Australian Council of Prawn Fishery (ACPF) Submission:

'Review of the circumstances leading to the 2017 suspension of uncooked prawn imports into Australia and the biosecurity considerations relevant to future trade in uncooked prawns'

for the Commonwealth Inspector-General of Biosecurity

28 April 2017

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INTRODUCTION

The Australian Council of Prawn Fisheries (ACPF) welcomes the opportunity to provide this submission to the 'review of circumstances leading to the 2017 suspension of uncooked prawn imports into Australia and the biosecurity considerations relevant to future trade in uncooked prawns'.

The Australian Council of Prawn Fisheries is the National peak industry body that represents Australia's wild catch prawn industry. The Council is comprised of regional, State, and Commonwealth wild-prawn fishing and marketing associations, and individual fishing companies around Australia. The Council represents and makes this submission on behalf of our members:

- Clarence River Fisherman's Co-op Ltd
- Gulf St Vincent Prawn Fishery
- Moreton Bay Seafood Industry Association Inc
- North Queensland Trawler Supplies
- Northern Prawn Fishery Industry Pty Ltd
- Professional Fisherman's Association Inc
- Queensland Seafood Industry Association
- Seafood Industry Victoria
- Shark Bay Prawn Trawler Operators Association Inc
- Spencer Gulf and West Coast Prawn Fishermen's Association Inc
- Queensland Seafood Marketers Association Inc
- South Australian Prawn Co-operative Ltd
- Austral Fisheries Pty Ltd
- MG Kailis Pty Ltd – Exmouth Gulf Prawn
- Murphy Operator P/L
- Raptis & Sons Pty Ltd

The ACPF notes that the Terms of Reference for this review are specifically limited to:

- The effectiveness of biosecurity controls and their implementation for managing the biosecurity risks of importation of uncooked prawns and prawn meat into Australia;
- The effectiveness of post-entry surveillance measures and 'end use' import conditions for uncooked prawns and prawn meat into Australia; and
- Areas for improvement in the biosecurity risk management framework and its implementation for future trade in prawns and related seafood.

SUMMARY

The ACPF is gravely concerned about the numerous apparent failures in Australia's biosecurity system which has led to the White Spot Disease (WSD) incursion in prawn farms beside the Logan River Queensland in December 2016, and the subsequent detection of White Spot Syndrome Virus (WSSV) in wild-catch prawns from the Logan River, inshore areas of Queensland's Moreton Bay and in imported prawn products in Australian supermarkets/retailers.

The ACPF notes that an Import Risk Assessment (IRA) for importation of green prawns was developed in 2009 and released for implementation in 2010. The purpose of the IRA was to inform the development of a risk-based biosecurity framework which would minimise the risk of disease incursions, in particular WSSV and Yellow Head Virus (YHV) from imported prawns to Australia.

It is clear that the controls implemented in response to the IRA were not appropriate for the documented high risk in that they:

1. were functionally insufficient to control the biosecurity risk
2. were prone to human failure/abuse and not properly implemented at each step equating to a significant biosecurity breach exceeding the Acceptable Level Of Protection (ALOP)
3. did not contain prescribed post-border controls as are practiced for other commodities, and
4. allowed high risk uncooked prawns entry into a disease free environment via more than one pathway for an unknown period of time.

Recommendations:

The ACPF recommends that the current bio-security regime for prawns and crustacea is reviewed as a matter of urgency. This process should include a review of (i) altered risks in currently identified pathways, (ii) the implementation of the bio-security framework, and (iii) importation protocols. Consideration should cover but not be limited to:

- Prawn and crustacean diseases that have emerged since 2009 and methods to proactively include emerging diseases in importation protocols rather than responding retrospectively
- The increase in both the production of farmed prawns from countries with WSSV and international trade of farmed prawns from countries with WSSV increasing Australia's disease exposure
- Changing consumer behaviours when purchasing and using green imported prawns (eg for bait) increasing the risk of disease along pathways previously underrated

- The definition of a 'highly processed prawn' given the evidence that such processing does not deactivate disease, provides a loophole to avoid border testing, and does not prevent product diversion from this pathway to the aquatic environment
- Pre-border surveillance measures to ensure the sanitary status of the exporting country given the importance of country of origin in biosecurity measures
- Proficiency test of laboratories used to assess the status of import products to ensure a consistent approach is being undertaken to reduce risks
- Post-border biosecurity control measures to strengthen disincentives for product substitution and mislabelling that place greater onus on importing entities to adhere to biosecurity regulations
- Recognition that, based on 100% negative tests results for WSSV and YHV in NATA-approved laboratories, Australian prawns processed overseas and reimported for sale on the Australian domestic market are a **low-risk** disease pathway, but must be subject to the same level of biosecurity scrutiny as other prawn imports to ensure there are no product substitution or cross-contamination risks
- Options to improve on-farm bio-security to mitigate disease risks to wild-catch crustacean populations (Refer Stephens 2017)
- The need for an agreed, transparent process and timeline for amending the biosecurity protocols and/or the IRA if and when risk ratings change and/or new risks emerge

Outputs from the review must necessarily result in amendments to the current biosecurity regime and implementation protocols for importation of prawns that:

- are risk-management based, robust and enforceable
- are consistent with WTO principles *and*
- protect Australia's waterways, fisheries and prawn farms from risk of exotic disease incursions as far as practical

BACKGROUND

Australia's remote geographical location offers a degree of safety from exotic diseases that are transmitted between animals, compared to other global disease-infected countries.

