



Submission to

**“Review of the biosecurity risks of, and import conditions for,
prawns and prawn products”**

For the attention of:

Prawn Review Liaison Officer

Animal Biosecurity
Department of Agriculture and Water Resources
GPO Box 858
CANBERRA ACT 2601
prawnreview@agriculture.gov.au

June 2018

CONTENTS

Section	Page
Introduction	3
Existing and altered risks in 2009 identified pathways	6
2010, and 2017 and 2018 importation protocols and their effectiveness in addressing risks	7
Conclusion	14
Recommendations	15
References	16
Appendix 1 - Comparison of 2010 importation protocols to 2017 protocols	18
Appendix 2 - Recommendations - Inspector-General of Biosecurity (2017), Uncooked prawn imports: effectiveness of biosecurity controls, Department of Agriculture and Water Resources, Canberra	19

INTRODUCTION

The Australian Council of Prawn Fisheries (ACPF) welcomes the opportunity to provide this submission to the Department of Agriculture and Water Resources.

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 Fishery
- Murphy Operator P/L
- A. Raptis & Sons Pty Ltd

The ACPF notes the Terms of Reference for this Inquiry can be found under Biosecurity Advice 2018/06 at <http://www.agriculture.gov.au/biosecurity/risk-analysis/memos/ba2018-06>.

The ACPF notes that the only incursion of diseases of the scale of WSSV in Australia before December 2016 was in 2000, when three Darwin aquaculture facilities were found to be using WSSV infected imported uncooked prawns (which they thought were 'Australian') as aquaculture feed. As a result, these facilities had to be destocked and disinfected. Sampling in Darwin Harbour revealed a small number of WSSV-positive prawns and crabs, but no clinical signs of disease. Subsequent testing resulted in no positive results. In 2001–02 a comprehensive survey of wild prawns and other crustaceans from 64 sites around Australia found no evidence of WSSV. Due to this incident, in 2001 Australia introduced its first requirement for testing imported uncooked prawns.

The ACPF notes that the first Import Risk Assessment (IRA) for importation of uncooked 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 that would

minimise the risk of disease incursions, in particular White Spot Syndrome Virus (WSSV) and Yellow Head Virus (YHV) from imported prawns to Australia.

As a result of an exotic disease outbreak in December 2016, it became 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
4. allowed high risk uncooked prawns entry into a disease-free environment via more than one pathway for an unknown period of time
5. did not provide for a transparent process of review and amendment to take account of new emerging risks

Failures in Australia's biosecurity system led to;

- a) imported infected prawn products on sale in Australian supermarkets/retailers and their confirmed use as bait by recreational fishers since at least 2013 (AAHL's detection of WSSV in retail prawns as detected but not reported in 2013 (Inspector-General of Biosecurity (2017))
- b) the incursion of White Spot Disease (WSD) in prawn farms beside the Logan River Queensland in December 2016
- c) the subsequent detection of White Spot Syndrome Virus (WSSV) in prawns from the Logan River (mainly Black Tigers - probably farm escapees), and in wild-catch prawns from inshore areas of Queensland's Moreton Bay in 2017.
- d) Undocumented impact on marine ecosystems, through the infection of endemic species.

Following the suspension of uncooked prawn importation on 6 January 2017, the Department enacted revised importation protocols on 7 July 2017 and it is understood that the implementation of the protocols is being closely monitored for the information of this review. The ACPF notes the importation controls in the breaded, battered and crumbed (BBC) category proposed for September 2018 implementation (Biosecurity Advice 2018/10) and the announcement to begin random 'seals intact' inspections for cooked prawns (Biosecurity Advice 2018/44). The ACPF assumes these are the result of further evidence gathered by the Department since July 2017 and a result of the Inspector-General of Biosecurity recommendations in 2017 (Appendix 2). The ACPF supports these proposals.

The ACPF believes that there are five significant pathways for introducing potentially diseased prawns into the marine environment that are inadequately addressed by the

revised July 2017 importation protocols, proposed September 2018 protocols for BBC and 2018 protocols for cooked product as follows:

1. timeliness of inclusion of emerging disease in importation protocols and the lack of incentive for importers to declare disease
2. easy access to and use of uncooked prawns as bait by recreational fishers
3. re-purposing partially processed uncooked prawns that are exempt from testing
4. re-purposing prawns that are packaged as cooked but are not randomly inspected on arrival
5. seemingly reactive and inconsistent post-border control and surveillance measures given the high risk of importing a raw protein from countries known to have OIE ranked diseases

Australia has now suffered two prawn disease incursions through repeated and often unreported border control failure since the release of the 2009 IRA. The ACPF demands protocols that are better than a “third time lucky” attempt to tweak the importation protocols of a high-risk protein. The ACPF seeks a revised IRA that is;

- risk-management based, robust and enforceable
- consistent with WTO principles and
- protects Australia’s waterways, ecosystems, fisheries and prawn farms from risk of exotic foreign disease incursions as far as practical.

