard*, 11 September 2017, pp. 2-3.

50 Seafood Importers Association of Australasia Inc., *Submission 13*, pp. 13, 18-19.

51 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 3.

52 Australian Prawn Farmers Association, *Submission 2*, p. 3.

Chapter 5

2009 Import Risk Analysis for Prawns and Prawn Products

5.1 This chapter examines the development of the 2009 *Generic Import Risk Analysis Report for Prawns and Prawn Products* (IRA). During the development of the IRA, a number of scientific concerns were raised regarding the content of the IRA, along with concerns over the timeframe in which the IRA was developed.

5.2 This chapter presents evidence submitted to the inquiry about the need for an urgent review of the IRA. The chapter considers the efficacy of several prawn treatments in addressing disease risks.

5.3 The IRA considers a number of pathogenic agents that can infect prawns, such as YHV, Taura syndrome virus (TSV) and necrotising hepatopancreatitis bacterium. However, for the purposes of this inquiry, the committee has focused primarily on the inclusion of WSSV in the IRA.

Development of the IRA for prawns

Background

5.4 Prior to 1992, there was no animal health related policy in Australia for the importation of prawns or prawn products. Following a 1992 major review of aquatic animal health and quarantine, the National Taskforce on Imported Fish and Fish Products (NTF) was established in 1995. It recommended that:

> AQIS [Australian Quarantine and Inspection Service] review aquatic animal quarantine policies and practices, including that quarantine requirements for imported bait prawns, prawn feeds and prawns for human consumption, be revised as a high priority.[1]

5.5 The government agreed to most of the NTF recommendations. In 1996, AQIS imposed restrictions on the entry of 'uncooked prawns and prawn-based products containing uncooked prawns for bait use, to address concerns relating to use of imported prawns as recreational fishing bait'.[2]

5.6 In 1997, the development of an IRA for prawns commenced, resulting in the release of a draft IRA in 2000. In December 2000 and based on this draft IRA, post-arrival AQIS inspections for prawns were introduced to manage the risk of

---

1 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 13.

2 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 13.

WSSV entering Australia. In addition to post-arrival inspections, further measures were added in June 2001 and included:

- a ban on whole uncooked prawns weighing less than 15 grams to minimise their use as bait;
- health certification from the relevant government authority in the exporting country, attesting that the products had been appropriately processed, were free from visible lesions associated with infectious disease and were fit for human consumption; and
- WSSV testing of all imported batches of uncooked whole prawns or unpeeled headless prawns.[3]

International reaction to the draft IRA

5.7 On 23 November 2000, Australia presented the draft 2000 IRA to the World Trade Organisation (WTO) Committee on Sanitary and Phytosanitary Measures (CSPM). The CSPM was established to allow WTO member governments to exchange information in relation to the SPS Agreement, and discuss issues including compliance with the SPS Agreement, and trade disputes.[4]

5.8 The draft IRA provided by Australia to the CSPM identified 15 disease agents as potential hazards, and concluded that risk management was needed for two agents in particular, WSSV and YHV. Australia sought comment from the CPSM on the draft by 15 January 2001.[5]

5.9 Prior to this deadline, in February 2001 Australia implemented interim measures on the importation of prawn and prawn products from countries within the Association of Southeast Asian Nations (ASEAN). The measures were based on the fact that imported diseased prawn product might be used illegally as fishing bait.[6]

5.10 The WTO published a summary of concerns raised regarding the draft IRA by CSPM members, between 2001 and 2007. In 2001, Thailand urged Australia to lift its interim measures, objecting to the inclusion of 'illegal domestic practices as a major

---

3 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 14.

4 World Trade Organization, 'Understanding the WTO Agreement on Sanitary and Phytosanitary Measures', https://www.wto.org/english/tratop_e/sps_e/spsund_e.htm (accessed 10 August 2017).

The SPS Agreement is discussed further in Chapter 3 of the committee's interim report.

5 World Trade Organization, Committee on Sanitary and Phytosanitary Measures, Notification G/SPS/N/AUS/124, 23 November 2000.

6 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products, http://spsims.wto.org/en/SpecificTradeConcerns/View/19 (accessed 10 August 2017).

element in risk analysis'. Thailand further argued that the interim measures were more restrictive than necessary.[7]

5.11 In response, Australia noted that the interim measures were a response to a WSD outbreak. Further, 'investigations had revealed far more imported prawns were being used for bait than had been previously thought', leading Australia to ban the import of whole uncooked prawns weighing less than 15 grams.[8]

5.12 Over the following years, a number of concerns were raised with Australia at the CSPM by WTO member countries. Some of the concerns raised are summarised below:

- October 2001: Thailand expressed 'serious concern about the inclusion of Australia's domestic enforcement practices as a major element in Australia's risk analysis'. ASEAN argued Australia's measures were not based on scientific evidence and were overly restrictive;
- June 2002: Thailand, Malaysia and the Philippines requested information on how long the interim measures would apply, and their scientific basis. Australia advised that a draft risk analysis report would be released after July 2002, but the scientific concerns about WSSV remained;
- April 2003: Thailand observed that 'interim measures against the import of uncooked prawns and prawn products from ASEAN countries had been in place for over two years and there was no legitimate reason for the continuation of these emergency measures'. Australia replied that the measures were only on high-risk products, and that tests had shown the presence of WSSV in uncooked prawns from Thailand. Further, 'Biosecurity Australia had commissioned a study on bait use which provided clear support for the measures taken';
- June 2003: Thailand noted that the interim measures were still in place and that the IRA was unlikely to be concluded within a short period of time.[9]

5.13 In February 2007, Thailand 'again expressed serious concerns about the revised draft generic import analysis report on prawns and prawn product as notified by Australia'. Thailand was:

---

7 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

8 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

The WSD outbreak referred to was the 2000 incident in Darwin aquaculture research facilities.

9 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

> in particular concerned that there was no scientific justification for the proposed quarantine measures. The analytical methods employed suffered from a lack of empirical data, and the conclusions were not based on scientific data but tailored to fit the views of policymakers. Thailand considered that these measures were unnecessary and would create trade obstacles for its exports.[10]

5.14 Thailand further noted that the 'more than 6-year delay in completing the IRA was an undue delay', and if the measures imposed were in fact interim, they 'should have been reviewed within a reasonable time'. China expressed similar concerns, arguing that the measures were overly restrictive and that 'Australia had imported prawns from Asia for ten years with no evidence that the disease had been spread through trade'. China also argued against the heat treatment of imported prawns, as it would reduce marketability. These arguments were supported by Indonesia, Malaysia, the Philippines and Sri Lanka.[11]

5.15 Australia released a further revised draft IRA in 2007, arguing that it presented a comprehensive review of the science. The draft IRA concluded that stricter import control measures were needed, but these measures were yet to be determined. In June 2007, Thailand 'expressed serious concerns about Australia's revised IRA process, which was long and unpredictable'.[12]

5.16 Vietnam also raised concerns, stating that:

> To date, there were no reports of any disease outbreaks related to Vietnamese prawn exports. [Vietnamese] authorities had carefully studied Australia's draft risk analysis. Of the five diseases identified to be of concern in the IRA, three were not known to occur in Viet Nam. The other two diseases were widespread in South East Asia, yet had never been introduced into Australia despite years of prawn imports without the current quarantine restrictions. The risk management measures proposed in the draft IRA lacked scientific justification and would present a serious barrier to trade.[13]

---

10 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

11 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

12 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

13 World Trade Organization, Sanitary and Phytosanitary Information Management System, Specific Trade Concern Number 85: Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products.

5.17 The draft IRA was further revised in September 2008, before the IRA was finalised by Biosecurity Australia in 2009.[14]

2009 Import Risk Analysis

5.18 In 2009, Biosecurity Australia released the final IRA. This IRA covered the import of prawns and prawn products into the country, excluding live prawns.

