



AUSTRALIAN  
**Prawn  
Farmers**  
ASSOCIATION

A Submission to the Department of Agriculture, Water and the  
Environment

**Review of the biosecurity risks of prawns imported from all countries  
for human consumption – Draft Report**

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Submitted and directed to:

Department of Agriculture, Water and the Environment  
Prawn Review

By

Australian Prawn Farmers Association

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## 1. Executive Summary

The Australian Government Department of Agriculture, Water and the Environment (the Department) has conducted a draft risk review on the biosecurity risks associated with the import of prawns from all countries for human consumption.

The Australian Prawn Farmers Association (APFA) appreciates the opportunity to provide input into the draft report dated September 2020 and would like to acknowledge the significant amount of work undertaken by the Department and the Prawn IRA Review Team in reviewing the risks and developing the draft report.

APFA seeks the implementation of biosecurity measures for imported prawns to manage the disease risks to the Australian prawn farm industry and the Australian seafood sector, to a very low level, in order to achieve Australia's appropriate level of protection (ALoP).

It is acknowledged that enhanced biosecurity measures have been implemented since the devastating White Spot Syndrome Virus (WSSV) incursion 2016/17. However, these measures contravene the principle of consistency in application of the SPS Agreement which states that the importing country must apply the same ALoP (i.e. accept the same level of risk) at both external (international) and internal (national or domestic) borders, and the ALoP must be applied consistently across the range of commodities in which the country trades. Unfortunately, the draft risk review does not achieve this principle of consistency in its current form.

For a rapidly growing industry such as the prawn farming industry, one of Australia's key competitive advantages is to be able to operate in the absence of some of the world's most impactful prawn diseases. As now seen with WSSV, once a disease-free status is lost, it is exceedingly unlikely that it will ever be regained, and those environmental and economic impacts in terms of ongoing losses to disease and cost burden to farmers are present for all time.

APFA supports the continued importation of prawns into Australia with **appropriate and effective biosecurity measures in place**, as porosity at the border remains a significant challenge. This is demonstrated by infected WSSV consignments still coming into Australia as one example.

Government precedent already exists for more appropriate sanitary measures which are applied to other meat commodities imported into Australia, and these must also be applied to the prawn farming industry to ensure consistency with Australia's ALoP.

The short-term advantages of maintaining supply of certain raw prawn products are outweighed overwhelmingly by the severe impacts to industry and the environment and flow-on effects to regional economies. APFA points out that it is in the Department's responsibility to make sure that consistent and effective biosecurity measures are put in place, as applied to other meat protein industries, to ensure adequate zoosanitary protection.

Pre-export testing is not an appropriate or reliable biosecurity measure. Batch testing in its current form is not an adequate biosecurity measure and would require significant additional resources to be effective.

Heat treatment in the form of cooking all imported prawn products with specified minimum cooking times and temperatures which inactivate all listed prawn pathogens (as is already applied to domestically produced prawns and in several other imported meat protein commodities such as pork, chicken meat), appears the most reliable, least cost and least restrictive risk mitigation method available to achieve Australia's ALoP.

## 2. Summary of Recommendations

### Recommendation 1

The Department to apply the same ALoP to foreign sourced imported prawns that is already applied to other commodities such as imported pork, salmon and chicken, and to domestically produced prawns crossing out of internal prawn disease control areas.

### Recommendation 2

The Department to provide evidence of changes made since the IGB 2017 Report to address human error and deliberate criminal activity.

### Recommendation 3

Batch testing for some (but not all) disease agents of concern prior to release of imported product from quarantine as currently prescribed is not an effective biosecurity measure and cannot be relied upon to meet the ALoP.

### Recommendation 4

Cooking of all imported prawn products intended for human consumption to a prescribed minimum thermal heat treatment standard that is acceptable to reduce the exposure likelihood to a very low level in the event of them being used as bait and/or berley.

### Recommendation 5

Implement cooking of imported prawns with prescribed minimum cooking times and temperatures as the preferred biosecurity measure to stop exotic and emerging pathogens entering the country.

### Recommendation 6

Broodstock and farmed prawns in Australia are not fed whole domestic or imported commodity prawns in hatcheries or in grow-out ponds, and any raw material containing crustacean meal of any type is suitably treated to destroy and inactivate pathogens prior to manufacture and subsequent use. Any reference to the use of feeding commodity prawns is incorrect and is to be removed; specifically, the section titled *“Use of imported prawns as feed for crustacean broodstock and crustaceans in research facilities and public aquaria”* should be reviewed.