This submission addresses:

1. Existing and altered risks in 2009 identified pathways
2. 2010, 2017 and proposed 2018 importation protocols and their effectiveness in addressing risks

1. Existing and altered risks in 2009 identified pathways

The disease introduction risk pathways were identified, mapped and prioritised as part of the 2009 review (Figure 1).

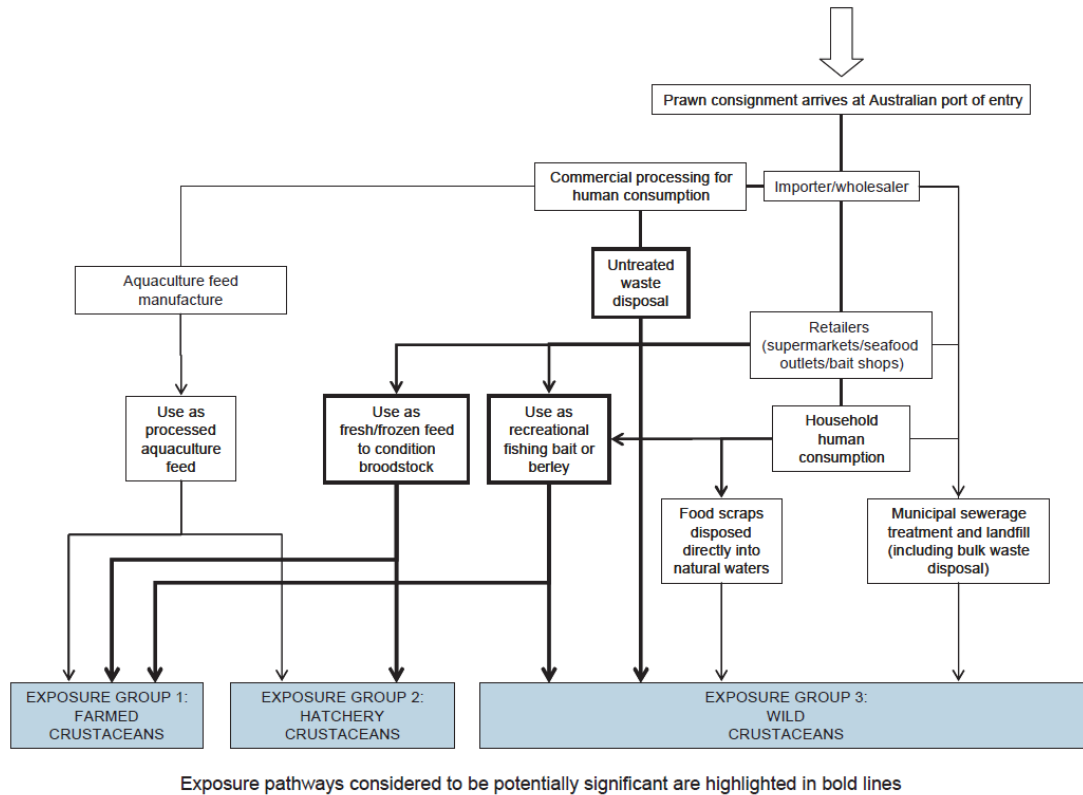


Figure 1: Major exposure pathways (Figure 5.2, Biosecurity Australia (2009) Generic Import Risk Analysis Report for Prawns and Prawn Products. Biosecurity Australia, Canberra, Australia)

The disease introduction risks identified in the 2009 IRA still exist but have changed in priority as products and trade pathways change. ACPF members report the following changing and /or continuing practices in which risks require re-assessment;

- Changes in the market place, including increased tonnage of imported farmed prawns which increases risk
- The continued easy access to imported prawns for use as bait (low cost of green imported prawns relative to other bait products)
- The increased volume and continued practice of repurposing partially processed uncooked prawns such as BBC prawns and the potential that diseased prawns may find their way into the marine environment
- The increase in the volume of “cooked” prawns, which are uninspected at the border, and the potential that these may be re-purposed and find their way into the marine environment
- The use of potentially contaminated water used in Individual Quality Freezing (IQF) treated prawns which is a freezing method increasingly used in imported prawns

- Introduction of other infected material (frozen worms, aquaculture feed, other fish) into the marine environment

The ACPF reiterates that disease risk is not confined to white spot syndrome virus (WSSV), yellowhead virus (YHV), and Taura syndrome virus (TSV), and in addition, necrotising hepatopancreatitis bacterium (NHPB). Disease risk is not static, and the disease risks identified in 2009 are not current, 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 risk of disease introduction is not confined to prawns. Prawn diseases can also affect crustaceans and is harbored in bait worms, Australia's rock lobster, crab and bait worm industries are also under threat. Freshwater species such as marron are also at risk.

The ACPF believes that timeliness of inclusion of diagnostics in importation protocols for emerging diseases poses risk to Australia's industries. Lightner (2012) commented that "the OIE has no authority to impose any sort of sanctions on countries that do not report or delay reporting of aquatic animal diseases. Hence, this can result in the under reporting of OIE listed and emerging aquatic animal diseases in many MCs". Time delays on disease reporting can threaten assurance of pre-border controls from countries issuing general health certificates and also pose risks where new diseases are not identified and diagnostic tools are not in place.