5.19 The IRA examined what pathogenic agents could be introduced into Australia through the importation of uncooked prawns and prawn products, intended for human consumption. The IRA recommended the importation of prawns, subject to 'compliance with risk management measures to manage the quarantine risks of a range of significant pathogenic agents to a very low level'. WSSV was considered a pathogenic agent.[15]

5.20 The IRA determined a number of acceptable risk management measures, including:

- sourcing all uncooked prawn product from a country or zone that Australian government authorities considered free of WSSV;
- removal of the prawn head and shell, and holding each imported batch on arrival in Australia under quarantine control, for testing and confirmation that the product was free of WSSV;
- importing highly processed product, with the prawn head and shell removed, and coated for human consumption in crumb, batter, wet or dry marinade, or marinated and placed on skewers (with the marinade in all cases clearly seen on the prawns); or
- cooking the product in a premises approved by, and under the control of, an appropriate authority in the exporting country, to a minimum time and temperature standard, resulting in no remaining uncooked meat.[16]

5.21 The IRA stipulated that, unless an importing country is free from prawn pathogens, all imported prawns must have heads and shells removed, be frozen and each batch tested on arrival in Australia, and found to be free of WSSV and YHV. Alternatively, the IRA required prawns to be 'highly processed', with the head and shell removed, and:

- coated for human consumption by crumb or batter;

---

14 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 15.

15 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 11.

16 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, pp. 11-12.

- coated for human consumption in a wet marinade, where the marinade is not less than 12 per cent of the total product weight;
- coated for human consumption in a dry marinade, which must be clearly seen to cover the product;
- coated for human consumption by being marinated and placed on skewers, with the marinade clearly seen to cover the product; and
- the raw prawn meat processed into dumpling, spring roll, samosa, roll, ball or dim-sum type product.[17]

5.22 The IRA further stated that imported uncooked and highly processed prawns would be randomly inspected by quarantine officers to ensure the import complied with the import permit and health certificate.[18]

5.23 In determining that all imported uncooked prawn product should come from a country or zone considered free of WSSV, the IRA argued that Australian Government authorities must have knowledge of the activities of the relevant authority in the other country. The Government should be satisfied the authority can control disease, and undertake proper monitoring and surveillance for disease. A satisfactory assessment of the procedures from these countries would reduce the overall risk of WSSV from imported prawns.[19]

5.24 Overall, the IRA found the likelihood of release of WSSV 'via the unrestricted importation of non-viable, farm-sourced, frozen, uncooked whole prawns intended for human consumption is estimated to be high'.[20]

Reaction to draft and final IRAs

5.25 The committee was concerned to learn that prior to the finalisation of the IRA in 2009, testing had determined that WSSV was present in Australia. Some of these results are presented in the IRA.

5.26 For example, the IRA notes that WSSV was detected in 2004 in Australia, in imported frozen uncooked prawns intended for human consumption. In 2006, the Western Australian and Queensland governments tested raw, peeled imported

17 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, pp. 190-191.

18 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 11.

19 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 179.

20 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 112.

supermarket prawns. These tests found a 20 to 100 per cent prevalence of WSSV, in the 14 batches tested, with five prawns tested per batch.[21]

Queensland Government

5.27 In 2006, QDAF received from the Commonwealth a request for feedback on the revised draft IRA for prawns and prawn product. In response, QDAF undertook a limited testing program. QDAF advised the committee that where it held particular concerns with Commonwealth proposals regarding imported products, it would 'test and form a view' on that proposal.[22]

5.28 QDAF advised the committee that a small amount of its testing:

> indicated a high level of infection in imported product at that time and therefore [the Queensland Government] did not support the proposed approach to the import of green prawns.[23]

5.29 In correspondence seen by the committee, dated 16 February 2007, the Queensland Government's Department of Primary Industries and Fisheries (DPIF) provided its advice to Biosecurity Australia on the revised draft IRA. This advice contained the testing results undertaken by DPIF:

> To date the testing of sixteen batches of imported uncooked prawns has detected WSSV in 87.5 per cent of samples tested (some with severe viral infection loads) and TSV in 62.5 per cent of samples, (some severe) and not only in prawns from China but also Thailand and Indonesia. Although the two samples from Vietnam were negative to TSV they were both tested positive for WSSV. Prawns were sourced from supermarkets in Brisbane, Rockhampton, Mackay, Townsville and Cairns and were all different batches according to the packet information.[24]

5.30 DPIF argued that the testing results showed that WSSV was entering Queensland through imports from various countries, 'despite existing quarantine conditions intended to exclude WSSV'. DPIF supported a review of a number of quarantine policies, to ensure the effectiveness of Australia's biosecurity policy. DPIF argued that the reviews should consider:

- the validity of foreign-issued animal health certification;
- the efficacy of post arrival inspections;

---

21 Biosecurity Australia, *Generic Import Risk Analysis Report for Prawns and Prawn Products*, October 2009, p. 112.

22 *Committee Hansard*, 27 June 2017, p. 21.

23 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 20.

24 Queensland Department of Primary Industries and Fisheries, file copy of correspondence to Biosecurity Australia, Reference 07/02107, 16 February 2007, p. 4.

- the efficacy of WSSV testing on quarantined prawn products, including sampling rate, sample management and test methodology; and
- the efficacy of processes for the exclusion of prawn products (that fail quarantine conditions) from entering the Australian market.[25]

5.31 DPIF noted that:

> with the price of imported uncooked prawns dropping substantially and the tonnage of imports increasing there has been a heightened risk of cheap readily available product being purchased for other uses such as bait and berley. Despite a communication campaign by the [DPIF] to alert fishermen to the risk of such practices it is clear that use of imported prawns as bait and berley remains a risk.[26]

5.32 DPIF argued for the screening of all batches of imported prawns for exotic viruses, noting that this 'would go a long way towards ensuring that prawn product containing exotic viruses will no longer be readily available for misuse'.[27]

5.33 During the inquiry, QDAF confirmed its position that it did not support the IRA at the time of its development, and noted that it has 'consistently pointed out risks that are not apparent to the Commonwealth or have in our view been assessed differently by the Commonwealth'.[28]

Revision of the 2009 IRA

5.34 Over the course of the inquiry, various stakeholders argued for urgency in revising the 2009 IRA, especially given the WSD outbreak. Stakeholders argued for an appropriate assessment of biosecurity risks moving forward, in light of the lessons learned from the recent WSD outbreak and the possibility of varied incursion pathways.

5.35 The NSIA stated that while it was not against the importation of seafood, it was 'extremely concerned about the failures of border control and the incursion of the white spot disease into south-east Queensland'. The NSIA argued that the IRA had failed, and called for its comprehensive and urgent review with the full involvement of industry throughout the review process.[29]

---

25 Queensland Department of Primary Industries and Fisheries, file copy of correspondence to Biosecurity Australia, Reference 07/02107, 16 February 2007, p. 4.

26 Queensland Department of Primary Industries and Fisheries, file copy of correspondence to Biosecurity Australia, Reference 07/02107, 16 February 2007, p. 1.

27 Queensland Department of Primary Industries and Fisheries, file copy of correspondence to Biosecurity Australia, Reference 07/02107, 16 February 2007, p. 1.

28 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 25.

29 Mr Johnathon Davey, National Seafood Industry Alliance, *Committee Hansard*, 28 August 2017, p. 1; National Seafood Industry Alliance, *Submission 16*, pp. 7-8.