In December 2016, White Spot Disease (WSD) was confirmed in a prawn farm on the Logan River in south-east Queensland and, despite rapid chlorination and destocking of the farm, further outbreaks were progressively confirmed up to February 2017 on the six nearby prawn farms, all of which were subsequently treated and destocked. A number of White Spot Syndrome Virus (WSSV) infected prawns and crabs were also subsequently detected nearby in the wild near the Logan River and in Deception Bay. Whilst there are numerous potential sources of infection and the specific source of the 2016 WSD infection has not been categorically confirmed, evidence gathered and reported by Biosecurity Queensland in February 2017 supports that the *likely* source of infection has been the use of WSSV-infected imported prawns used as bait in the feeder canals adjacent to prawn farms.

Before the December 2016 outbreak of WSD, the only detection of WSD previously recorded in Australia was in 2000 when three Darwin aquaculture facilities were found to be using imported green prawns as aquaculture feed. The prawns had been purchased from a Darwin wholesaler on the understanding that they were of Australian origin, in accordance with the facility's policy of feeding locally caught rather than imported prawns to reduce disease risks (Biosecurity Australia, 2009). As a consequence, these facilities were disinfected, but testing in Darwin Harbour revealed a small number of WSSV positive prawns and crabs, although no clinical signs of disease were evident. A month later, further testing returned no positive results.

Subsequently, in 2004 a comprehensive national survey of wild catch prawns (and other crustaceans) from 64 sites around Australia found no evidence of WSSV.

The ACPF notes that an amendment has recently been made to allow re-importation of Australian wild catch green prawns as of 3 May 2017, subject to increased traceability and testing requirements, and confirmation of disease-free status.

Australian wild catch prawns processed offshore and reimported to Australia for sale on the Australian domestic market have been subject to testing on re-entry since 2009[1]. An analysis of all samples tested for disease pathogens and results of testing on all reimported wild catch prawns was undertaken in FRDC Project *"Collation of white spot syndrome virus testing from wild-catch re-imported prawns"* (Koopman 2017). The results of this analysis show that, of approx 5300 prawns[2] from 410 batches tested over

[1] With the exception of 1 processing factory in Thailand which received an exemption by Govt to future testing in August 2015 (Ref: https://www.legislation.gov.au/Details/F2017L00168)

[2] a small number of samples included in the NPF data were from wild caught prawns from Queensland East Coast Trawl and wild caught prawns from overseas fisheries, however all tests results were negative

the past 5 years, there are no positive results for WSSV or YHV. These results confirm that Australian prawns are a low disease pathway risk and support the risk analysis that led to the said amendment.

ACPF supports the continuation of this policy provided this product category continues to be subject to the same robust traceability systems and stringent testing requirements that apply to all imported prawns to continue to minimize disease risk, including from product substitution and cross-contamination.

RESPONSE TO TERMS OF REFERENCE 1 & 2

1) *The effectiveness of biosecurity controls and their implementation for managing the biosecurity risks of importation of uncooked prawns and prawn meat into Australia and*

2) The effectiveness of post-entry surveillance measures and 'end use' import conditions for uncooked prawns and prawn meat into Australia

The management of pre-border and border biosecurity risks associated with the importation of uncooked prawns into Australia is the responsibility of the Australian Government Department of Agriculture and Water Resources (the department).

In 2009, the department released a draft import risk analysis (IRA) of the import of prawns and prawn products, inviting comments from stakeholders. The final IRA (Biosecurity Australia 2009) was released in early 2010.

Since implementation of strengthened entry conditions for uncooked prawn imports determined by the 2009 IRA, the department has recorded a number of infringements, including:

- inadvertent release by the department of a consignment of prawns which tested positive to WSSV. This release was the subject of a review (Interim Inspector General of Biosecurity, 2010) and a number of recommendations were made to strengthen biosecurity.
- a number of consignments of uncooked prawns which were improperly or inadequately marinated and therefore were reassigned to be either tested, cooked, re-exported or destroyed.
- In late December 2016, the department found high levels of retail availability of WSSV-infected prawns, and evidence that white spot infected prawns were being used as bait by recreational fishermen on the Logan River.
- This led the Director of Biosecurity to suspend the importation of uncooked prawns, including Australian wild caught prawns processed offshore and reimported for sale on the domestic market, for a period of six months from 6 January 2017. Marinated prawns were also removed from the category of ‘highly processed’ prawns, which meant that their importation was also suspended.

- The failure in the biosecurity regime to prevent WSSV entering Australia is further demonstrated by advice to ACPF from the DAWR Prawn Liaison Officer on 3rd March which stated that **38 of 68** batches tested under the enhanced biosecurity regime were refused release due to detection of WSSV.

The 2016 WSD/WSSV outbreak would indicate that the 2009 IRA risks assessment and associated controls (including the overall bio-security regime developed in response to the 2009 IRA) are not appropriate for the documented high risk.