The extent of risk along each pathway depends to a great extent on the suitability and implementation of the importation protocol to manage the risk. For example, if raw infected processed prawns are not identified in pre-border controls they pose a downstream border control risk. If they are then allowed entry without testing, as in the case leading to the 2016 WSSV outbreak, the infected prawns pose a further downstream post-border risk. The next section deals with evidence of unacceptable risk to Australia's ALOP through Australia's prawn importation protocols.

2. 2010, 2017 and proposed 2018 importation protocols and their effectiveness in addressing risks

2010 measures

The lack of effectiveness of the 2010 importation protocols indicated that the 2016 breaches were the result of significant process, policy and resourcing weaknesses, as the Senate Standing Committee on Rural and Regional Affairs and Transport (Senate) reported in 2017 when it assessed findings of Operation Cattai, and as reviewed by the Inspector-General of Biosecurity (2017).

Process: The IRA process itself follows a robust risk assessment logic. However potential risks are prone to being underrated, may significantly change from the date of assessment and the specified importation controls become inadequate. New diseases and consideration of increased trading volume or changes in product form along some pathways are examples that should be included in a timely risk assessment process. The IRA review trigger process needs urgent refinement.

Policy: The importation policies seem convoluted for uncooked prawns, compared to other proteins, so that their enforcement is ripe for failure (as was demonstrated by Operation Cattai). It is understood that an IRA must not be trade prohibitive however, with so many weak points and loopholes available, it is not surprising that biosecurity breaches occurred.

Resourcing: The most telling evidence of lack of resourcing is the failure of border testing and the lack of post border surveillance. When border surveillance increased, the detection rate of positive containers increased from less than 15% to over 50%. Landos (2017) provided anecdotal evidence of border surveillance measures that pointed to lack of enforcement resources at the border. Inspector-General of Biosecurity (2017) confirmed lack of resources when it reported that frontline inspector numbers have fallen by 25% in the last five years in the period that (seafood) imports have increased.

Resources are also required to implement post-border surveillance such as those recommended in the Interim Inspector-General's report into the pork trade in 2013 which were similar to that recommended by Inspector-General of Biosecurity (2017) including:

- regular reviews and staff visits to confirm country claims of freedom from disease
- establishment of a random inspection regime *and*
- unannounced audits of importers facilities

2017, 2018 and proposed September 2018 measures

The ACPF notes amendments to the 2010 protocols made in 2017 (Biosecurity Advice 2017/12), in 2018 (Biosecurity Advice 2018/44) and proposed for September 2018 (Biosecurity Advice 2018/10). **Appendix 1** compares the importation protocol changes made in 2017, 2018 and proposed for September 2018 for each product format to demonstrate the changes over time. Australia has now suffered two prawn disease incursions through border control failure - the ACPF demands protocols that are better than a "third time lucky" attempt to tweak a high risk importation system. The ACPF makes the following comments in relation to current control measures:

Emerging diseases:

DAWR (2017) detailed control measures and risks largely related to WSSV. WSSV is not the only disease of concern and other emerging diseases may not be transmitted or controlled in the same way. Testing is currently only conducted for WSSV and YHV (where uncooked product is not from a country declared disease free for WSSV, YHV, TSV and NHPB). Other than an OIE alert triggering increased testing, which Lightner (2012) cautions may not be timely, no precautionary measures are apparent to detect emerging diseases.

Pre-border declarations:

The “financial incentives to mis-declare or co-mingle prawn shipments with other products” as noted by Inspector-General of Biosecurity (2017) calls into question the likely success of the Senate Committee’s recommendation. In 2017 the Senate Committee recommended 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. Significant evidence confirms that pre-border control measures cannot be relied on:

- border evasion identified in Operation Cattai,
- positive WSSV consignments in November 2017, and
- the Inspector-General of Biosecurity’s 2017 assessment that Australia had “too much trust in importers to do the right thing” and that “it (would) be most unwise to revert to previous levels of trust in importer declarations”.

Diagnostic training is not a sufficient remedy for deliberate, opportunistic evasion of importation controls over an extended period. The ACPF recommends that curbing product format, increasing border surveillance and instigating adequate post-border surveillance are the only appropriate control measures if prawn importation is to continue without damage to the marine environment.

Seals intact inspections:

The ACPF commends the increase to 100% ‘seals intact’ inspection for product formats in response to results from DAWR’s Operation Cattai in 2016:

- a) frozen uncooked head and shell off sourced from countries not free of high risk diseases
- b) processed and par-cooked (breaded, battered or crumbed (BBC) head and shell off)
- c) processed (included as an ingredient)
- d) processed (marinated head and shell off marinated).

However, the ACPF requests DAWR provide evidence on the success (or otherwise) of the ‘seals intact’ inspections to stop avoidance of at-border controls before these measures can be considered adequate.

Product format risk: The ACPF:

- a) commends the risk based evidence control measures outlined in Appendix 1 for the low risk importation of Australian wild caught prawns processed in Australian approved facilities. The risks in this category were no doubt informed by the disease-free status of shipments documented by Koopman (2017). The ACPF supports the continuation of precautionary border testing for identified diseases and does not wish to see them relaxed.