**Recommendation 7**

**Pre-export testing is not a reliable or acceptable biosecurity measure and would not reduce the exposure likelihood, therefore pre-export testing is to be removed as a biosecurity measure.**

**Recommendation 8**

**Implement cooking of imported prawns with prescribed minimum cooking times and temperatures as the preferred biosecurity measure most likely to meet Australia's ALoP.**

### 3. Introduction

This submission is in response to the Department of Agriculture, Water and the Environment (the Department) *Review of the biosecurity risks of prawns imported from all countries for human consumption – Draft Report* (the Report).

The Australian prawn farm industry and the Australian Prawn Farmers Association (APFA) has long warned governments, both federal and state, of the risk of importing and introducing exotic and emerging pathogens. Hundreds of submissions have been made over many years along with several senate enquiry appearances. These have all been captured in detail in previous documents and will not be reiterated here.

In brief, prior to 2016, White Spot Syndrome (WSSV) had not been detected on any Australian prawn farm but had been detected for a number of years in commodity prawns being imported to Australia. As early as 1996 the National Taskforce on Imported Fish and Fish Products recommended that the importation of prawns and prawn products be reviewed as a high priority and, recognising the high risks of disease introduction if imported uncooked prawns were used for bait or berley, the department ‘banned’ the import of uncooked prawns for bait use by requiring that all uncooked prawn imports be labelled ‘For human consumption only—not to be used for bait or feed for aquatic animals’. The aim was to prevent bait sellers from importing wholesale quantities of prawns, but it was understood that the measure would not prevent recreational fishers from using imported raw prawns as bait (1).

This long overdue review has resulted in exposing Australia to greater disease incursions and the APFA welcomed the announcement by the Department of this review. APFA has worked with the Department’s review team to assist in their understanding of modern Australian prawn farming.

The APFA acknowledges the amount of work and industry liaison undertaken by the Department and the review team in undertaking this long-awaited review.

### 4. The Australian Prawn Farm Industry

Aquaculture production worldwide has been growing at a rate of almost 8 per cent for the past 10 years. This growth is expected to continue at a similar rate to support the world’s increasing food protein needs.

In 2017-18 Australia’s aquaculture sector represented 44 per cent of Australia’s total seafood production with a value of \$1.41 billion dollars (97,406 tonnes) (2).

In 2018-19, Australia farmed prawn production increased by 18.1% to 4,630 tonnes and is expected to grow to 20,000 tonnes over the next five years (3). This forecast does not include the recently announced \$172m prawn farm project by Tassal at Exmoor station with up to 1000-hectare ponds proposed (4). This is despite the severe impact of the white spot disease (WSD) incursion in Moreton Bay which has resulted in production decreases ranging between 40 and 100% on prawn farms along the Logan River (5).

The total value of prawn production in 2018-19 grew by 7.6% to over \$80 million and the number of producing prawn farms went up by four to 20. The Queensland prawn farming sector employs 350.9 FTE workers or 56.3% of the industry's total labour force.

Due to this emerging high value industry attracting increased investment, Australian prawn farming is projected to grow to \$500m of sales value and will invest \$400m in capital expansion projects over the next 5 years (6).

Highlighted in the recent CRC Northern Australia Industry Aquaculture Situational Analysis, Australia has a strong reputation in international markets for supplying high quality seafood and provides a significant opportunity for aquaculture in Northern Australia to supply to those markets (7).

Prawn farming in Australia, and particularly in Queensland, continues to be on track as a significant regional economic driver.

Over the next 5 years, it is planned that 1,200 new regional direct jobs will be created and an estimated 3,000 indirect jobs via large investment in suppliers and contractors will be created.

Other economic drivers from the significant regional investment planned include new skills and training, increased transport investment and increased feed manufacture investment, all contributing to improved social and economic outcomes for regional communities.

The Australian Prawn Farmers Association has 97% Australian prawn farm membership and a large number of members who are businesses associated with the industry (supply chain and stakeholders).