The risks identified in the development of the IRA have altered significantly since 2009, including through increased prawn aquaculture production from countries with WSSV and increased international trade of aquaculture prawns from those countries. As well, there is sufficient evidence that the agreed risk management strategies have not been implemented as intended. Clearly this had led to a breakdown in the robustness of the prawn importation bio-security regime which has resulted in uncooked prawn biosecurity breaches. ***These events are the result of a combination of process, policy and resourcing weaknesses that need to be addressed.***

ACPF notes that the Import Risk Assessment (IRA) conducted in 2009 determined that "the unrestricted risk associated with WSSV, TSV and YHV exceeds Australia's Acceptable Level of Protection (ALOP) and, therefore, risk management is deemed necessary".

After analysing risks of introducing high risk diseases as at 2009, the IRA proposed each measure, or a combination of measures, that were deemed to reduce the overall risk to 'very low' or lower. The IRA recommendations agreed by the Panel (referred to in Biosecurity Australia Advice 2010/11 Prawns and Prawn Imports) were believed to have addressed the risks. The likely effectiveness of those measures hinged on whether they would be properly implemented and would deliver the desired effect.

Table 1 (Attachment 1) outlines the IRA recommendations for biosecurity control imposed on the importation of uncooked prawns into Australia as a result of the 2009 IRA.

The recommendations focus on:

- The country of origin of the product and verification of being disease free
- Product processing and labelling controls intended to inactivate any pathogens or circumvent disease pathway risks *and*
- Testing at the border

No post border controls were recommended.

Table 1 also provides evidence on the effectiveness (or lack thereof) of each of the biosecurity control options in the table that is based on scientific research, record of practices and test results of product in the chain.

Figure 1 below outlines the 2009 IRA's recommended combination of acceptable control measures, rather than relying on one measure in isolation on the assumption that a combination of measures would achieve an ALOP. The combinations are as follows:

Figure 1: IRA for Uncooked Prawn Protocol Options

Sourced from countries free of high risk diseases (chilled)
+
General health certification issued in the exporting country
+
Packaging marked 'for human consumption only' and 'not to be used as bait or feed for aquatic animals'

OR

Cooked in Competent Authority approved premises
+
Health certification issued in the exporting country

OR

Highly processed (head and shell off; breaded, marinated, etc)
+
General health certification issued in the exporting country
+
Packaging marked 'for human consumption only' and 'not to be used as bait or feed for aquatic animals'

OR

Head and shell off (frozen)
+
General health certification issued in the exporting country
+
Batch tested on arrival for WSSV & YHV
+
Packaging marked 'for human consumption only' and 'not to be used as bait or feed for aquatic animals'

Similar importation breaches that have occurred in 2016 in the Logan River were documented in the 2009 IRA (*Appendix 2 – 2000 Darwin WSSV incident*). This should have alerted those involved in the 2009 IRA process that the same risks could easily reoccur and would warrant tighter risk management strategies with fewer loop holes to achieve an ALOP.

ACPF notes the advice of Landos (2017) that the current IRA does not achieve an ALOP that is acceptable for animal and plant products with lesser or comparable viral or fungal risks associated with the commodities. Landos states that the risk of disease

introduction in other animal products (pork and chicken) was deemed so high that importation protocols are much more stringent preventing potentially infected products into disease introduction pathways.

In hindsight, it is clear that the controls implemented in response to the IRA do not appear to be appropriate for the documented high risk in that they:

1. were functionally insufficient to control the biosecurity risk
2. were prone to human failure/abuse and not properly implemented at each step equating to a significant biosecurity breach exceeding the ALOP
3. did not contain prescribed post-border controls as are practiced for other commodities
4. allowed high risk uncooked prawns entry into a disease free environment via more than one pathway for an unknown period of time.

RESPONSE TO TERM OF REFERENCE 3

3) Areas for improvement in the biosecurity risk management framework and its implementation for future trade in prawns and related seafood

Noting that the 2009 IRA documented evidence of similar disease introduction pathway into Darwin in 2000 as has occurred into the Logan River in 2016, Biosecurity Australia cannot simply allow 'more of the same' to continue with an undertaking to "do better next time".

Biosecurity Australia **must** redress the failure of the current biosecurity system to protect Australia from disease and develop a more robust approach to future bio-security which will protect Australian waterways, fisheries and farms from disease incursions.

Prawn farming is a component of Australian prawn production and supply. However prawn farming also poses some biosecurity risk to the wild caught sector. Intensive farming is a known disease vector and proximity of prawn farms to wild prawn populations requires careful biosecurity management by prawn farming businesses. ACPF supports recommendations made by Stephens (2017) for the farmed prawn sector to resource new infrastructure and better practices to improve on-farm bio-security to mitigate risks to wild catch crustacean populations of disease.

The ACPF recommends that the current bio-security regime for prawns and crustacea is reviewed as a matter of urgency. This process should include a review of (i) altered risks in currently identified pathways, (ii) the implementation of the bio-security framework, and (iii) importation protocols. Consideration should cover but not be limited to:

- Prawn and crustacean diseases that have emerged since 2009 and methods to proactively include emerging diseases in importation protocols rather than responding retrospectively
- The increase in both the production of farmed prawns from countries with WSSV and international trade of farmed prawns from countries with WSSV increasing Australia's disease exposure
- Changing consumer behaviours when purchasing and using green imported prawns (eg for bait) increasing the risk of disease along pathways previously underrated
- The definition of a 'highly processed prawn' given the evidence that such processing does not deactivate disease, provides a loophole to avoid border testing, and does not prevent product diversion from this pathway to the aquatic environment
- Pre-border surveillance measures to ensure the sanitary status of the exporting country given the importance of country of origin in biosecurity measures
- Proficiency test of the laboratories used to assess the status of import products to ensure a consistent approach is being undertaken to reduce risks
- Post-border biosecurity control measures to strengthen disincentives for product substitution and mislabelling that place greater onus on importing entities to adhere to biosecurity regulations
- Recognition that, based on 100% of negative tests results for WSSV and YHV in NATA-approved laboratories over the past 5 years, Australian prawns processed overseas and reimported for sale on the Australian domestic market are a low-risk disease pathway but must be subject to the same level of biosecurity scrutiny as other prawn imports to ensure there are no product substitution or cross-contamination risks
- Options to improve on-farm bio-security to mitigate disease risks to wild-catch crustacean populations (Refer Stephens 2017)
- The need for an agreed process and timeline for amending the biosecurity protocols and/or the IRA if and when risk ratings change and/or new risks emerge

Outputs from the review must necessarily result in amendments to the current biosecurity regime and implementation protocols for importation of prawns that are risk-management based, robust and enforceable, consistent with WTO principles and protect Australia's waterways, fisheries and prawn farms from exotic disease incursion as far as practical.

For Consideration

ACPF

REFERENCES

Biosecurity Australia (2009) Generic Import Risk Analysis Report for Prawns and Prawn Products. Biosecurity Australia, Canberra, Australia

Department of Agriculture (2013), Disease strategy: White spot disease (Version 2.0). In: Australian Aquatic Veterinary Emergency Plan (AQUAVETPLAN), Australian Government Department of Agriculture, Canberra, ACT

Diggles BK (2017). "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. FRDC project 2016/064 2017

Interim Inspector General of Biosecurity (2010), An examination of what caused a consignment of imported raw peeled prawns that tested positive for White Spot Syndrome Virus (WSSV) to be mistakenly released into Australia by the Biosecurity Services Group (BSG), Department of Agriculture, Fisheries and Forestry, Australia

Koopman (2017) FRDC Project “Collation of white spot syndrome virus testing from wild-catch re-imported prawns” 28 April 2017

Landos (2017) "Assessing compliance and efficacy of import conditions for uncooked prawn in relation to White Spot Syndrome Virus (WSSV)" for Australian Prawn Farmers Association, FRDC project 2016/066 (2017)

Stephens (2017) “A Plan for the Prawn Farming Industry’s Initial Response to the White Spot Disease Incident in Summer 2016-17. FRDC project 2016-266 Canberra 2017

ATTACHMENT 1

Table 1 Evidence of Effectiveness of Biosecurity Controls

Control point	2010 importation biosecurity control options (from 2009 IRA)	Effectiveness evidence
Pre-border	Sourced from countries or zones determined to the satisfaction of Australian government authorities to be free of white spot syndrome virus (WSSV), yellowhead virus (YHV), and Taura syndrome virus (TSV), and in addition, necrotising hepatopancreatitis bacterium (NHPB) if the product is not frozen (i.e. the product is chilled)	The 2009 IRA documented that WSSV survives freezing, as is further documented by Landos 2017), but the importation pathway was still allowed as an option. The disease risks assessed in 2009 are not static, are not current in 2017 and new forms of aquatic diseases emerge over time. Diggles (2017) and Landos (2017) report that the list of serious and emerging prawn diseases has expanded since the 2009 IRA to include such diseases as Acute hepatopancreatic necrosis disease (AHPND, formerly known as EMS), Yellowhead Virus -1 (YHV1), and Enterocytozoon hepatopenaei (EHP) as well as those retained for Risk Assessment. The likelihood of emergence of new aquatic diseases did not translate into more a cautious set of risk management options. Australia is a disease free zone. Approximately 5000 samples of Australia prawn products which have been processed overseas and reimported for sale on the domestic market have been tested for disease pathogens (including WSSV and YHV) in the past 5 years alone. None of these samples have returned positive results for WSSV or YH - Koopman (2017).
Pre-border	General health certification (to accompany each shipment of imported prawns) issued by the relevant Competent Authority in the exporting country, attesting that the prawns had been inspected, processed and graded in premises approved by and under the control of the Competent Authority, were free from visible lesions associated with infectious disease and are fit for	It is assumed that General health certificates accompany each consignment but the integrity of those is in serious question: Landos (2017) provides evidence of product substitution, packages unmarked with country of origin and under-reporting of disease incursions in exporting countries.