- b) commends the batch testing of marinated prawns as if marinated prawns pose the same risk as uncooked frozen prawns. This category was a risk identified by DAWR in Operation East Leichhardt in 2014.

- c) commends the additional requirement for BBC prawns to be par-cooked to ensure the coating is properly adhered to the prawn. DAWR (2017) confirmed the industry's anecdotal evidence of suspected importer avoidance in this category and it is assumed that this evidence led to the announcement of Biosecurity Advice 2018/10. This reduces the risk of prawns in this category being repurposed. However, due to the ACPF's concerns about the exporting authority's reliability to par-cook product in this category, the ACPF recommends border testing for this category as per requirements for uncooked prawns.
- d) is concerned on the reliance on the exporting authority to correctly attest that BBC prawns have been par-cooked as a means of satisfying batch testing requirements for uncooked prawns. The definition of par-cooked is open to abuse and may not ensure disease inactivation as is assumed by the protocols required for cooked prawns. The level of cooking required to inactivate disease needs to be ascertained for BBC prawns before any consideration is given to par-cooked prawns being exempt from border testing (Inspector General of Biosecurity (2017) Recommendation 3).
- e) is concerned about evidence of increased cooked prawn consignments and the lack of controls. Despite evidence provided by Inspector-General of Biosecurity (2017) that border evasion is occurring through the use of this category, cooked prawns are only subject to random 'seals intact' inspections at the border, no minimum cooking times or temperatures are specified, their release is at the discretion of the exporting country, and there is no apparent post-border surveillance of product.

Batch testing:

The ACPF notes that batch testing protocols and testing standards policy has been improved in response to results from DAWR's Operation Cattai in 2016, but it is noted that a single batch can be as large as the contents of one container, and that testing avoidance may still be possible. Evidence of post border control measures are required as, if border control measures fail, relatively low dose rates from any part of a partially processed prawn can cause infection (Ref Oidtmann and Stentiford (2011)).

Level of resourcing:

The ACPF recommends that for increased importation protocols to be successfully implemented, increased resourcing is necessary. An under-resourced change in policy poses risk.

Post border controls:

- a) Disparity of post-border biosecurity control: It must be pointed out that Australian jurisdictions such as NSW, SA and WA have implemented movement control restrictions to prevent cross-border importation of potentially infected bait sourced from the SE Qld disease control region. However, potentially infected imported stock is still available for retail sale in supermarkets all around the country.
- b) Retail packaging and labelling: Australia didn't need the further evidence provided by Oidtmann and Stentiford (2011) to understand the risk of infecting other prawns

from a virus which remains viable in all uncooked prawn body parts after freezing. Inspector-General of Biosecurity (2017) stated “the intent of the 2010 prawn import conditions was that imported uncooked prawns would all be cooked once in Australia, so that virtually none would be diverted for bait and berley and thus enter waterways in an uncooked state.”

The continued reliance on the requirement to mark packaging with ‘for human consumption only’ and ‘not to be used as bait or feed for aquatic animals’ is an entirely faulty ‘last line of defense’ and grossly misplaced for the volume of uncooked product now entering the retail stream. DAWR’s intended repeat of a survey similar to Kewagama Research’s “National Survey of Bait and Berley Use by Recreational Fishers” in 2002 and 2007 will likely confirm increased usage of imported prawns purchased from supermarkets as bait. This is likely driven by convenience and cost, and highly unlikely to be remedied by education and labelling at point of sale as is recommended by the Senate (2017).

The ACPF notes the partnership established in 2018 between Biosecurity Qld and Qld supermarkets to add “NOT TO BE USED AS BAIT” on the ticket toppers of imported prawns for retail sale. The ACPF commends the initiative but, because the purchase is probably driven by convenience and cost, labelling alone is unlikely to stop the practice. Dr Barry O’Sullivan, Sunfish Qld (2017) recommended that the only feasible solution to control risk was to stop the pathway of the product to the public, as was the intention of the 2010 protocols.

- c) Post-border surveillance: The continued reliance on voluntary compliance and the absence of a post border surveillance program poses increased risk to the ALOP. DAWR (2017) outlined its compliance tools and indicated that demonstrated deliberate and opportunistic non-compliance are a trigger for increased intervention rates and inspections. Deliberate and opportunistic non-compliance, as was evidenced in Operation Cattai, has resulted in tighter border controls but there is no clear evidence of the introduction of a post-border surveillance program. The Inspector-General of Biosecurity (2017) confirmed that the 2009 IRA was seen as a fail-safe control measure but did not include post-border measures, resulting in repeated pre and at-border control failure that was only sporadically detected and rarely reported.

The ACPF notes that the DAWR is the only custodian of quantitative evidence to indicate whether the implementation of the 2017 protocols has been sufficient to reduce risk of introducing prawn disease within Australia’s ALOP. The ACPF requests that this information be made publicly available to help inform this review.

Table 1 lists evidence of disease introduction risk for each product format.