5.36 The APFA stated that the high prevalence of WSSV detected in Australia showed that the current arrangements under the IRA had failed comprehensively, repeatedly and on a large scale. The APFA argued there would 'always be breakdowns in the system due to human error, test failure, sampling errors and deliberate fraud', and called for the simplification and strengthening of import controls.[30]

5.37 The APFC called for the urgent review of the biosecurity regime for prawns and crustaceans, noting that the controls in place under the current IRA were insufficient to control risk, and were open to human failure and improper implementation. The APFC called for improved post-entry product surveillance, noting that prawn products did not have post-border controls similar to other commodities.[31]

5.38 The APFC further encouraged any biosecurity review to look at, among other things, emerging diseases in prawns and crustaceans; changing consumer behaviours with regard to prawn products; the proficiency of testing laboratories, and post-border disincentives to stop product substitution and mislabelling.[32]

5.39 With regard to revision of the IRA, Dr Ben Diggles argued that:

> The strong possibility that this disease incursion was caused by the use of imported prawns as bait signals an urgent need to revise the prawn IRA and reassess this and other potential pathways of aquatic animal disease introduction into Australia. The IRA has now not only failed, it is simply out of date. The risk profiles of diversion of prawns and other imported seafood products to bait and burley have either changed or were not properly identified in the first place.[33]

5.40 The SIAA noted that there were at least 35 viral, bacterial or other diseases affecting prawn farms globally, and that more would evolve, including in Australia. While supportive of appropriate import controls, the SIAA argued that imported prawns were not the only risk to biosecurity, and that:

> An over-reliance on border controls would inevitably lead to an endless procession of revised import risk analyses, revised import conditions, and further trade restrictions – with no guarantee that these diseases won't reach here by other pathways…these are aquatic diseases and Australia is surrounded by water.[34]

---

30 Australian Prawn Farmers Association, *Submission 2*, p. 17.

31 Australian Council of Prawn Fisheries, *Submission 14*, p. 5.

32 Australian Council of Prawn Fisheries, *Submission 14*, pp. 18-19.

33 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 47.

34 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 13.

5.41 SIAA urged DAWR in its review of the IRA to undertake an assessment of all disease pathway risks, and not just importation. SIAA encouraged DAWR to 'look at which are the relevant points in the supply chain to apply necessary controls rather than focusing on just one potential pathway and placing almost all the control effort on just one point in the supply chain'.[35]

5.42 The ABFA agreed with this view, arguing that the reliance on border testing to manage disease risk was 'illogical' and did not account for new and emerging diseases that may not yet have tests in place.[36]

5.43 In reviewing the IRA, Dr Patrick Hone of the FRDC urged that effective, science-based systems were used to inform biosecurity measures. Dr Hone encouraged consideration of new and different processes being included in an updated IRA, rather than simply fixing the existing provisions.[37]

5.44 More broadly, there were calls to ensure that all IRAs were updated in a timely manner, rather than as a retrospective result of a disease outbreak. A number of submissions to the inquiry noted that the limited number of IRAs for particular seafood products were outdated, and did not have appropriate review mechanisms, thus increasing disease risk. For example:

- the ABFA noted that the IRA for barramundi products was 20 years old, generic and out of date;
- the NAC advised that the IRA for finfish was completed in 1999 and no longer reflects the breadth of finfish imports, and that no IRA exists for molluscs (including oysters); and
- the APFC noted that the prawn IRA appeared to have no review mechanism in place, outside of a high-profile failure such as occurred in late 2016 with WSD.[38]

Support for the IRA

5.45 Other evidence to the inquiry suggested that the development of the 2009 prawn IRA was sound. Dr Monckton, of Monckton Consulting, argued that:

> The scientific basis for the 2009 IRA was carefully and extensively debated by an expert panel with significant contributions from expert scientists overseas as well as local and public input. There was an expert scientific review panel to review the submissions from all stakeholders including the importers as well as the local prawn farmers and anyone or anybody who

35 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 22.

36 Australian Barramundi Farmers Association, *Submission 12*, p. 3.

37 Dr Patrick Hone, Fisheries Research and Development Corporation, *Committee Hansard*, 28 August 2017, p. 12.

38 Australian Barramundi Farmers Association, *Submission 12*, p. 4; Australian Council of Prawn Fisheries, *Submission 14*, p. 11; National Aquaculture Council, *Submission 17*, pp. 4-5, 10.

> had to do with the importation and testing. While not a perfect document…it seemed to have most if not all the requirements to fulfill [sic] the requirements under the OIE and the acceptance of ALOP especially to have a low level of risk for any imported prawns.[39]

5.46 SIAA submitted that there was no conclusive evidence that the IRA had failed. SIAA argued that the provisions of the 2009 IRA 'would have been sufficient to ensure imported uncooked prawns remained a low risk to Australia's marine environment and fisheries – if they had been robustly enforced', and supplemented with pre-export testing.[40]

DAWR review of the IRA

5.47 The committee notes that on 16 May 2017, DAWR announced a review of the import conditions for prawns and prawn products, intended for human consumption. The review will consider the biosecurity risks from the imports of such products, and 'recommend appropriate import conditions to manage these'. The review will examine the IRA and other existing import conditions and policies.[41]

5.48 DAWR advised the committee that in undertaking the review, it would engage fully with the industry. To that end, DAWR would hold a consultation roundtable with stakeholders before the end of 2017, to 'ensure that all interested parties are informed, engaged and consulted'.[42]

Diseases in the IRA

5.49 Given the IRA was finalised in 2009, a number of submitters argued that the IRA should be updated to include new and emerging diseases not considered by the current IRA.

5.50 Evidence to the committee suggested that other disease agents not considered in the 2009 IRA included, among others, acute hepatopancreatic necrosis disease (AHPND), monodon slow growth syndrome, and Covert Mortality Disease.[43]

5.51 DAWR advised that it engages in ongoing monitoring of prawn diseases that may present a biosecurity risk to Australia. For example, in relation to AHPND,

---

39 Monckton Consulting Pty Ltd, *Submission 10*, p. 6.

40 Seafood Importers Association of Australasia Inc., *Submission 13*, pp. 3, 16.

41 Department of Agriculture and Water Resources, *Review of import conditions for prawns and prawn products*, 16 May 2017, http://www.agriculture.gov.au/about/media-centre/media-releases/review-prawn-prawn-products (accessed 26 September 2017).

42 Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 2.

43 DigsFish Services Pty Ltd., *Submission 1*, p. 11 (includes a non-exhaustive list of new and emerging prawn diseases); Mr Alistair Dick, Gold Coast Marine Aquaculture, *Committee Hansard*, 27 June 2017, p. 6.

DAWR has reviewed scientific information and reached a preliminary conclusion that 'the current risk management measures for uncooked prawns, such as freezing, reduce the biosecurity risk of AHPND to an acceptable level'.[44]

Importing cooked prawns

5.52 Over the course of the inquiry, the committee received evidence from a number of witnesses that the best way to achieve Australia's ALOP from disease was to only import cooked prawns.

5.53 In its submission, the APFA stated that 'there does not appear to be any compelling reason why prawns must be imported to Australia in an uncooked state'. It was argued that other products, such as salmon, chicken and pork must be cooked prior to arrival in Australia, and there was no explanation as to why the same ALOP did not apply to prawns.[45]

5.54 The ABFA likewise asserted there were quarantine conditions for some imported meat products where cooking was required, and that this was permissible under the WTO and OIE rules. The ABFA argued, however, that prawns 'have a lower biosecurity threshold with raw product allowed', and that a higher risk burden should be introduced.[46]

5.55 Dr Diggles also argued that quarantine conditions requiring the cooking of imported meat products were within the rules of the WTO and the OIE, however the fishing and aquaculture industries were treated differently. Dr Diggles supported the importation of cooked prawn products, stating:

> By requiring cooking prior to entry, the processes of inspection at the border would be simplified, additional costs of testing for diseases would be eliminated, and other risk mitigations like processing (removal of heads/peeling/deveining) may no longer be required, resulting in a more streamlined inspection process at the border and potentially a cheaper product to the end consumer. Furthermore, the technology required to cook seafood is virtually no cost, imposing little burden on exporting countries, and we would no longer have this ridiculous situation whereby uncooked commodities enter Australia from WSSV positive overseas countries, while commercial fishers and aquaculturists in SE QLD have to cook their commodities prior to sending them interstate or up to North QLD.[47]

5.56 The NSIA held a similar view, and stated that cooking prawns was a 'simple, cheap and effective sanitary process that inactivates most pathogens' that present a

---

44 Department of Agriculture and Water Resources, answers to questions on notice, 5 September 2017 (received 18 September 2017).