ATTACHMENT 1

	human consumption	
Pre-border	Highly processed, that is with the head and shell removed (the last shell segment and tail fans permitted) and coated for human consumption as follows: - breaded (crumbed) or battered, or - marinated to a minimum standard, or - processed into dumpling, spring roll, samosa, roll, ball or dimsum-type product,	Diggles (2017) provided evidence that full processing (removal of parts of the body) of green prawn products only reduces viral load by around half, which is not at all sufficient to prevent establishment of infections in susceptible species if there is failure to accurately detect and reject test-positive commodities at the border. Breading and other processes aimed to stop the pathway for use as recreational bait and to avoid border testing have not been sufficient. Evidence suggests that these treatments can be washed off and were applied to avoid testing at the border
Pre-border	Uncooked prawns imported for human consumption that are not considered to be highly processed be marked with the words 'for human consumption only' and 'not to be used as bait or feed for aquatic animals'.	Landos (2017) states that numerous uncooked and unprocessed imported prawn products were purchased from delicatessen windows which contained no such labelling, in addition to some pre-packed frozen commodities. Landos (2017) stated that this marks a rapid increase in purchasing behaviour of recreational anglers, thereby altering the volumes of "human consumption" product being diverted into bait use. Stephens (2017) reported that the *2002 National Survey of Bait and Berley Use by Recreational Fishers* commissioned by Biosecurity Australia across 8,000 Australian households found 6.8 percent of recreational used prawns sold for human consumption as bait. A 2007 *Follow-up Survey Focusing on Prawns/Shrimp* found there was a significant increase in the number of fishers using prawns sold for human consumption as bait/berley. Kewagama Research 2007 report suggests that labelling would make little difference to angler's diversion of these products into use as bait. The survey recorded 85.6% of angling respondents had no awareness of this regulatory requirement.
At-border or Post-border	Cooked in premises approved by and under the control of an appropriate Competent Authority to a minimum time and temperature standard where all	This option has not been taken as the preferred biosecurity control for uncooked prawns

ATTACHMENT 1

	the protein in the prawn meat is coagulated and no uncooked meat remains	
Pre-border AND At-border	Have had the head and shell removed (the last shell segment and tail fans permitted) and each batch tested on arrival in Australia and found to be free of WSSV and YHV: testing is based on the polymerase chain reaction (PCR) tests in the current version of the World Organisation for Animal Health (OIE) Manual of Diagnostic Tests for Aquatic Animals or equivalent, and a sampling regimen that would provide 95% confidence of detecting the agent if present at 5% prevalence.	Removal of body parts does not sufficiently reduce risk of disease infection if there is biosecurity failure to accurately detect and reject test-positive commodities at the border The fact that product from countries which have not declared freedom from WSSV could be released for retail sale following the return of negative test results from sampling undertaken by border officers left the risk management strategy wide open for failure. These potential failures are documented at “Importation issues that may have contributed to high rates of WSSV test-positive prawns in retail samples” on page 60 of Landos (2017) report. WSSV-infected frozen green prawns have travelled through border quarantine, at least in part due to attempts by some importers to evade detection by mislabelling high risk commodities and substituting known WSSV-free prawns for testing (Ref: Atkin 2017). Landos (2017) reports results that the level of positive imported commodities detected at retail was ~86.7% by qPCR (or ~65.7% using a more conservative measure) were still test-positive. These results are suggestive of a gross failure to accurately detect and reject positive commodities at the border, or illegal actions circumventing the border controls.

ATTACHMENT 2

FRDC
FISHERIES RESEARCH & DEVELOPMENT CORPORATION

Collation of white spot syndrome virus testing from wild-caught re-imported prawns

Matt Koopman

28/4/2017

ATTACHMENT 2

Collation of white spot syndrome virus testing from wild-caught re-imported prawns
2017

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In submitting this report, the researcher has agreed to FRDC publishing this material in its edited form.

ATTACHMENT 2

Introduction

White Spot Disease (WSD) was observed on an Australian prawn farms on 22nd November 2016, and officially diagnosed for the first time on 1 December 2016 (Stephens, 2017[3]). During December and January, the disease spread through a number of prawn farms along the Logan River, Queensland. This detection had a wide range of implications affecting aquaculture, wild harvest and recreational sectors, importation of raw prawns and the bait trade. There is potential for long-term effect from a loss of confidence of consumers of Australian seafood, a lack of confidence in investment in the industry, and expensive capital improvements to enhance biosecurity of all Australian prawn farms (Stephens, 2017[3]).

Wild caught prawns that are re-imported into Australia are required to be tested for white spot syndrome virus, the virus that causes WSD. Examination of these data could reveal if any positive test results have been recoded to date.

Methods

Advanced Analytical Australia Pty Ltd undertakes routine testing for the largest re-importers of wild-caught prawns in Australia. Raw white spot syndrome virus (WSSV) testing results data since 1 January 2012 were requested from them, and consent for release of the data was provided by three prawn companies. The data was extracted from the Laboratory Information Management System (LIMS) on 27 April 2017, and provided on the same day. Results of yellow head virus (YHV) were also provided and presented here.

Data were check for obvious errors, resulting in the change of the year of testing of one batch of WSSV test results and one batch of YHV test results from the obviously erroneous 2105 to 2015 (the correct year was obvious given the date of other batches from the same consignment). Data from each company were pooled. Each company was contacted to request the original source of wild caught prawns. The fisheries from which prawns were caught were identified for two of the companies (either the Northern Prawn Fishery (NPF), or the Spencer Gulf Prawn Fishery (SGPF)), however the third could not distinguish between testing results of re-imported prawns from the NPF and from wild caught prawns caught either in the East Coast Otter Trawl Fishery or overseas. The company did confirm however that the majority of re-imported prawns were caught in the NPF (industry contact, pers. comm.).

The number of samples from each fisher are shown in Figure 1, noting that a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries. All data provided are presented, aggregated by fishery and either by month (

Figure **2**–Figure 5) or year (Table 1 and Table 2). "Number of samples" refers to the number of individual test results, which in the data provides were grouped into what I have called "Batches" of thirteen samples.