Importation risk	Risk of disease introduction through pre-border control measures	Risk of disease introduction through border control measures	Risk of disease introduction through post-border control measures
Australian wild caught prawns processed in Australian approved off-shore facilities	Low risk as identified by Koopman (2017)		
Prawns (all formats) sourced from countries recognised free of high risk diseases	The disease risks assessed in 2009 are not static, are not current in 2017 and new forms of aquatic diseases emerge over time and Lightner (2012) cautions on the timeliness of disease reporting.		*Packaging labels about intended use have been demonstrated as ineffective as a post-border control measure by Landos (2017), Stephens (2017). Contrary to the education campaign recommendation of the Senate (2017), Dr Barry O’Sullivan, Sunfish Qld (2017) recommended that the only feasible solution to control risk was to stop the pathway of the product to the public.
Raw, chilled prawns sourced from countries not free of high risk diseases	Landos (2017) evidence of product substitution, packages unmarked with country of origin and under-reporting of disease incursions in exporting countries was confirmed by DAWR (2017). The integrity of certificates as a pre-border control was further questioned when positive WSSV shipments were received in 2017. 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. The disease introduction risk of relying on pre-border processing as a control measure was confirmed by Oidtmann and Stentiford (2011) who provided evidence that freezing does not inactivate WSSV, that viral load does not vary greatly between body parts and that viral loads in emergency harvested prawns were well over the minimum infective dose.	Landos (2017) reported 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. Inspector-General of Biosecurity (2017) report of 73% of batches placed in biosecurity control had tested WSSV positive by October 2017. These results confirm a gross failure to accurately detect and reject positive commodities at the border under the 2010 protocols, or illegal actions circumventing the border controls (Ref: Atkin 2017). DAWR (2017) reported evidence of at-border avoidance in Phase 1 and 2 of Operation Cattai and further suspected practices in Phase 3 which was confirmed by product category evasion by Inspector-General of Biosecurity (2017). Even under tighter 2017 protocols there is still potential room for disease control failure in all product formats particularly where testing is not	^Bateman et al (2012) confirmed infection susceptibility of crustaceans to WSSV from frozen supermarket purchased prawns. A sporadic post-border surveillance program translates to a high risk of breach if other control measures have also failed.
Frozen uncooked head and shell off sourced from countries not free of high risk diseases			See * and ^ A sporadic post-border surveillance program translates to a high risk of breach, particularly in this case where batch testing is not required
Processed (BBC head and shell off, or included as an ingredient) sourced from countries not free of high risk diseases			
Processed (marinated head and shell off) sourced from			See * and ^ A sporadic post-border surveillance

countries not free of high risk diseases	DAWR (2017) provided evidence that breaching and other processes may be applied to avoid testing at the border and there is no agreed standard for par-cooking that would be effective to inactivate disease	required or only random checks on consignments are conducted.	program translates to a high risk of breach if other control measures have also failed
Cooked prawns sourced from countries not free of high risk diseases	Inspector-General of Biosecurity (2017) reported increasing volumes of cooked prawn importations that, on inspection, were only lightly blanched and with labelling "Must be further cooked"		A sporadic post-border surveillance program translates to a higher risk of breach if other control measures have also failed

Table 1: Risk by prawn format intended for human consumption at each importation control point.

CONCLUSION

The WSSD incursions in 2000 and in 2016 are the ultimate evidence that Australia's biosecurity system for the importation of prawns has not done its job to protect Australia's aquatic environment. In 2017 the Inspector-General of Biosecurity provided damning evidence of successful repeated and prolonged importer effort to evade biosecurity controls that were completely inadequate for the task.

Science released since the 2009 IRA review by Bateman et al (2012), Oidtmann and Stentiford (2011) and Lightner (2012) confirmed the danger of relying on pre-border controls such as those contained in the 2017 importation protocols. A country's disease status may not be accurate at the time a consignment is made, partial processing and freezing of uncooked product does not sufficiently eliminate risk of infection in Australia's crustaceans, and imported prawn disease doses - especially at rates found in emergency harvested prawns - are sufficient to cause infection.

The 2010 prawn import conditions were designed under the assumption that imported uncooked prawns would all be cooked once in Australia, so that virtually none would be diverted for bait and berley and thus enter waterways in an uncooked state (Inspector-General of Biosecurity, 2017). The same trade pathways exist in 2018 that were identified in 2009. Evidence provided by the Inspector-General of Biosecurity in 2017 confirms anecdotal industry reports that volumes in each prawn category, and the subsequent risk, are not just affected by market demand but by importation protocols. The events leading up to and since the 2009 IRA demonstrate that the financial benefit of border evasion is greater than the penalty of outwitting Australia's biosecurity system.

The ACPF commends tightening of inspection through the seals intact approach and batch testing of uncooked consignments (and uncertified par-cooked consignments) to a consistent standard but questions the exclusion of BBC product from testing even if the exporter attests to its par-cooked status. It is not known whether par-cooking will inactivate disease. Operation Cattai alerted of evidence of border evasion tactics in the BBC category and the ACPF has no confidence that this will not continue.