## 5. The Economic Impact of White Spot Disease Incursion 2016/17

The Inspector-General of Biosecurity's 2017 Report *Uncooked prawn imports: effectiveness of biosecurity controls* (IGB 2017 Report) highlighted the cost to the Australian Government, Queensland Government, Logan River prawn farms, commercial fishers, recreational fishers and businesses affected by the movement control order in Moreton Bay to be in the vicinity of \$162,870,000 (8). However, given that it now appears that WSSV has become permanently established in that region (5), the economic losses from the WSD incursion in Moreton Bay will continue to accumulate over time. Besides the severe impact the WSD incursion has had on prawn farms along the Logan River (which have experienced production losses ranging between 40 and 100% since the incursion (5)), mortalities of wild prawns and crabs have also been recorded, and the effects of domestic biosecurity controls on the commercial prawn and bait prawn fisheries in Moreton Bay are ongoing and likely to be permanent (5). Clearly the introduction and establishment of WSSV in Moreton Bay has been devastating to fisheries and aquaculture industries in that region, demonstrating the significant threat that exotic disease incursions pose to the planned prawn aquaculture industry expansions which were discussed in Section 4 above.

## 6. APFA Review of the biosecurity risks of prawns imported from all countries for human consumption – Draft Report

### 6.1. Australia's Appropriate Level of Protection (ALoP)

APFA acknowledges the large amount of work undertaken by the Department and specifically the work by the Prawn IRA Review team in getting to this point with the Review. However, it should be noted that the international aquatic animal disease situation is constantly evolving and the substantial delays in review of this document (it has been over 11 years since the completion of the previous prawn IRA and



over 4 years since the WSD incursion on the Logan River) have exposed Australia's fisheries and aquaculture industries to heightened disease incursion risks that continue to increase over time.

Given the historical failures of the past (as highlighted in the IGB 2017 Report (9) and Operation Cattai (9)) it is vital that Australia's biosecurity standards and processes for imported prawn products are brought up to the same high standards enjoyed by other industries (salmonids, terrestrial livestock). This will ensure maintenance of a consistent ALoP in the face of future challenges, for example changes in operational strategy, budget constraints and resource changes within the Department, as well as recognition of the ever-evolving international aquatic animal disease situation.

The ALoP is the level of protection deemed appropriate by a country establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory (10). The ALoP for the importing country **must apply the same level of risk at both external (international) and internal (national/domestic) borders if it is to meet the principle of consistency (11, 12) in application under the Sanitary and Phytosanitary (SPS) agreement.** Unfortunately, the draft risk review does not achieve this principle of consistency in its current form.

In relation to WSSV, to protect their valuable fisheries and aquaculture industries soon after the WSSV incursion in 2016/17, a number of states (Queensland, New South Wales, Western Australia and South Australia), introduced control movements of prawns across their borders, and the requirement for gamma irradiation to a dose of 50 kilogray (kGy) (a high dose of gamma irradiation which makes treated prawns unfit for human consumption) or cooked product only allowed to move interstate (11, 13, 14). This demonstrates cooking as the only acceptable biosecurity measure for prawns destined for human consumption to achieve Australia's domestic ALoP and reduce the risk of interstate translocation of WSSV to very low.

This evidently shows the inconsistency between States and Federal government on what is considered to be the ALoP (15). In a submission to *Biosecurity Advice 2018/06: Request for scientific submissions on specific issues with Australia's current prawn import policy*, it was also highlighted that if Australia's ALoP is to be applied consistently at both external and internal borders, then all prawn products being imported from regions where WSSV is endemic should be cooked.

The Department's website states "*Australia's ALOP is expressed as providing a high level of sanitary and phytosanitary protection aimed at reducing risk to a very low level, but not to zero. A risk assessment is undertaken to determine whether any SPS measures are required to be applied to an import in order to achieve Australia's ALOP. It is important to clearly distinguish between the ALOP and SPS measures. ALOP is a broad objective. The SPS measures are established to meet that objective (16).*"

The Department is clearly responsible for undertaking Import Risk Analysis' (IRA) to determine if any SPS measures need to be applied to achieve Australia's ALoP.

Under the SPS agreement, the ALoP for the importing country is also supposed to be consistent across all commodities (i.e. Article 5.5 of the SPS Agreement, the principle of consistency in application, (12, 17)). As seen below, the precedents set by the Australian government requiring thermal heat treatment for imported pork, salmon, chicken, turkey meat and duck meat (as examples), to protect these industries from diseases not present in Australia, should also be applied to imported prawn products. This would better protect the Australian environment and prawns from exotic and emerging diseases and provide consistency in the application of Australia's ALoP as required under the SPS agreement.

## Pork

In 2004, a generic IRA was undertaken for the importation of pork (18).