Results

There were no positive WSSV or WHV test results in the data provided by Advanced Analytical Australia Pty Ltd, which represents testing of wild caught prawns that were re-imported into Australia by three different companies (

Figure **2**–Figure 5 and Table 1 and Table 2).

[3] Stephens, L. Seafood CRC, 2017, A Plan for the Prawn Farming Industry's Initial Response to the White Spot Disease Incident in Summer 2016-17. Canberra 2017

ATTACHMENT 2

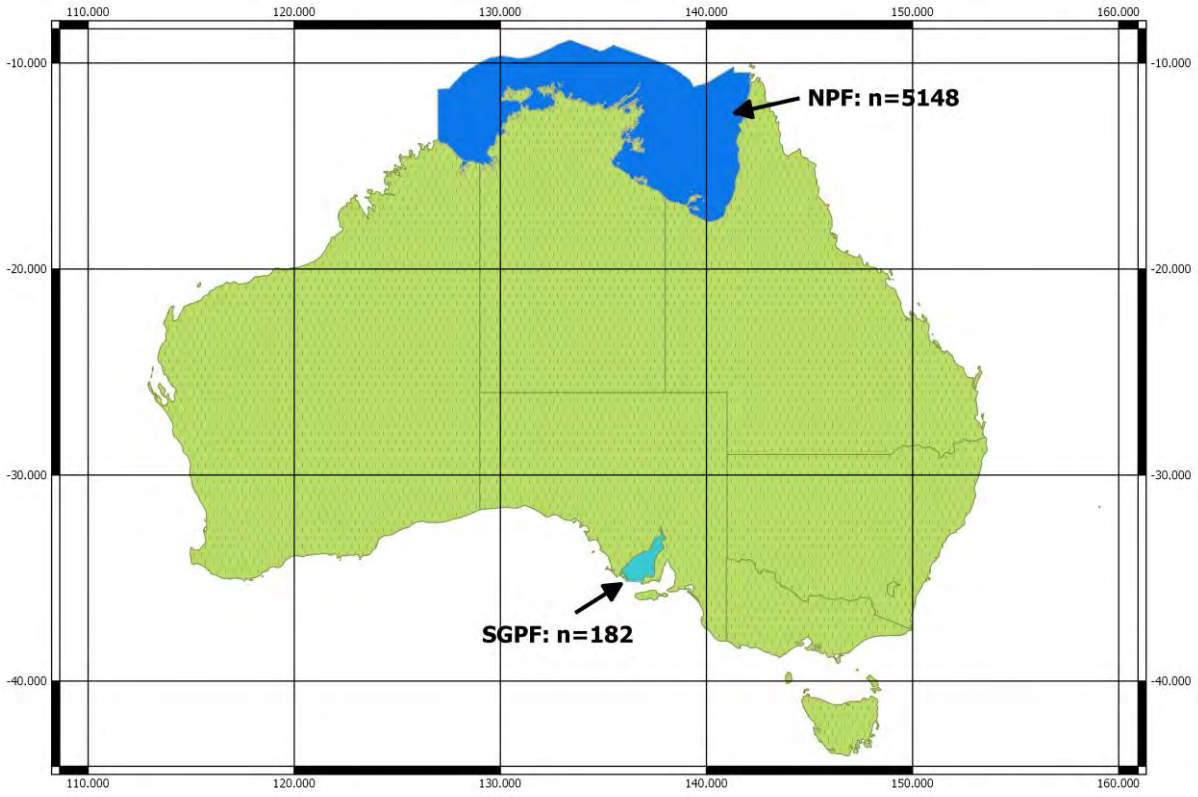

Figure 1. Number of samples tested for WSSV and YHV from the NPF and SGPF since January 2012. Note: (1) no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