In 2017 the Inspector-General of Biosecurity confirmed industry reports of an increase in cooked prawn consignments, evidence of partially cooked prawns and importer avoidance in the BBC category proposed for par-cooking from September 2018. The ACPF commends the addition of 'seals intact' to random inspections of cooked prawn and mixed consignments. However, the Biosecurity Advice 2017/12 protocols and proposed Biosecurity Advice 2018/10 protocols do not specify minimum cooking times or temperatures, the consignment's categorization is at the discretion of the exporting country, and there is no apparent post-border surveillance of product.

Regardless of the best intent of the Australian Government, past evidence of border evasion, the complexity of the 2017 importation protocols and the lack of resources to implement them, it is likely only a matter of time before another biosecurity failure and disease incursion occurs. Australia cannot afford the cost of a third disease incursion

through border control failure. The ACPF demands protocols that are better than a “third time lucky” attempt to tweak a high-risk importation system.

The ACPF can reach no other conclusion, based on the evidence, but to call for further border importation control measures to close loopholes and reduce the risk of uncooked product reaching the aquatic environment. The current IRA must review the volume of high-risk uncooked products entering the high-risk retail pathway alongside evidence of Australia’s convenience and cost-driven habit of buying imported prawns from supermarkets for use as bait. The IRA must not be affected by market demand, but must make recommendations based on biosecurity outcomes which may require that high-risk uncooked non-Australian origin imported prawns are treated to inactivate viruses prior to retail sale.

The effectiveness of pre-border and border controls can only be confirmed by negative disease results in post-border surveillance programs. Retail sampling and inspections of importer premises should be a core component of post-border surveillance. The ACPF calls for implementation of a post-border surveillance program which **does not** only rely on educating the public on the risk of using imported prawns as bait as a biosecurity measure.

RECOMMENDATIONS

1. That the IRA review current trade pathways and volumes and the latest science of disease transmission from prawns to crustaceans against the biosecurity risk management protocols of 2010 which were designed under the assumption that imported uncooked prawns would all be cooked once in Australia.
2. That the review does not simply find ways for the same trade pathways to continue to satisfy the market but that risks are assessed and protocols devised that;
 - a. are risk-management based, robust and enforceable
 - b. are consistent with WTO principles and
 - c. protects Australia’s waterways, ecosystems, fisheries and prawn farms from risk of exotic foreign disease incursions as far as practical.
3. That the IRA review emerging diseases and the diagnostics required to identify them, and provide a transparent mechanism for how protocols will be adapted to include new and emerging diseases outside a formal IRA review period.
4. That **at least** border testing and 100% ‘seals intact’ inspection be required for all uncooked and or insufficiently par-cooked product unless they are included as an ingredient in a highly processed item (eg such as a dim sim). Evidence has confirmed that prawns have been re-routed into high risk trade pathways and there is no evidence to suggest that there will not be future attempts to continue border evasion under a new IRA.

5. That cooking standards be agreed for cooked and par-cooked prawns based on scientific evidence of disease inactivation (Inspector General of Biosecurity (2017) Recommendation 3) and 100% 'seals intact' inspection regime added to the importation protocols for cooked prawns in order to address the evidence of border evasion through consignment labelling.
6. That border testing and seals intact inspections required in the 2017 and 2018 protocols and proposed September 2018 protocols not be relaxed for all importers. The incentive for importers to establish a track record of disease-free consignments should be continued market access, rather than reduced importation protocols.
7. In line with the 2017 Inspector-General of Biosecurity's recommendation, the review devise a post-border surveillance program including routine retail sampling and importer premises inspections (further to (Inspector General of Biosecurity (2017) Recommendation 22).
8. The review recognize that the bio-security regime cannot rely on educating the public on the risk of using imported prawns as bait as a key line of biosecurity defense.

REFERENCES

Bateman et al (2012): "Susceptibility of juvenile European lobster *Homarus gammarus* to shrimp products infected with high and low level doses of white spot syndrome virus" and "Susceptibility to infection and pathogenicity of White Spot Disease (WSD) in non-model crustacean host taxa from temperate regions".

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

Biosecurity Advice 2018/10: New import conditions for breaded, battered and crumbed prawns imported for human consumption. Department of Agriculture and Water Resources, 30 May 2018 (proposed for 28 September 2018 implementation)

Biosecurity Advice 2018/44: Introduced inspection of cooked prawns. Department of Agriculture and Water Resources, 30 May 2018

DAWR (2017): "Inquiry into biosecurity risks associated with the importation of seafood and seafood products (including uncooked prawns and uncooked prawn meat) into Australia". Submission from the Department of Agriculture and Water Resources. April 2017

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

Inspector-General of Biosecurity (2017), Uncooked prawn imports: effectiveness of biosecurity controls, Department of Agriculture and Water Resources, Canberra.

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)

Lightner (2012) "Global transboundary disease politics: the OIE perspective"

Oidtman and Stentiford (2011) "White Spot Syndrome Virus (WSSV) concentrations in crustacean tissues – a review of data relevant to assess the risk associated with commodity trade."