To meet Australia's ALoP, import requirements now mandate that any imported pork be cooked to government defined, high temperatures for set periods of time, prior to being sold to ensure any pig diseases present in the meat are rendered inactive (18, 19).

## Salmon

In 2019, the Department implemented new import conditions for salmon to meet Australia's ALoP. All salmonid product imported in a form that requires further processing is to remain under biosecurity control at an approved establishment and will only be released after it has been transformed into a consumer ready form. Salmonid product that is imported in consumer ready form or has undergone the required thermal treatment offshore will not be required to go to an approved establishment and released from biosecurity control at the border (20).

## Chicken

In 2008, a generic IRA was undertaken for the importation of chicken meat (21).

As stated on the Australian Chicken Meat Federation website, almost all chicken meat consumed in Australia is grown domestically and raw chicken meat can only be imported under strict protocols which poultry producers from other countries have to date been unable to meet (22). In practice this means that all imported chicken meat must be cooked. As an example, the risk management measures applied for Newcastle disease detail the following cooking time and temperature requirements "*chicken meat must be heated to a minimum core temperature of 70°C for at least 8.2 minutes*" (23). This is to ensure that there is no unacceptable risk to Australian poultry or consumers.

## Turkey meat from the United States

Australia currently only permits the importation of canned or retorted turkey meat products that meet specific temperature and time requirements during the manufacturing process.

The 2016 IRA review on turkey meat from the United States (US) identified hazards that could be present in turkey meat from the US and therefore requires biosecurity measures to manage these risks to a very low level in order to achieve Australia's appropriate level of protection (ALOP).

As a result, the turkey meat must be cooked to a minimum core temperature of 76.6 degrees Celsius for a minimum of 30 minutes (24).

## Duck meat from Thailand

The second draft review report 2020 for cooked duck meat from Thailand requires the duck meat has been cooked in a commercial process to a minimum core temperature of 70°C for at least 8.2 minutes or

equivalent according to the time/temperatures specified and records confirm that these time/temperature parameters were met (25).

The ALoP applied to the above commodities to protect these industries from disease incursions is clearly not being applied to the Australian prawn industry, resulting in inconsistent application of the national ALoP. State governments throughout Australia have demonstrated that the domestic ALoP with respect to control of the introduction and spread of exotic notifiable diseases of prawns, such as WSD, is one that requires sanitary measures equivalent to subjecting prawn products from regions where WSSV occurs to cooking to a level where all proteins are coagulated, or exposure to high levels of gamma irradiation (50 kilogray (kGy), see Department of Agriculture 2014) (13). This being the case, it is clear that Australia should now insist that a similar level of protection is applied to crustacean products originating overseas from areas where WSSV is known to be endemic. In other words, if Australia's ALoP is to be consistently applied across both domestic and international borders in accordance with the SPS Agreement, all prawn products originating from overseas regions where WSSV is known to occur should now also be required to be cooked (or subjected to appropriate levels of gamma irradiation) prior to their importation into Australia.

#### Opportunity for human error or deliberate criminal evasion

Although the Department has taken steps to reduce these historical failures, there is still significant risk with human error and deliberate criminal evasion (as highlighted during Operation Cattai (9)) in the process. The Department has applied seals intact inspection, however there were a number of other risk points in the process including variances in laboratory testing, complex documentation, traceability issues, number of inspectors needed for seals intact inspection, inspector safety compromised in freezers and sufficient time to undertake proper random sampling which were all highlighted in the IGB 2017 Report. The specific risk mitigation strategies implemented to address these risk points is unknown and APFA requests this be provided to enable better understanding and confidence by industry that these historical failure points have been addressed.

#### **Recommendation 1**

**The Department to apply the same ALoP to foreign sourced imported prawns that is applied to other commodities such as imported pork, salmon and chicken, and to domestically produced prawns crossing out of internal prawn disease control areas.**

#### **Recommendation 2**

**The Department to provide evidence of changes made since the IGB 2017 Report to address human error and deliberate criminal activity.**

## 6.2. Batch testing

The Report suggests that batch testing of prawns on arrival would reduce the likelihood of entry for WSSV and YH1. This may be so compared to the unmitigated risk of no testing, but in practice the original testing regime resulted in a probability of an incursion event occurring every 7 years (the time which elapsed between the 2009 IRA and the WSD incursion on the Logan River in late 2016).

As highlighted in the IGB 2017 Report, there are a number of problems associated with batch testing which is only expected to exclude most, but not all, infected prawn batches (26).