ATTACHMENT 2

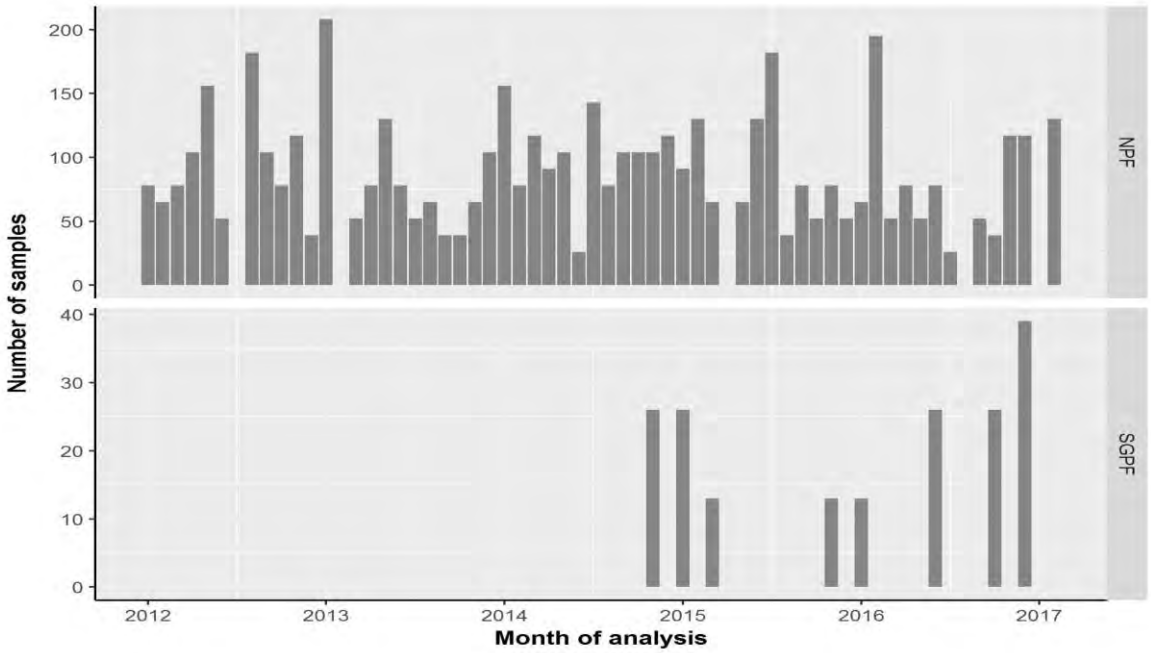

Figure 2. Number of re-imported wild catch prawn samples tested, and number of negative result for WSSV by month since January 2012. Note: (1) no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

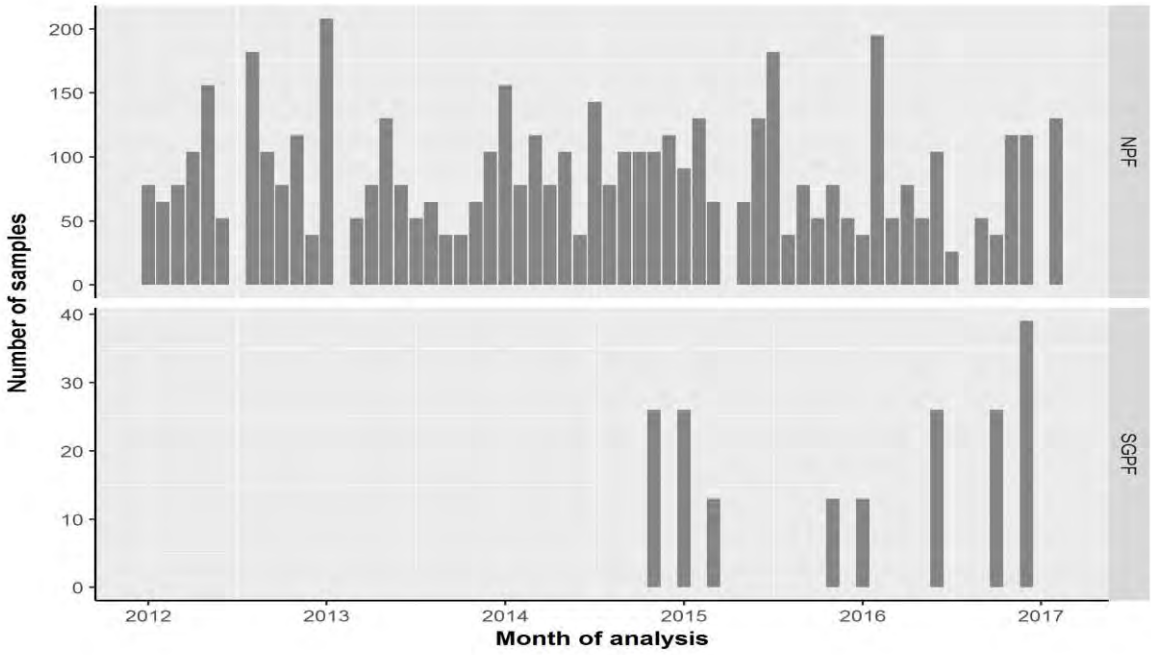

Figure 3. Number of re-imported wild catch prawn samples tested, and number of negative result for YHV by month since January 2012. Note: (1) no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