Senate Standing Committee on Rural and Regional Affairs and Transport (2017) "Biosecurity risks associated with the importation of seafood and seafood products (including uncooked prawns and uncooked prawn meat) into Australia"

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

Appendix 1 - Comparison of 2010 importation protocols to 2017 protocols

Format and origin	2010 importation protocol	Equivalence	2017 importation protocol proposed 2018 protocols
Prawns (all formats) sourced from countries recognised free of high risk diseases	General health certification issued in the exporting country by the Competent Authority (CA) + Packaging marked 'for human consumption only' and 'not to be used as bait or feed for aquatic animals' (*)	Equal	General health certification issued in the exporting country by the Competent Authority (CA) + Packaging marked 'for human consumption only' and 'not to be used as bait or feed for aquatic animals' (*)
Australian wild caught prawns processed off shore in Australian Government approved premises	Health certification issued in the exporting country by the CA stating origin and approved processing facilities + Batch tested on arrival for WSSV & YHV	Decreased	Health certification issued in the exporting country by the CA stating origin and approved processing facilities allowing head on, shell on format + 100% seals intact inspection and batch tested on arrival for WSSV & YHV + Packaging marked * (as above)
Frozen uncooked head and shell off sourced from countries not free of high risk diseases	General health certification issued in the exporting country by the CA + Batch tested on arrival for WSSV & YHV + Packaging marked * (as above)	Increased	General health certification issued in the exporting country by the CA + 100% seals intact inspection and batch tested on arrival for WSSV & YHV + Packaging marked * (as above)
Processed (breaded, battered or crumbed (BBC) head and shell off, or included as an ingredient)	General health certification issued in the exporting country by the CA + Packaging marked * (as above)	Increased	General health certification issued in the exporting country by the Competent Authority + Par-cooked to ensure breading/crumbing adhesion + 100% seals intact inspection for level of processing. No batch testing on arrival for WSSV & YHV unless exporting authority unable to verify par-cooked status.
Processed (marinated head and shell off)	General health certification issued in the exporting country by the CA (including a marination check) + Packaging marked * (as above)	Increased	General health certification issued in the exporting country by the CA. No marination check + 100% seals intact inspection and batch tested on arrival for WSSV & YHV. No marination check + Packaging marked * (as above)
Cooked in Competent Authority approved premises	General health certification issued in the exporting country by the CA	Equal	General health certification issued in the exporting country by the CA + Random seals intact inspections on cooking compliance (including mixed consignments)

Table 2 – Comparison of 2010 importation protocols to 2017 protocols

1 **Recommendations and departmental responses**

Recommendation 1

The department, in consultation with industry and state/territory governments, should review risk mitigation measures for the various pathways for white spot disease to enter and establish in Australia.

Department's response: Agree. The department has commenced a review of the biosecurity risks of, and import conditions for, prawns imported for human consumption. There will be extensive consultation and engagement with aquatic health and production experts in Australian and state/territory government agencies, universities and industry to support the prawn risk review.

Recommendation 2

The department should, as a priority, review the sampling regime for consignments of imported uncooked prawns and prawn products.

Department's response: Agree. An improved sampling process for consignments of imported uncooked prawns and prawn products has been implemented. Sampling regimes will also be considered in the prawn risk review.

Recommendation 3

The department should facilitate research to validate the impact of cooking on:

- white spot syndrome virus inactivation, and
- white spot syndrome virus testing results.

Department's response: Agreed in principle. Research such as this, which could be commissioned by FRDC, will be considered in the context of the prawn risk review.

Recommendation 4

The department should review import conditions for uncooked prawns listed on its Biosecurity Import Conditions (BICON) system to ensure clarity and consistency with OIE terminology, scientific accuracy and usefulness for verification at the border.

Department's response: Agree. Import conditions have been reviewed and updated and will be further reviewed and updated as the risk review progresses.

Recommendation 5

The department should work with competent authorities and industry to ensure that, where possible, uncooked prawn products are imported from specific pathogen-free countries, zones or compartments. This should be industry-driven and involve:

- quality-assured supply chain management
- competent authority verification of pre-border status of consignments, and
- regular departmental offshore audits or verifications of these arrangements.

Department's response: Agree in principle. In conducting the risk review, the department will consult with competent authorities and industry to consider the designation of specific pathogen-free countries, zones or compartments for the import of uncooked prawn products.

Appendix 2 – Recommendations - Inspector-General of Biosecurity (2017), Uncooked prawn imports: effectiveness of biosecurity controls, Department of Agriculture and Water Resources, Canberra

Recommendation 6

The department should continue to conduct full seals-intact inspections of uncooked prawn imports (by at least two inspectors). It should also review measures to ensure integrity of the seals-intact containers until inspection.

Department's response: Agreed and implemented.

Recommendation 7

The department should implement and publicise an ongoing program of random and risk-based, seals-intact inspections of frozen goods to ensure that uncooked prawns are not being imported as other frozen foods.

Department's response: Agree. This may be implemented as part of the department's cargo compliance verification program.

Recommendation 8

The department should ensure that inspections at approved arrangements, especially at regulated cold stores, are periodically carried out by two inspectors. If only single inspectors are available, they should be regularly rotated.

Department's response: Agree. Revised processes have been implemented.