45 Australian Prawn Farmers Association, *Submission 2*, p. 18.

46 Australian Barramundi Farmers Association, *Submission 12*, p. 5.

47 DigsFish Services Pty Ltd., *Submission 1*, pp. 21-22.

threat to the environment and human and animal health. Further, the NSIA was of the view that cooking prawns was a low cost, low risk process that could be implemented quickly, and would reduce the costs associated with compliance testing and inspection. Importing only cooked prawns would 'likely be the only way to level the playing field and reduce risks to within the ALOP enjoyed by other non-seafood industries'.[48]

5.57 However, some submitters raised concerns about importing only cooked prawns. SIAA argued that while the import of cooked prawns would address some biosecurity concerns, to do so was to 'misunderstand the Australian market entirely'. SIAA continued that:

> Limiting supply to pre-cooked prawns would deprive foodservice businesses of their capacity to apply their culinary skills to add value through cooking – the very activity that underpins their competitive advantage, their revenue, and, some would argue, their purpose.
>
> There is a real danger that this would also inflict a major degrading of the quality of prawn meals available to consumers and jeopardise the premise that prawns are inherently high quality food…This in turn could lead to a slump in sales that would affect both local supply and imports.[49]

5.58 SIAA further argued that Australian-sourced uncooked prawns would not be able to fill the gap in the uncooked prawn market, as the production volume is less than the demand. This was confirmed by the FRDC, who noted that Australia would have to double its production of raw prawns to meet current market demand.[50]

5.59 DAWR made the point that only allowing the import of cooked prawns would not provide a '100 per cent guarantee' in preventing a white spot incursion, as there would remain other pathways for the disease to enter Australia. Further, importation of raw prawns and prawn product would be based on risk assessments, and if Australia could trade safely, 'then we should be trading'.[51]

5.60 This position on trade was also put forward by Minister Joyce. In correspondence to Mr Michael Crandon MP, Queensland Member for Coomera, Minister Joyce stated that:

---

48 National Seafood Industry Alliance, *Submission 16*, pp. 9-10; 18.

49 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 4.

50 Seafood Importers Association of Australasia Inc., *Submission 13*, pp. 4, 8; Dr Patrick Hone, Fisheries Research and Development Corporation, answer to question taken on notice, 28 August 2017 (received 5 September 2017).

51 Ms Lyn O'Connell, Department of Agriculture and Water Resources, *Committee Hansard*, 11 September 2017, p. 10.

> our two-way trading relationships are vital for Australian producers who rely on selling their products overseas and the government has an obligation to allow agricultural imports, where the science says it is safe to do so.[52]

'Highly processed' prawns

5.61 Throughout the inquiry, there was discussion as to whether the processing of prawns in certain ways reduces the viral load, or changes the likelihood of raw, imported prawns being used as bait. In particular, it was suggested that marinades on highly processed prawns were being washed off, and the clean raw prawns subsequently used as bait.

Removal of head and shell

5.62 The IRA contends that removal of the prawn head and shell reduces the viral load of infected prawns. DAWR has argued that shelled prawns being used as bait 'may result in a lower rate of viral introduction into the environment'.[53]

5.63 However, some evidence suggested that removing the prawn head does little to reduce the viral load. Dr Diggles summarised scientific evidence that removal of a prawn head does little to reduce the WSSV viral load, as 'viral load in individual prawns is nearly identical in either heads (49% of total virus) or tails (51% of total virus)'. The processing of green prawns (removing the head or shell) therefore reduces the viral load only by half.[54]

5.64 Mr Alistair Dick argued that while removing the head and shell of a prawn does not reduce the viral load, such an action could in fact increase the likelihood of a raw prawn being used as bait, and therefore increase the probability and risk of viral transfer.[55]

Marinated prawns

5.65 The NSIA argued that there was no scientific evidence that marinating or breadcrumbing prawns inactivates disease, or stops consumers from using prawns as bait or burley. The NSIA also questioned whether marinating and breadcrumbing were 'processing steps' that removed the need for disease testing. The NSIA contended that:

---

52 The Hon Barnaby Joyce MP, correspondence to Mr Michael Crandon MP, 5 July 2017 (received 27 July 2017).

53 Department of Agriculture and Water Resources, *Report into the cause of white spot syndrome virus outbreak in the Logan River area of Queensland – December 2016, Interim report*, May 2017, p. 10.

54 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 46.

55 Mr Alistair Dick, Gold Coast Marine Aquaculture, *Committee Hansard*, 27 June 2017, p. 2.

> this was simply misleading and heightened risks of disease introduction, instead of reducing them, by providing a loophole to avoid testing and allow entry of infected prawns into the retail sector.[56]

5.66 The APFA supported this view, stating that the term 'highly processed', as applied to marinated and breadcrumbed prawns, was a 'misnomer because it implies some form of heat or energy has been applied to the product, which would reduce or eliminate pathogens'. The APFA argued that as there was no scientific evidence that prawn pathogens are inactivated when highly processed, the importation controls presented a loophole for infected product to enter Australia. The APFA stated that this loophole should be closed.[57]

5.67 The SIAA submitted that it was unclear to what extent people were washing marinades off prawns. SIAA noted that despite this pathway being repeatedly mentioned by stakeholders, 'it is hard to imagine that a marinated product would be the first choice of anyone intending misuse when better suited products (e.g. un-marinated meat and cutlets) were available'. Nevertheless, the SIAA encouraged further research into the effectiveness of marinade in preventing the prawns being used as bait.[58]

5.68 The committee notes that as part of the enhanced import conditions in place from 7 July 2017, uncooked and marinated prawns are considered as one product class and subject to enhanced testing and import conditions such as seals intact inspection and pre-export disease testing.[59]

---

56 National Seafood Industry Alliance, *Submission 16*, pp. 7-8.

57 Australian Prawn Farmers Association, *Submission 2*, p. 19.

58 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 20.

59 Department of Agriculture and Water Resources, answers to questions on notice, 5 September 2017 (received 18 September 2017).

Chapter 6

Committee views and recommendations

6.1 The devastating impact of the 2016 white spot disease outbreak on farmers and seafood industries in Queensland has raised particular concerns over the biosecurity controls for preventing aquatic disease incursions into the country. It has brought to the fore a number of serious concerns regarding the adequacy of Australia's biosecurity systems and import controls.

6.2 Some progress has been made since the outbreak in developing a more effective import regime for raw prawns and prawn products. This chapter examines some of this progress, while also providing the committee's views and recommendations on a range of issues that have arisen as a result of the WSD outbreak.

Impact on industry

6.3 The committee was troubled to hear of the devastating impact that white spot has had on the Logan River prawn farms. The farms have effectively been shut down for two years, to help ensure eradication of WSSV and to implement updated biosecurity controls.

6.4 During a site visit to the Logan River area in June 2017, the committee saw for itself the devastating impact of white spot on local farmers. The Logan River prawn farmers will likely experience long-term and significant financial impacts because of WSD. In addition, the farmers will continue to suffer a great personal cost as a result of the disease outbreak, given the direct impact it has had on their livelihoods.

6.5 Similar experiences were faced by the commercial sector in the Logan River and Moreton Bay areas. The commercial operators have been severely impacted by the movement control order still in place around Moreton Bay. These operators have been unable to send their products into more lucrative markets, and have subsequently suffered both financially and personally.

6.6 Some submitters expressed concerns regarding the biosecurity measures in place on some prawn farms. However, the committee notes that prawn farms will be implementing improved biosecurity measures before recommencing production in 2018. The committee encourages the application of the best possible biosecurity measures on farms. While there may be financial implications in doing so, improved biosecurity controls will help to prevent a similar outbreak occurring once the farms recommence operations, and will assist farmers to restore the reputation of Queensland farmed prawns.

Departmental response to outbreak

Queensland response

6.7 The committee commends the work of QDAF in responding to the disease outbreak and containing the spread of white spot as much as was feasible. The committee notes that it was a Queensland Government responsibility to respond to the disease incursion, yet it was actions by the Commonwealth at the border that may have led to the disease incursion in the first place. This placed a significant burden on Queensland, both physically and financially, that it might not have otherwise had to contend with.