These limitations apply in pre-export testing as well.

On arrival in Australia, as stated on the Department's website, 65 prawns from 13 randomly selected cartons (5 prawns from each carton) are taken from each importer-declared batch. A batch cannot be greater than one shipping container. Five prawns are pooled as one sample for testing (27).

Each consignment (container) is considered one batch unless multiple batches are specified in the container. If a batch is shipped in two containers each container is considered a single, unrelated batch (28). There are a number of assumptions in relation to quantity per container or what constitutes a batch as product can be packed in different configurations. A single batch from an offshore processor may also include multiple sources, for example a processor in another country may source produce from 10 farms in a single day. This further increases the risk with batch testing.

Between 12 January 2018 and 7 September 2020, 26 consignments were detected with WSSV (29).

The volume of uncooked frozen prawns imported into Australia between 1 January 2018 and 30 September 2020 was 23,000 tonnes (30).

Therefore, 26 consignments (container load batches for this exercise) failed for WSSV, that's 26 x 18 MT= 468 MT of fails out of 23 000 MT equals the 2% which falls within the Department's acceptable limits, however, batch testing for release as currently prescribed does not provide 95 per cent confidence that the regime is detecting 2 or even 5 per cent batch prevalence as the regime is based on calculated sample size for a true random sample of a homogeneously mixed population in a container. It does not take into consideration that the container may contain multiple ponds-worth of prawns rather than just one, and thus infection may be clustered. In addition, the **OIE Aquatic Manual clearly indicates that pooling of large prawn samples is inappropriate; there has been little work done on assessing the impact of pooling on sensitivity of the diagnostic test.** Only 13 samples are being tested and potentially diluting the WSSV in the process.

The fact is, the batch sampling process is completely inadequate and does not meet Australia's ALoP as evidenced by the WSD incursion on the Logan River in late 2016 and the continuing prevalence of WSSV in raw imported prawns detected post-border in retail outlets. To then rely twice on such a flawed method to reduce assessed risk from high to very low is inappropriate, imposes additional costs and restrictions which still remain subject to error due to the fact that not all diseases of concern are being tested for. A 1 in 7 year probability horizon for incursions due to inadequate testing may be extended to a 1 in 14 year horizon by 2 x testing, but this still represents an unacceptably high level of risk to Australia's fisheries and

aquaculture industries and is a risk that certainly exceeds an ALOP of “Very Low” and far exceeds the domestic ALOP applied within Australia for products originating from the Moreton Bay White Spot Disease Biosecurity Control Zone.

To adequately undertake the required number of batch testing would require a significant increase in resources and costs (personnel, sample kits) and is therefore not a practical option. A lower cost, less restrictive and more effective biosecurity measure would be to cook all imported prawns to a prescribed minimum thermal heat treatment standard.

### **Recommendation 3**

**Batch testing for some (but not all) disease agents of concern prior to release of imported product from quarantine as currently prescribed is not an effective biosecurity measure and cannot be relied upon to meet the ALOP.**

### 6.3. Use of imported prawns and prawns intended for human consumption as bait or berley for recreational fishing

The APFA supports the findings of the Report that imported prawns and prawns intended for human consumption are being widely used as bait or berley for recreational fishing in many areas of Australia. This activity substantially contributes to total risk and therefore their availability or form must be rendered to make them substantially unsuitable for this end use (for example, cooked product) (31).

Once infective products leave retail shelves there is no control on how that infective product will be used, and reliance on education campaigns is not an effective biosecurity measure. As highlighted in the Report by the Kantar Public Survey 2017, the belief from a fisher was *“If you’re going to allow prawns into Australia and sold in the shop it is going to be used. It doesn’t matter if you put signs up or whatever... So you don’t let the product in Australia. You don’t say, ‘we’ll let it into Australia, but people won’t use it for bait.’ They will use it for bait. It is as simple as that”* (32).

Further, the Report advises the Department views this as likely a widespread belief given the driver for purchasing ‘sold as seafood prawns’ is convenience and price.

The most cost-effective measure least restrictive to trade which would reduce risk to an appropriate level, consistent with other imported commodities’ ALOP, is to require mandatory cooking to reduce to a very low level the release of potentially infectious imported prawns into our environment and waterways (33).

Mandatory cooking must also ensure the product isn’t frozen to -70oC then heated over a short period leaving the product still frozen and green.