Recommendation 9

The department should facilitate the development and implementation of a nationally consistent competence and verification framework covering staff involved in assessing and inspecting imported uncooked prawns and other commodities. This should be regularly reviewed and adequately resourced.

Department's response: Agree. The Department has implemented a national competency and verification framework for prawn inspections.

Recommendation 10

The department should improve internal communication to develop and implement training processes, instructional material and work directions that are technically sound, suit the conditions being experienced and are applied as intended. These should be monitored and regularly reviewed.

Department's response: Agree. The department has implemented improved internal communications arrangements, updated instructional material and has strengthened arrangements to ensure that the required processes are being applied as intended.

Recommendation 11

The Australian Government should commit to ensuring adequate long-term funding for biosecurity risk management, including border inspections and enforcement. Funding should be linked to growth in imports and biosecurity risks, with cost-recovered functions exempt from efficiency dividends and staff ceilings.

Department's response: Noted. This is a matter for government.

Recommendation 12

The department should consider seeking stronger powers under the *Biosecurity Act 2015* to apply direct penalties for serious non-compliance and impose administrative sanctions or on-the-spot fines for relatively minor non-compliance.

Appendix 2 – Recommendations - Inspector-General of Biosecurity (2017), Uncooked prawn imports: effectiveness of biosecurity controls, Department of Agriculture and Water Resources, Canberra

Department's response: Agree. While the Biosecurity Act already provides powers to apply direct penalties for serious non-compliance and penalties for relatively minor non-compliance in the form of infringement notices, the department will consider whether stronger powers are required.

Recommendation 13

The Director of Biosecurity should seek powers under the *Biosecurity Act 2015* to conduct a general recall of goods for biosecurity purposes.

Department's response: Agree in principle. Proposed changes to the Biosecurity Act have been drafted that will provide powers to enable the improved management of a similar event.

Recommendation 14

The department should continue to improve internal biosecurity risk governance and communication to rapidly identify emerging biosecurity risks. Risks should be communicated to governments, the wider community and industry through a defined and documented triaging and escalation procedure.

Department's response: Agree in principle. The department's Active Risk Management program is helping to improve internal biosecurity risk governance and communication to rapidly identify emerging biosecurity risks. Risks will be communicated to other governments, the wider community and industry as appropriate to the specific circumstances.

Recommendation 15

The department should discuss with the National Biosecurity Committee mandatory reporting of all post-border detections of prescribed exotic disease agents or pests to Australian and state/territory government departments.

Department's response: Agree. The Australian government reports post quarantine detections to state and territory governments and will seek the National Biosecurity Committee's agreement that states and territories share similar information with the Australian government and with each other.

Recommendation 16

The department should collaborate with state/territory agencies, Animal Health Australia and relevant industry bodies to review and implement more effective communication policies to aid the early dissemination of information about exotic aquatic diseases and pests and their management to stakeholders.

Department's response: Agree. Implementation is progressing.

Recommendation 17

The department should formalise, oversight and monitor stronger prescribed arrangements for laboratories undertaking import testing to ensure their accountability and ongoing implementation of prescribed testing standards.

Department's response: Agree. Implementation is progressing.

Recommendation 18

The department should, in collaboration with National Association of Testing Authorities, oversight the performance of import testing laboratories in quality assurance programs. This should include regular proficiency testing and assessment of control samples distributed among the laboratory network, with means to ensure that laboratories rectify any identified deficiencies in a reasonable period of time.

Department's response: Agree. Implementation is well progressed.

Recommendation 19

The department should promote an update of the old Australian and New Zealand standard diagnostic procedure for white spot syndrome virus including peer review of the new *Procedure for detection of white spot syndrome virus for biosecurity risk management*. This should be conducted by a suitably resourced national technical group formed from the Animal Health Committee's National Laboratory Task Group and Sub-Committee on Aquatic Animal Health.

Department's response: Agree. Implementation is progressing.

Recommendation 20

The department should maintain strong links with aquatic health and production experts in Australian and state/territory government agencies, universities and industry, to support decision-making based on:

- the latest scientific knowledge of new technologies, and
- international emergence, movements and risks to Australia of serious aquatic animal diseases.

Department's response: Agree. There will be extensive consultation and engagement with aquatic health and production experts in Australian and state/territory government agencies, universities and industry to support the prawn risk review.

Recommendation 21

The department should continue to work with Animal Health Australia, state/territory agencies and aquatic industries to develop an aquatic emergency animal disease response agreement (deed) as soon as possible.

Department's response: Agree. Development of the aquatic deed is well progressed.

Recommendation 22

The department and state/territory governments and industry should agree on (and cost share, as relevant) measures for monitoring and minimising risks of any imported uncooked prawn product entering waterways. Measures could include:

- periodic surveillance of retail prawns for target diseases
- periodic assessment of fishing practices
- targeted public awareness programs discouraging use of imported prawns as bait
- prevention of recreational fishing and surveillance of wild crustaceans close to prawn farms, and
- surveillance of bait shops to ensure they are not selling prawns imported for human consumption.

Department's response: Agree in principle – These issues will be considered as part of a systems based approach. Regulation of domestic fishing practices is a matter for state and territory governments.