6.8 QDAF advised the committee of its interest in 'mitigating the impacts of future biosecurity incursions'. QDAF was seeking ways to 'identify further areas for improvement in both our biosecurity systems at the state level and the way we fit into the Commonwealth and national arrangements with other state and territory jurisdictions'.[1]

6.9 To that end, a number of submitters identified ways in which the Queensland Government response could be improved.

6.10 In his report into the incident, Dr Diggles examined the communication between the Logan River prawn farmers and Queensland Government biosecurity staff. Dr Diggles observed that in some instances, communication with farmers was lacking, with some farmers feeling they were operating in an 'information vacuum'. Timelier biosecurity advice to farmers at the earliest stages may have reduced infection risks.[2]

6.11 Additionally, farmers found it stressful that many instructions to them from biosecurity staff were verbal, and were not followed up by written documentation. Dr Diggles stated that:

> The only thing worse than no information is misinformation which often happened when verbal instructions dominated and the response strategy appeared to vary from day to day or hour by hour. Clearly this is not satisfactory and in the future it is important that relevant documentation is provided to farmers as promptly as possible and written (hard copy) situation updates are also provided to farmers on a regular, predictable

1 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Proof Committee Hansard*, 27 June 2017, p. 19.

2 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 41.

> basis. The urgency for eradication should in no way be used as an excuse to keep farmers in the dark.[3]

6.12 Dr Diggles was also of the view that there was limited availability of biosecurity field staff with specialist aquatic animal training, which may have hindered the transfer of appropriate information to decision-makers higher up the chain of command. It was argued that trained officers would allow for 'more precise decision making and more rapid adaptation to changing situations'.[4]

6.13 The NSIA called for relevant documentation to be provided by biosecurity officers to farmers and fishers promptly, in the event of a disease incursion. The NSIA further stated that situation updates should be provided on a regular and predictable basis, to improve communication mechanisms.[5]

DAWR communication

6.14 The committee received overwhelming evidence of a communication failure on the part of federal biosecurity authorities.

6.15 The evidence shows that DAWR was aware that WSSV was in the Australian retail sector at elevated levels throughout most of 2016. The relevant officers at the federal level failed to properly notify their jurisdictional counterparts, industry stakeholders or prawn farmers of the heightened risk of white spot disease coming into Australia.

6.16 Further, it appears to the committee that during the development of the 2009 IRA, there was insufficient acknowledgment by federal authorities of concerns raised at a jurisdictional level. The concerns raised by jurisdictions do not appear to have been incorporated into the IRA or actioned in any way. This is particularly true for Queensland, where testing clearly showed evidence of white spot at significant levels as early as 2006.

6.17 With regard to Operation Cattai, the committee appreciates the need for DAWR to undertake its investigations with some level of confidentiality. However, it is apparent to the committee that effective and timely communication with industry and state government stakeholders was lacking in this instance.

---

3 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, p. 41.

4 Dr Ben Diggles, *Field observations and assessment of the response to an outbreak of White Spot Disease (WSD) in Black Tiger Prawns* (Penaeus monodon) *farmed on the Logan River in November 2016*, Fisheries and Research Development Corporation, 21 February 2017, pp. 40-41.

5 National Seafood Industry Alliance, *Submission 16*, p. 6.

6.18 DAWR acknowledged as much, when it suggested that in the event of a similar incident in future, it would advise its state counterparts of the outcomes of its investigations.

6.19 Better communication could have seen the increasing prevalence of WSSV addressed in a more timely and cohesive manner. It is the committee's view that such communication could have occurred without undermining the integrity of ongoing DAWR investigations. DAWR should ensure that it implements procedures that allow it to communicate effectively and confidentially with jurisdictional counterparts, to alert them to heightened risks of disease incursion.

Recommendation 1

6.20 The committee recommends that the Department of Agriculture and Water Resources introduce procedural guidelines that allow it to communicate confidentially with jurisdictional counterparts while pursuing biosecurity investigations. Such procedures should protect the integrity of investigations, while alerting other jurisdictions to heightened disease risk.

Enhanced import conditions

6.21 The demand for seafood in Australia cannot be met from domestic supply, requiring significant volumes of seafood to be imported from overseas. The prawn import suspension, implemented from January to July 2017, therefore had a dramatic effect on the distribution of prawns to and around Australia, and on seafood importers and retailers.

6.22 The committee was concerned by the various amendments made to the original import suspension (particularly the amendments in May 2017) to allow the import of uncooked prawns which had been marinated, for human consumption. The changes were made despite the cause of the WSD outbreak remaining unknown.

6.23 The enhanced import conditions, in place since July 2017, combine uncooked and marinated raw prawn into the same product class for biosecurity purposes, with pre-export and at the border testing, and 100 per cent seals intact inspections. The committee expects that combining raw and marinated prawns into the same product category will go some way to addressing stakeholder concerns.

6.24 However, while imports have resumed under these enhanced conditions, there remains a movement control order in place in the Moreton Bay area. These orders mean that while international seafood product can enter Australia, prawns, yabbies and marine worms from Moreton Bay cannot leave certain restricted areas in Queensland. The committee heard evidence of the devastating impact the orders have had on some Queensland industries.

6.25 The committee understands that the movement control order is in place to help prevent the potential spread of WSSV. However, the resumption of imports has created an unequal playing field for Moreton Bay seafood operators. The committee

encourages the lifting of the movement control order as soon as practicable, once it is deemed safe to do so.

Product recall powers

6.26 In its submission to the committee, and in evidence throughout the inquiry, DAWR called for legislative changes to the *Biosecurity Act 2015*, with regard to product recall powers. The changes would allow for a quicker and more comprehensive response if a similar biosecurity incident were to occur.[6]

6.27 DAWR argued that:

> A key change includes considering a potential new power providing the Director of Biosecurity with the ability to issue a general secure direction for a specified good or class of goods and a requirement for persons in possession of those goods to provide information to the department. Similar to a 'recall' power, a secure and advise power would enable the Director of Biosecurity to prevent the further movement of biosecurity risk goods and to gather information to support a targeted operational response to control the risk.[7]

6.28 The committee notes that the decision to suspend the import of raw prawns and prawn products was the first use of the import suspension powers in the *Biosecurity Act 2015*. Accordingly, the committee is encouraged that DAWR has examined the WSD response and proposed legislative changes to improve the biosecurity policy framework. The committee recommends that DAWR progress these statutory changes.

Recommendation 2

6.29 The committee recommends that the Minister for Agriculture and Water Resources introduce amendments to the *Biosecurity Act 2015*, which provide the Director of Biosecurity with appropriate secure and advise powers in relation to specified goods or classes of goods.

Diagnostic testing

Enhanced testing regime

6.30 The enhanced testing regime implemented by AAHL raised serious concerns for the committee. The committee recognises the need for rigorous testing procedures. However, the enhanced testing regime has created uncertainty for all stakeholders and added to the confusion around implementation of the import suspension in the first

6 Department of Agriculture and Water Resources, *Submission 9*, p. 47; *Committee Hansard*, 28 March 2017, pp. 10-11; Correspondence received from the Department of Agriculture and Water Resources, 11 July 2017.

7 Department of Agriculture and Water Resources, *Submission 9*, p. 47.

half of 2017. The conflicting test results between laboratories also raised the possibility of false positives and false negatives.

6.31 It is clear that AAHL took a conservative approach in the detection of white spot. While this may have prevented infected product entering Australia, it may also have resulted in the destruction of product that was unlikely to be infectious.

6.32 Importers in particular emphasised the adverse impacts of enhanced testing on their businesses. They informed the committee that imported prawn products testing negative for white spot at an approved laboratory often returned positive WSSV results at AAHL. As a result, substantial volumes of raw prawns were held in biosecurity control with orders to re-export or destroy the product, at great cost to importers and the broader seafood distribution chain.

6.33 DAWR explained to the committee that AAHL's confirmatory testing did highlight 'inconsistencies' between laboratories. The committee observes that DAWR has since taken steps to address these inconsistencies by introducing standardised testing procedures across laboratories.

6.34 The committee encourages DAWR to continue this important work, to ensure that biosecurity risks are adequately addressed, with all laboratories operating under the same arrangements. Should a similar biosecurity event occur in future, the committee urges DAWR to consider how diagnostic testing may be best applied in the circumstances, to reduce confusion and disruption for stakeholders.

Pre-export testing

6.35 The new regime of pre-export testing will provide greater certainty to exporting countries and importers that the product entering Australia is free from white spot and other crustacean diseases.