#### Recommendation 4

**Cook all imported prawn products intended for human consumption to a prescribed minimum thermal heat treatment standard that is acceptable to reduce the exposure likelihood to a very low level in the event of them being used as bait and/or berley.**

### 6.4. Exotic and Emerging Pathogens

Exotic and emerging pathogens still entering Australia are of significant concern to the Australian prawn industry and Australia's food security.

The implicit assumption in the Report that if imported prawns are de-headed, de-shelled and degutted that the risk of importing diseases such as EHP (and others) is so small, actually testing of samples for these diseases is not required.

This assumption is not scientifically supported.

As advised by Ben Diggles of DigsFish, if prawns are sold by weight, removing the head and shell of a prawn would not make a difference to the titre\* of a disease agent if it also occurs in the prawn flesh (for example IMNV, DIV1, TSV) (34). Further evidence is provided below under the heading "Pre-export testing".

*\*(a way of expressing concentration, titre testing employs serial dilution to obtain approximate quantitative information from an analytical procedure that inherently only evaluates as positive or negative)*

APFA has data that shows a range of imported uncooked (raw) prawn products including those with value added processing displayed:

1. Evidence of exoskeleton, epithelium and digestive tract even when headed, shelled and de-veined.
2. 15% of the pools tested were positive for WSSV on qPCR.
3. Almost 50% of the pools tested were positive for EHP on qPCR.
4. The identity of both pathogens were confirmed by sequencing.

Although a much larger sample size is required to fully understand prevalence, this clearly shows pathogens continue to cross the border, that the current process does not remove highest risk tissues and that the new pathogens e.g. EHP, are at high prevalence and very concerning. It has been left to APFA to continue to internally fund sampling and the more testing undertaken, the more we are finding. APFA continues to strongly advocate for the Department to undertake appropriate prevalence testing.

The risk pathways is clearly there for these existing pathogens and any novel pathogens that emerge before we know about them.

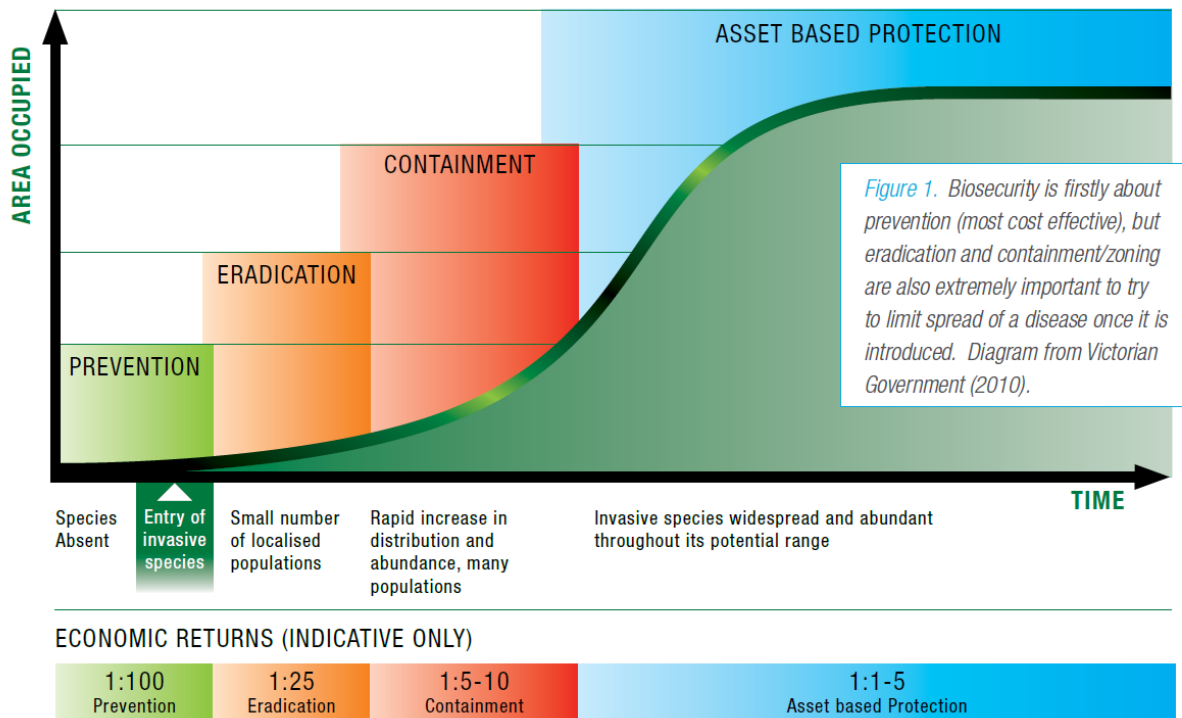
The only current way to manage the risk to the ALoP is to use thermal processing, a combination of temperature and time, on all foreign farmed prawn products seeking to be imported to Australia.