ATTACHMENT 2

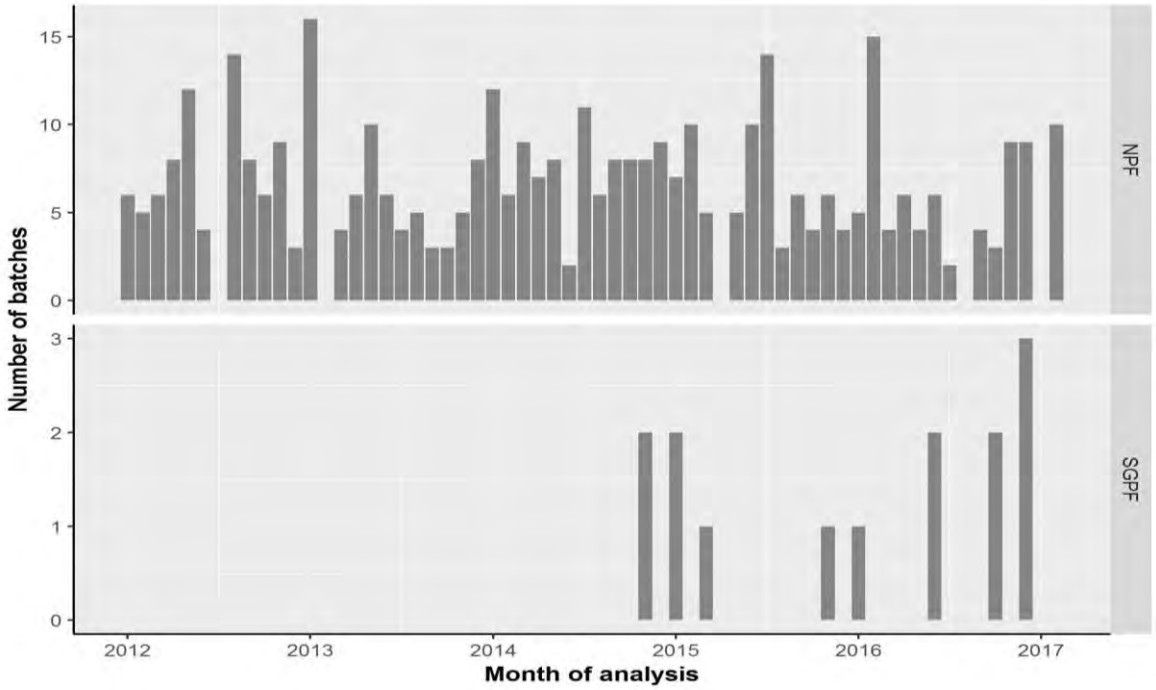

Figure 4. Number batches of re-imported wild catch prawn samples tested, and number of batches that returned a negative result for WSSV by month since January 2012. Note: (1) no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

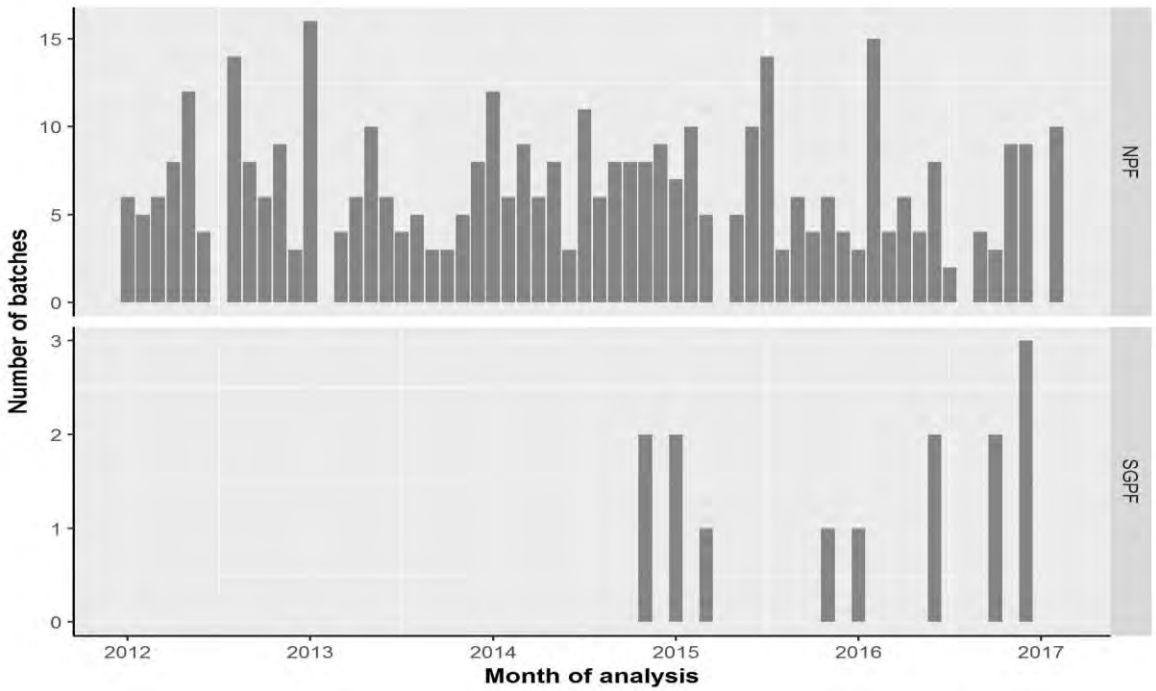

Figure 5. Number batches of re-imported wild catch prawn samples tested, and number of batches that returned a negative result for YHV by month since January 2012. Note: (1) no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

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Table 1. Results of samples tested for WSSV and YHV in re-imported wild catch prawns from the NPF and SGPF since January 2012. Note: (1) no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

Fishery	NPF				SGPF			
Test	WSSV		YHV		WSSV		YHV	
Result	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
2012	1053	0	1053	0				
2013	910	0	910	0				
2014	1222	0	1222	0	26	0	26	0
2015	962	0	962	0	52	0	52	0
2016	871	0	871	0	104	0	104	0
2017	130	0	130	0				
Total	**5148**	**0**	**5148**	**0**	**182**	**0**	**182**	**0**

Table 2. Number of re-imported prawns batches that tested negative to WSSV and YHV from the NPF and SGPF since January 2012. Note: (1) there were no samples that tested positive; (2) a small number of samples included in the NPF data were from wild caught prawns from east coast Queensland and wild caught prawns from overseas fisheries, however all tests results were negative.

Fishery	NPF				SGPF			
Test	WSSV		YHV		WSSV		YHV	
Result	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
2012	81	0	81	0				
2013	70	0	70	0				
2014	94	0	94	0	2	0	2	0
2015	74	0	74	0	4	0	4	0
2016	67	0	67	0	8	0	8	0
2017	10	0	10	0				
Total	**396**	**0**	**396**	**0**	**14**	**0**	**14**	**0**