6.36 The committee was encouraged to hear of these positive steps taken by DAWR to address concerns with WSSV testing, especially in providing training and assistance to overseas trading partners. The committee hopes a uniform approach to both testing methods and the interpretation of results will help prevent the importation of infected product, and assist biosecurity to better detect white spot at the border.

6.37 However, the committee also notes that the competent authorities from exporting countries must certify their products are free from WSSV, based on current OIE testing methods. The committee encourages the department to continue its discussions with the OIE and with trading partners, to ensure the diagnostic tests used globally are of an adequate standard to detect WSSV in prawn products coming to Australia. Appropriate overseas testing will play a key role in keeping WSSV out of Australia in future.

6.38 DAWR advised of planned visits to major prawn exporting countries, to 'discuss aquatic animal health controls and systems in place to manage the biosecurity risk of prawns and prawn products exported to Australia'. DAWR officials visited

Thailand in June 2017 and Malaysia in September 2017, with all other major trading partners to be visited within the next year (to mid-2018).[8]

6.39 Given the steps already taken to improve the diagnostic testing regime for our trading partners, the committee recommends that DAWR implement a formal and ongoing training program for diagnostic testing in trading nations. Such a program would help reassure exporting countries that prawn products will be more likely to be accepted upon arrival in Australia. This will in turn give confidence to importers and the supply chain.

Recommendation 3

6.40 The committee recommends that the Department of Agriculture and Water Resources implement an ongoing diagnostic testing training program for aquatic diseases with international trading partners, to assist those countries in improving their scientific disease testing capabilities, in line with the testing utilised in Australian laboratories.

Import Risk Analysis

6.41 It is apparent to the committee that the finalisation process for the IRA took far too long. It was nearly ten years between the first release of a draft IRA in 2000, to formal adoption of a final IRA in 2009.

6.42 During this time, Australia continuously implemented interim biosecurity control measures, which were in fact long-term and in place for significant periods of time. These interim measures created ongoing angst and concern amongst Australia's major seafood trading partners.

6.43 Australia's trading partners also raised numerous concerns regarding the scientific basis of the IRA, and suggested that the risk management measures in the IRA were overly restrictive.

6.44 While the committee appreciates that these processes take time, the absence of final agreement for such a long period only increased the risk of diseases entering Australia at the border. Furthermore, DAWR must now restore the confidence of trading partner nations in the context of even more stringent conditions, at a time when confidence in Australia's biosecurity controls is already in question.

Disease pathways

6.45 As was emphasised throughout the inquiry, the priority of Australia's biosecurity framework is to reduce the risk of disease to a low level, but not to completely eliminate the risk. As noted by Dr Elizabeth Woods of QDAF, regarding the presence of diseases in Australia:

8 Department of Agriculture and Water Resources, *Submission 9.1*, 24 August 2017, p. 4.

> at some level all of them represent some sort of failure of perfect border control, but I guess the reality is that perfect control is not possible, and it is not in fact the aspiration of our system.[9]

6.46 The committee acknowledges that as yet there is no definitive answer as to how the 2016 WSD outbreak occurred, and how WSSV entered Australia. While both DAWR and the Queensland Government are continuing genetic testing, the answer to this question may never be known.

6.47 However, it appears to the committee that some of the potential disease pathways under consideration are more plausible than others. For example, while WSSV may have already been present in Australia at very low levels, a lack of ongoing surveillance of wild prawn populations to date makes it difficult to affirm this pathway as the cause of the outbreak. Further, the absence of any earlier outbreaks makes this pathway less likely.

6.48 Based on the evidence before it, the committee suggests that aquatic feed, diseased broodstock, infected farming equipment and human activity are also less likely to be the cause of the outbreak. There are inherent risks associated with each of these potential pathways. Nonetheless, at this stage there appears to be a lack of substantial evidence against these pathways being the cause of the 2016 outbreak.

Imported raw prawns used as bait

6.49 The committee holds the view that the use of imported, infected raw prawns as bait and burley is one of the more feasible pathways to WSSV entering Australia. There is significant evidence that recreational fishers were using infected raw prawns as bait in the Logan River area, and evidence that such practices have been ongoing for some time.

6.50 Further, Operation Cattai proved that some importers were intentionally subverting biosecurity controls and importing infected prawn products into Australia. When the findings of Operation Cattai are combined with the evidence of imported raw prawns being used as bait by fishers, it becomes more apparent that this pathway requires serious consideration.

6.51 The committee was alarmed to see that in some instances, the interim IRA measures implemented between 2000 and 2009 were a response to increasing evidence that imported prawns intended for human consumption were being used as bait. The IRA noted that in 2004 and 2006, WSSV was detected in imported frozen uncooked prawns intended for human consumption, in a number of jurisdictions. The IRA put the likelihood of WSSV release via raw prawns intended for human consumption as 'high'. This indicates that DAWR has been aware of this disease import pathway for a considerable period.

---

9 Dr Elizabeth Woods, Queensland Department of Agriculture and Fisheries, *Committee Hansard*, 27 June 2017, p. 25.

6.52 A number of submitters, particularly from the prawn industry, emphasised that they had repeatedly called on DAWR to strengthen import controls for prawns and prawn products, to little avail. It is clear to the committee that the IRA needs urgent review with regard to this pathway.

Regulation of bait usage

6.53 It appears that there may be little appreciation or knowledge within the recreational fishing community that frozen, raw imported prawns should not be used as bait, despite the IRA requirements that such products are labelled as for human consumption only, and that they are not to be used as bait. The committee was informed that the use of raw imported prawns as bait is publically encouraged at some fishing outlets and in recreational fishing publications.

6.54 The point was made to the committee that it was very difficult to police the use of imported prawns as bait, and to educate consumers on the risks of doing so. The use of prawns in this way was driven in particular by the lower cost of prawns intended for human consumption, when compared with bait-specific product. Additionally, a number of submitters noted that there was no way to control the end use of seafood products, once sold at the retail level.

6.55 However, the committee considers that some action can be taken to try and address these issues. The committee recommends that DAWR consider regulations for the clearer labelling of imported, frozen, raw prawns for human consumption. Such regulations should reflect the biosecurity concerns raised by the IRA. In particular, consideration should be given to appropriate signage at the point of sale to alert consumers that imported raw prawns are not to be used as bait.

6.56 Additionally, the committee recommends that the Minister for Agriculture and Water Resources and DAWR take the lead in supporting all jurisdictions in the implementation of an education campaign. The campaign should advise stakeholders of the serious risks of using imported raw prawns as bait, and should pay particular attention to the recreational fishing community.

Recommendation 4

6.57 The committee recommends that the Department of Agriculture and Water Resources consider regulations and enforcement mechanisms for the improved labelling of imported frozen raw prawns intended for human consumption. Particular consideration should be given to appropriate signage at the point of sale in the retail sector.

Recommendation 5

6.58 The committee recommends that the Minister for Agriculture and Water Resources secure the co-operation of all jurisdictions to undertake an education campaign on the risks associated with using raw prawns intended for human consumption as bait.

Prawn imports review

6.59 The committee supports DAWR's review of the import conditions for prawns and prawns products, which includes a review of the 2009 IRA. A consultative approach with all industry stakeholders will go some way to ensure that the next iteration of the IRA best protects Australia's biosecurity.

6.60 The committee encourages the next iteration of the IRA to properly consider the various importation pathways for seafood into Australia, particularly frozen raw prawns intended for human consumption. The IRA review should include consideration of the conditions of prawn farming in the country of origin, to best understand and address potential disease import pathways. Looking beyond Australia's borders will allow DAWR to consider the processing conditions utilised by our trading partners and therefore to better understand possible importation pathways.

6.61 The review should also give appropriate attention to the end use of imported prawn and seafood products, and the risks such end uses present to Australia's various aquaculture industries. Biosecurity measures at the border form an important part of stopping disease incursions. However, once product passes through these controls, there is no further scope for testing, tracing or overview.