As previously discussed, diagnostic testing after seals intact inspection to detect a sample prevalence as high as 5% (for example a sample of 60 prawns out of any one shipment) is insufficient to meet the ALoP when the amount of imported prawns entering our waterways through bait or berley is so high as advised

in the Report “The total volume (imported and Australian origin) of prawns purchased from supermarkets and used for bait or berley is significant, the volume entering the aquatic environment is substantial and it is a frequent and repeated activity” (36).

The prevention of entry into Australia from diseases is the most cost-effective biosecurity measure.

### GENERALISED INVASION CURVE SHOWING ACTIONS APPROPRIATE TO EACH STAGE



### Different products have different risks



Risk profile	Product/process
Highest	Live animals
	Dead (uncooked)
	Frozen (uncooked)
Lowest	Contaminated equipment/clothing
	Cooked product

Source: Queensland Seafood Industry Biosecurity Plan Overview Document 2018.

Note: In respect to Live animals in the table above, individually screened (not pooled) SPF/SPR animals from an approved supplier are exempt. The risk profile above to live broodstock relates to not testing all live broodstock. Testing all live broodstock for every known pathogen results is a very low risk.

The economic returns from preventing the entry of a pathogen (or pest) far outweighs that of containment after border failures for whatever reason. Therefore, where it is possible to institute simple straightforward effective measures at the border, it behoves our regulators to do so.

#### **Recommendation 5**

**Implement cooking of imported prawns with prescribed minimum cooking times and temperatures as the preferred biosecurity measure to stop exotic and emerging pathogens entering the country.**

### 6.5. Prawn Feed or Feed Supplements

On page 68 of the Report under the heading 2) *Use of imported prawns as feed for crustacean broodstock and crustaceans in research facilities and public aquaria* it states that “*Uncooked prawns are known to form a significant component of broodstock conditioning diets*”. **Farmed prawns in Australia are not fed whole domestic or imported commodity prawns in hatcheries or in grow-out ponds, and any raw material containing crustacean meal of any type is suitably treated to destroy and inactivate pathogens prior to manufacture and subsequent use.**

This needs to be made very clear in the Report and any reference to farmed prawns being fed prawns needs to be removed.

#### **Recommendation 6**

**Broodstock and farmed prawns in Australia are not fed whole domestic or imported commodity prawns in hatcheries or in grow-out ponds, and any raw material containing crustacean meal of any type is suitably treated to destroy and inactivate pathogens prior to manufacture and subsequent use. Any reference to the use of feeding commodity prawns is incorrect and is to be removed; specifically, the section titled “*Use of imported prawns as feed for crustacean broodstock and crustaceans in research facilities and public aquaria*” should be reviewed.**

### 6.6. Pre-export testing

On page 240 of the Report, it is considered that by combining the two biosecurity measures of head and shell removal plus deveining of imported prawns, it is estimated to reduce the risk from **extreme** to **high** and if pre-export testing is included, the risk is reduced again to **moderate**. It is further advised that by combining the four biosecurity measures of head and shell removal, deveining, pre-export testing and on arrival testing results in the level of risk reducing from **extreme** to **very low**.

Considering some pathogens where the disease agent occurs in the prawn flesh (mentioned previously i.e. DIV-1, IMNV, TSV), this level of protection reduces from four biosecurity measures to two, as head and shell removal and deveining may not completely remove the pathogen. As an example, “*The virus is found mainly in haematopoietic tissue located above the stomach and at the base of antennae, pereopods and other appendages. However, SHIV infection is systemic and the virus is also found in the haemocytes, gills,*



*hepatopancreas, pereopods, and **muscle*** (37).’ In addition, as WSSV is a virus of the cuticular epithelium, head and shell removal would only increase the number of virions per gram of remaining flesh and by removing the head and shell, it is more attractive to use as bait/berley.

The Report also advises that “**pre-export testing in the country of origin is not considered equivalent to on-arrival testing in Australia. This is because for the purposes of considering this biosecurity measure it is assumed that Australia has not assessed the exporting country’s pre-export testing systems**” (38).

The Report clearly indicates that pre-export testing has not been assessed in terms of the appropriateness of the testing, the capacity of the laboratories to carry out the testing competently, and the voracity of the random sampling and sample chain. Therefore, pre-export testing **CANNOT be considered** to be a reliable risk mitigation measure and cannot reduce the risk in a manner that is consistent with Australia’s ALoP.

As a result, the reduction from **extreme** to **very low** by employing the four biosecurity measures outlined above, is not scientifically substantiated in the Report, and **does not result in reducing the risk from extreme to very low. Pre-export testing as a biosecurity measure should be removed.**

#### **Recommendation 7**

**Pre-export testing is not a reliable or acceptable biosecurity measure and would not reduce the exposure likelihood, therefore pre-export testing is to be removed as a biosecurity measure.**

### 6.7. Cooking Imported Prawns

As evidenced throughout this submission, cooking imported prawns to a prescribed minimum thermal heat treatment standard is the only practical and cost-efficient way to meet Australia’s ALoP.

It is acknowledged in the Report that the overall restricted risk of imported prawns with cooking applied as the biosecurity measure, was determined to be **very low which meets Australia’s ALoP.**

The Report calls for submissions supporting equivalence measures which will be considered on a case-by-case basis. Cooking as the biosecurity measure would eliminate the need for a combination of multiple biosecurity measures to meet Australia’s ALoP and is the only risk mitigation measure consistent with the ALoP enforced for domestically produced prawns. Thermal heat treatment is also consistent with risk mitigation measures applied to other high risk meat products imported into Australia for human consumption and thus is likely to be the only risk mitigation measure that will comply with Article 5.5 of the SPS Agreement (namely the principle of consistency in application).

In 7.4.2 of the Report it states “*It is assumed cooking may reduce, but not completely inactivate CMNV in imported prawn tissues and sufficient viable virus to cause disease may still be present. Therefore, cooking is not expected to reduce the likelihood of entry.*” (39) This was considered in the report for not only CMNV but also DIV1, IMNV and LSNV. This is not a logical conclusion as partial inactivation of some of the disease agent titre in a product must reduce likelihood of exposure and establishment by some level (possibly to

the minimum infectious dose in some circumstances), even if the actual level of risk reduction is not known (34).

In Dr Landos' report he advises that *“heat through cooking...have been documented to destroy the infectivity of prawn viruses including WSSV and is considered effective for pork and chicken viral pathogens, which underpins the trade arrangements for these products from disease positive countries, to only be allowed entry to retail if cooked (33).”*

In line with other imported meat commodities cited in this submission, heat treatment that prescribes minimum cooking times and temperatures should be specified that are shown to inactivate all relevant diseases agents of concern in imported prawn products. This will also render the product less likely to be used for bait/berley, thereby reducing exposure risk to a very low level.

#### **Recommendation 8**

**Implement cooking of imported prawns with prescribed minimum cooking times and temperatures as the preferred biosecurity measure most likely to meet Australia's ALoP.**

## 7. Conclusion

The Department and the Prawn IRA Review team are to be acknowledged for the in-depth work that has gone in to researching and writing the 354-page *Review of the biosecurity risks of prawns imported from all countries for human consumption – Draft Report*. However, the review process has taken many years which has exposed Australia's prawn fisheries and aquaculture industries to heightened disease incursion risks that continue to increase over time.

It is vital that Australia's biosecurity standards and processes are “future proofed” against the global biosecurity challenges that we face today, and which continue to emerge at an alarming rate. The porosity at the border remains a significant challenge. Infected WSSV positive consignments of prawns are still entering retail sale in Australia, which is a clear example of the unacceptably high risks posed by just one of many diseases of concern.

Australia's ALoP is aimed at protecting animals and plants from diseases not present in Australia. Precedent for thermal treatment of high risk products already exists for other meat protein commodities imported into Australia. The same standards must also be applied to imported prawn products to ensure consistency at both our domestic and international borders, as is required through our obligations under the SPS agreement.

Pre-export testing is not an appropriate biosecurity measure. Batch testing in its current form is not a reliable or adequate biosecurity measure and would require significant additional resources to be effective. These additional resources would impart additional costs and represent increased restriction on trade.

Cooking all imported prawn products with prescribed minimum cooking times and temperatures, as is already applied to other high risk imported meat protein commodities, would be the only risk mitigation measure that is likely to meet Australia's ALoP of **very low risk**.

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