6.62 The committee recommends that the review give suitable consideration to the 2009 IRA, which the committee suggests needs urgent and comprehensive reconsideration. It is clear that the IRA has underestimated the risk of certain disease pathways, particularly the use of infected raw imported prawns being used as bait. Since the 2009 IRA, a number of new seafood diseases have emerged. The review should apply the best and most current scientific findings to its final outcomes.

6.63 Further, in undertaking the review, the committee urges DAWR to consider the views of other jurisdictions. Particularly relevant will be the views of Queensland, which raised concerns over the IRA as early as 2006. Queensland at that time also presented testing results to support its claim that the IRA needed further amendment.

6.64 The committee notes that DAWR has already engaged an additional 105 staff as a result of the enhanced testing regime. To ensure that the review is completed in a timely manner, and without the considerable delays experienced during development of the 2009 IRA, the committee recommends that DAWR be allocated sufficient resources to undertake the review, whether from the additional staff already retained or elsewhere.

Recommendation 6

6.65 The committee recommends that the Department of Agriculture and Water Resources urgently complete its review into the import conditions for prawns and prawn products. The review should consider updates to the 2009 Import Risk Analysis on the basis of scientific evidence and with regard to the views of other jurisdictions.

Recommendation 7

6.66 The committee recommends that the Secretary of the Department Agriculture and Water Resources allocate sufficient resources in order to complete the review of import conditions for prawns and prawn products as soon as is practicable.

6.67 The committee notes that in February 2017, the Inspector-General of Biosecurity (IGB) commenced a review into the circumstances leading to suspension of uncooked prawn imports.[10] To date, this review has not been completed or publicly released.

6.68 The IGB review is examining the effectiveness of biosecurity controls and their implementation to prawn products, post-entry surveillance, the end use of imported prawn products, and areas for improvement in biosecurity risk management. Given the importance of these areas of review, the committee encourages the urgent finalisation of the IGB review, so that its findings can contribute to the IRA review at the earliest opportunity.

Industry and stakeholder consultation

6.69 Throughout the inquiry, it was apparent to the committee that the seafood and aquaculture industry is diverse, with a great variety of different types of seafood farming and fishing undertaken across Australia.

6.70 Because of this diversity, a number of witnesses emphasised to the committee the need for a whole-of-industry seafood and aquaculture consultation group. Such a group would help to improve communication between stakeholders, and state and federal governments. This level of communication is of particular importance when considering biosecurity and determining import and product controls.

6.71 Dr Hone of the FRDC explained which bodies would best form part of a consultation group, and the benefits of such a group being established. Dr Hone stated:

> the regulator, the agencies responsible and the industry—and that's the broad church of the industry, including the pet industry, the importers, the wild-catch sector and the commercial sector—have a forum where they can actually sit and discuss these issues and make sure that they're understanding each other's responsibilities to make sure that they've got effective systems. To us, that works best, and that trust is actually the most important part of making our systems work.[11]

10 See Inspector-General of Biosecurity, Current reviews, http://www.igb.gov.au/Pages/suspension-uncooked-prawn-imports.aspx (accessed 28 September 2017).

11 Dr Patrick Hone, Fisheries Research and Development Corporation, *Committee Hansard*, 28 August 2017, p. 11.

6.72 The NSIA and NAC expressed the view that a taskforce or similar body, representing a variety of organisations, would assist the industry in directly communicating biosecurity concerns to government at a state and federal level. The NSIA and NAC provided information to the committee on which organisations could form such a taskforce.[12]

6.73 The NAC argued that 'no-one is better placed than aquaculture seafood producers to understand the tension between the importance of engaging with external markets and adhering to and relying on effective biosecurity'.[13]

6.74 The establishment of a consultation group or similar was also supported by importer groups. SIAA, for example, encouraged government support for a professional organisation that could both engage with government and advise and educate all importers about biosecurity.[14]

6.75 The committee was encouraged that a variety of stakeholders supported the establishment of a seafood industry consultation group. The committee encourages organisations such as QSIA, which has been contacted by the Minister for Agriculture and Water Resources, to engage fully with government and with any broader consultation groups.

6.76 The committee recommends that DAWR establish a consultation group that involves industry (including the wild catch sector) and scientific organisations. The consultation group would present its views and issues on biosecurity directly to the relevant state, territory and Commonwealth ministers.

Recommendation 8

6.77 The committee recommends that the Department of Agriculture and Water Resources, in collaboration with seafood and aquaculture industries, establish a seafood industry and science consultation group, which has the ability to present its views on biosecurity to relevant state, territory and Commonwealth ministers.

Aquatic EADRA and stakeholder consultation

6.78 The committee was pleased to hear that the development of an aquatic EADRA has been in progress since 2014, with the support of DAWR. The committee hopes the development of the aquatic EADRA continues, and the draft is released by the end of this year as forecast.

---

12 National Seafood Industry Alliance and National Aquaculture Council, answer to question taken on notice, 28 August 2017 (received 12 and 18 September 2017).

13 National Aquaculture Council, *Submission 17*, p. 11.

14 Seafood Importers Association of Australasia Inc., *Submission 13*, p. 35.

6.79 An aquatic EADRA will ensure there is a cohesive and appropriately funded response to any future disease outbreaks that may affect the wild catch and the commercial fishing sector.

6.80 Notwithstanding the significant variances within the seafood industry, for example between prawn farms and the wild catch sector, the committee is of the view that all relevant stakeholders should be part of development of the aquatic EADRA. This is despite some stakeholders being hesitant to engage with the process. The best way to ensure that industry concerns with an EADRA are presented, acknowledged and addressed is by all stakeholders being part of the development discussions.

6.81 The financial benefits of having an aquatic EADRA in place will be significant, should another disease incursion occur. However, the committee notes the concerns of stakeholders that the 'three thirds' funding arrangements for an EADRA may not suitably apply to all sectors of the seafood industry, particularly the wild catch sector.

6.82 Therefore, the committee recommends that AHA and the Aquatic Deed Working Group consider whether a more flexible funding arrangement could apply to aquaculture industries. The aquatic EADRA should consider the unique nature of the wild caught sector, and the relative size of some elements of the commercial seafood industry.

Recommendation 9

6.83 The committee recommends that in developing an aquatic Emergency Animal Disease Response Agreement, Animal Health Australia and the Aquatic Deed Working Group consider alternative options to the 'three thirds' funding arrangements.

Senator Glenn Sterle

Chair

Appendix 1

Submissions received

Submission Number	Submitter
1	DigsFish Services Pty Ltd
2	Australian Prawn Farmers Association
3	Australian Recreational Fishing Foundation
4	NSW Aquaculture Association Inc.
5	DS Farms
6	Restaurant & Catering Industry Association
7	Northern Territory Seafood Council
8	Community and Public Sector Union
9	Department of Agriculture & Water Resources
10	Monckton Consulting Pty Ltd
11	Global Seafood Distributors Australia Pty Ltd
12	Australian Barramundi Farmers Association
13	Seafood Importers Association of Australasia Inc
14	Australian Council of Prawn Fisheries
15	Queensland Seafood Industry Asssociation
16	National Seafood Industry Alliance
17	National Aquaculture Council Inc
18	Australian Southern Bluefin Tuna Industry
19	Associate Professor Wayne Knibb

Additional information received

- Received on 7 April 2017, from Dr Helen Scott-Orr, Inspector-General of Biosecurity. Correspondence regarding biosecurity review;
- Received on 11 April 2017, from the Queensland Seafood Industry Association, answer to a question taken on notice at a public hearing on 10 April 2017;
- Received on 20 April 2017, from the Department of Agriculture and Water Resources, answer to a question taken on notice at a public hearing on 28 March 2017;
- Received on 11 May 2017, from Mr Eric Perez, Chief Executive Officer, Queensland Seafood Industry Association. Correction of evidence given at a public hearing on 10 April 2017;

- Received on 17 May 2017, from Mr Daryl Quinlivan, Secretary, Department of Agriculture and Water Resources. Correspondence dated 15 May 2017 regarding import suspension and biosecurity review;
- Received on 22 June 2017, from Mr Daryl Quinlivan, Secretary, Department of Agriculture and Water Resources. Correspondence dated 22 June 2017 regarding import suspension;
- Received on 23 June 2017, from Mr Harry Peters AM, Vice Chairman, the Seafood Importers Association of Australasia Ltd. Correspondence dated 23 June 2017;
- Received on 27 June 2017, from Ms Serena Zipf, Rocky Point Prawn Farm. Additional information;
- Dated 5 July 2017, from Mr Michael Crandon MP. Letter to the Hon Barnaby Joyce MP regarding white spot disease in the Coomera electorate;
- Dated 5 July 2017, from the Hon Barnaby Joyce MP. Letter to Mr Michael Crandon MP regarding the government's response to white spot disease;
- Received on 11 July 2017, from Ms Marion Healy, Acting Deputy Secretary, Department of Agriculture and Water Resources. Correspondence dated 10 July 2017 regarding questions posed in the additional evidence provided by Ms Serena Zipf;
- Received on 11 July 2017, from Dr Elizabeth Woods, Director-General, Department of Agriculture and Fisheries, Queensland Government. Correspondence dated 11 July 2017 regarding questions posed in the additional evidence provided by Ms Serena Zipf;
- Dated 21 July 2017, from Mr Alistair Dick, Gold Coast Marine Aquaculture. Email correspondence to Mr Michael Crandon MP regarding white spot disease;
- Received on 27 July 2017, from the Queensland Department of Agriculture and Fisheries, answers to questions taken on notice at a public hearing on 27 June 2017;
- Received on 27 July 2017, from Dr Elizabeth Woods, Director-General, Department of Agriculture and Fisheries, Queensland Government. Correction to evidence given at a public hearing on 27 June 2017;
- Received on 5 September 2017, from the Fisheries Research and Development Corporation, answers to questions taken on notice at a public hearing on 28 August 2017;
- Received on 7 September 2017, from Mr Daryl Quinlivan, Secretary, Department of Agriculture and Water Resources. Correspondence dated 7 September 2017 regarding the implementation of the International Convention for the Control and Management of Ships' Ballast Water and Sediments;
- Received on 11 September 2017, from the Department of Agriculture and Water Resources, answers to questions taken on notice at a public hearing on 28 August 2017;
- Received on 12 September 2017 and 18 September 2017, from the Fisheries Research and Development Corporation, answers to questions taken on notice at a public hearing on 28 August 2017;

- Received on 18 September 2017, from the Department of Agriculture and Water Resources, answers to written questions taken on notice on 5 September 2017;
- Received on 26 September 2017, from the Department of Agriculture and Water Resources, answers to questions taken on notice at a public hearing on 11 September 2017;
- Received on 5 October 2017, from Mr Daryl Quinlivan, Secretary, Department of Agriculture and Water Resources. Correspondence dated 5 October 2017 regarding the laboratory testing program for imported prawns.

Tabled documents

Monday, 10 April 2017, Brisbane, QLD

- Tabled by the Australian Prawn Farmers Association. Documents including:
    - Opening statements of Ms Helen Jenkins and Mr Alistair Dick;
    - Responses to Questions on Notice from Additional Estimates, February 2011;
    - Various correspondence involving the Australian Prawn Farmers Association, and government Ministers;
    - Academic articles; and
    - Findings of the Import Risk Analysis Appeal Panel and associated submissions

Tuesday, 27 June 2017, Yatala, QLD

- Tabled by Dr Richard Smullen, Group Technical and R&D Manager, Ridley AgriProducts Pty Ltd. Opening statement.
- Tabled by Dr Elizabeth Woods, Director-General, Department of Agriculture and Fisheries, Queensland Government. Opening statement.
- Tabled by the Australian Prawn Farmers Association. Additional submission replying to the interim report.

Appendix 2

Public hearings and witnesses

Tuesday, 28 March 2017, Canberra, ACT

- CHAPMAN, Mr Tim, First Assistant Secretary, Department of Agriculture and Water Resources
- MARTIN, Dr Robyn, Assistant Secretary, Department of Agriculture and Water Resources
- O'CONNELL, Ms Lyn, Deputy Secretary, Department of Agriculture and Water Resources
- PADOVAN, Mr Nico, First Assistant Secretary, Department of Agriculture and Water Resources
- QUINLIVAN, Mr Daryl, Secretary, Department of Agriculture and Water Resources
- TERPSTRA, Mr Wayne, Assistant Secretary, Department of Agriculture and Water Resources
- VIVIAN, Ms Raelene, First Assistant Secretary, Department of Agriculture and Water Resources

Monday, 10 April 2017, Brisbane, QLD

- BETZEL, Mr Marshall, President, Queensland Seafood Marketers Association
- DICK, Mr Alistair, Board Member, R&D Committee, Australian Prawn Farmers Association
- DIGGLES, Dr Ben, Managing Director, DigsFish Services Pty Ltd
- JARRETT, Ms Annie, Chairperson, Australian Council of Prawn Fisheries
- JENKINS, Ms Helen, Executive Officer, Australian Prawn Farmers Association
- LANDOS, Dr Matt, Future Fisheries Veterinary Service
- PEREZ, Mr Eric, Chief Executive Officer, Queensland Seafood Industry Association
- RIESENWEBER, Mr Tony, Member, Queensland Seafood Industry Association
- STEPHENS, Dr Len, Managing Director, Seafood CRC Company Ltd
- WILKINSON, Mr Michael, Member, Queensland Seafood Industry Association
- WOOD, Mr Michael, Vice President, Trawl and Safety Representative, Moreton Bay Seafood Industry Association

Tuesday, 27 June 2017, Yatala, QLD

- CROOK, Dr Allison, Chief Veterinary Officer, Biosecurity Queensland; and General Manager, Animal Biosecurity and Welfare, Department of Agriculture and Fisheries, Queensland
- DICK, Mr Alistair, Technical Director, Gold Coast Marine Aquaculture
- DYMOCK, Mrs Nicole, Director, East Coast Live Bait Wholesalers
- HAMILTON, Mr Ian, Private capacity
- MOORE, Mr Nick, General Manager, Gold Coast Marine Aquaculture
- PARKER, Mr Stephen, Managing Director, Prawn Park
- PEREZ, Mr Eric, Chief Executive Officer, Queensland Seafood Industry Association
- RIESENWEBER, Mr Lionel Ross, Private capacity
- ROSSMANN, Mr Daniel, Owner, DS Farms
- ROSSMANN, Mr Geoffrey, Owner, GI Rural
- ROSSMANN, Mr Ian, Manager, GI Rural
- ROSSMANN, Mr Simon, Owner, DS Farms
- SMULLEN, Dr Richard, Group Technical and R&D Manager, Ridley Corporation
- SPENCER, Mr Scott, Deputy Director-General, Fisheries and Forestry, Department of Agriculture and Fisheries, Queensland
- THOMPSON, Dr Jim, Chief Biosecurity Officer, Biosecurity Queensland, Department of Agriculture and Fisheries, Queensland
- WOODS, Dr Elizabeth (Beth), Director-General, Department of Agriculture and Fisheries, Queensland
- ZIPF, Mrs Serena, Director, Rocky Point Prawn Farm

Monday, 28 August 2017, Canberra, ACT

- DAVEY, Mr Johnathon, Chair, National Seafood Industry Alliance
- HONE, Dr Patrick William, Executive Director, Fisheries Research and Development Corporation
- IRVING, Mr Aaron, Executive Chair, National Aquaculture Council

Monday, 11 September 2017, Canberra, ACT

- CHAPMAN, Mr Tim, First Assistant Secretary, Biosecurity Animal Division, Department of Agriculture and Water Resources
- CUPIT, Dr Andrew, Assistant Secretary, Biosecurity Animal Division, Department of Agriculture and Water Resources
- KOVAL, Mr Matthew, First Assistant Secretary, Biosecurity Policy and Implementation Division, Department of Agriculture and Water Resources
- O'CONNELL, Ms Lyn, Deputy Secretary, Department of Agriculture and Water Resources

- PADOVAN, Mr Nico, First Assistant Secretary, Service Delivery Division, Department of Agriculture and Water Resources
- TERPSTRA, Mr Wayne, Acting First Assistant Secretary, Compliance Division, Department of Agriculture and Water Resources