



Australian Council of Prawn Fishery (ACPF) Submission

for the Australian Government (Department of the Environment and Energy) review of

'Environmental Assessment Report – Import of Specific Pathogen Free Penaeus Monodon Into Australia'

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INTRODUCTION

The Australian Council of Prawn Fisheries (ACPF) welcomes the opportunity to provide this submission to assist in the review of the '*Environmental Assessment Report – Import of Specific Pathogen Free Penaeus Monodon into Australia*'.

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 prawn fishing companies around Australia. The Council represents and makes this submission on behalf of our members:

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

The ACPF notes that:

- an application has been lodged by ProAqua Pty Ltd to amend the List of Specimens taken to be Suitable for Live Import (Live Import List) in the Australia Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) to include specific pathogen free (SPF) black tiger prawns *Penaeus monodon* for the purposes of prawn aquaculture development. The proposal specifically intends to:
 - import live *Penaeus monodon* broodstock from certified disease free hatcheries in Thailand or Hawaii into an Australian quarantine facility (never to leave the facility);
 - the next generation be moved, after testing, to hatcheries and/or farms for grow out as commercial stock.
- the review is limited to the environmental report prepared against the standard terms of reference and assesses the suitability of these species for import into Australia.

SUMMARY

The ACPF notes the stated purpose of the proposed importation of *P. monodon* as a means for protecting the disease biosecurity of Australia's prawn hatchery industry due to the risk of relying on potentially infected wild broodstock.

The ACPF's members categorically reject the proposal. The ACPF takes the position that, at this point in time, the importation of live *P. monodon* from countries with past disease outbreaks is seen as a risky venture. The ACPF also notes that there are options for obtaining P Monodon from Australian waters.

Australia's prawn industry still suffers the catastrophic effects of the WSD outbreak in the Logan River in December 2016 which was, on the balance of probability, caused by the use of imported disease infected prawns as bait by recreational fishers in channels adjacent to prawn farms. The optics around the timing of the application to import live P Monodon broodstock animals has caused great angst.

The two year process for the "*Review of the biosecurity risks of, and import conditions for, prawns and prawn products*" conducted by the Australian Government Department of Agriculture and Water Resources (Animal Biosecurity), is currently underway. This process should be completed and adding an additional disease pathway at this in time is not supported. A diversion of resources away from that much needed review would be firmly rejected. The Australian prawn industry can never be confident of being free of introduced disease but the ACPF expects that more stringent importation protocols should reduce the risk to the Australian industry.

The ACPF acknowledges the lower risk of importing tested and quarantined broodstock compared to the importation of high volumes of infected raw prawns as occurred prior to December 2016. However, the recent importation biosecurity failures have completely undermined any confidence amongst Australia's wild prawn fisheries that live imports would be immune from biosecurity failure at some point. Until such time as the Australian biosecurity system has addressed all of the failures that have emerged from the WSSV disease outbreak, the ACPF cannot support adding further potential disease pathways.

WSSV is an example of a virus that is not known to proliferate in the wild to outbreak level and, if it exists in the wild, is at low levels. As long as wild broodstock is sourced from currently disease free zones and broodstock is adequately tested, with methods used by Cowley et al (2015), the risk to hatcheries should be reduced.

The ACPF is unaware of progress in the prawn aquaculture sector to improve on-farm/hatchery biosecurity facilities post WSD 2016. Despite all efforts to test wild broodstock and/or proposals to import specific pathogen free stock, farms may still be disease susceptible and adjacent wild populations also at risk from infected prawns.

Given there is no recent precedence for the importation of broodstock for breeding purposes in Australian aquaculture, that there are successful Australian based aquaculture breeding programs, and there is past and current effort to selectively breed *P. monodon* in Australia, there is not a strong enough case for importing broodstock.

While lack of importation precedence is no reason to rule out future possibility it does clearly communicate that Australia's aquaculture industries are self sufficient using Australian stock. Experiences in other sectors also demonstrate that, when affected by diseased waters, it is possible to improve biosecurity in order to continue production and to protect Australia's disease free status.

IMPORTATION RISK CONTEXT

Current prawn product biosecurity review

Australia's prawn industry is currently near the beginning of a two year process in the "Review of the biosecurity risks of, and import conditions for, prawns and prawn products" conducted by the Australian Government Department of Agriculture and Water Resources (Animal Biosecurity). This process and the associated importation protocols have significant bearing on the disease risk profile of Australia.

Biosecurity Australia identified exposure pathways in 2009 (Figure 1). 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.

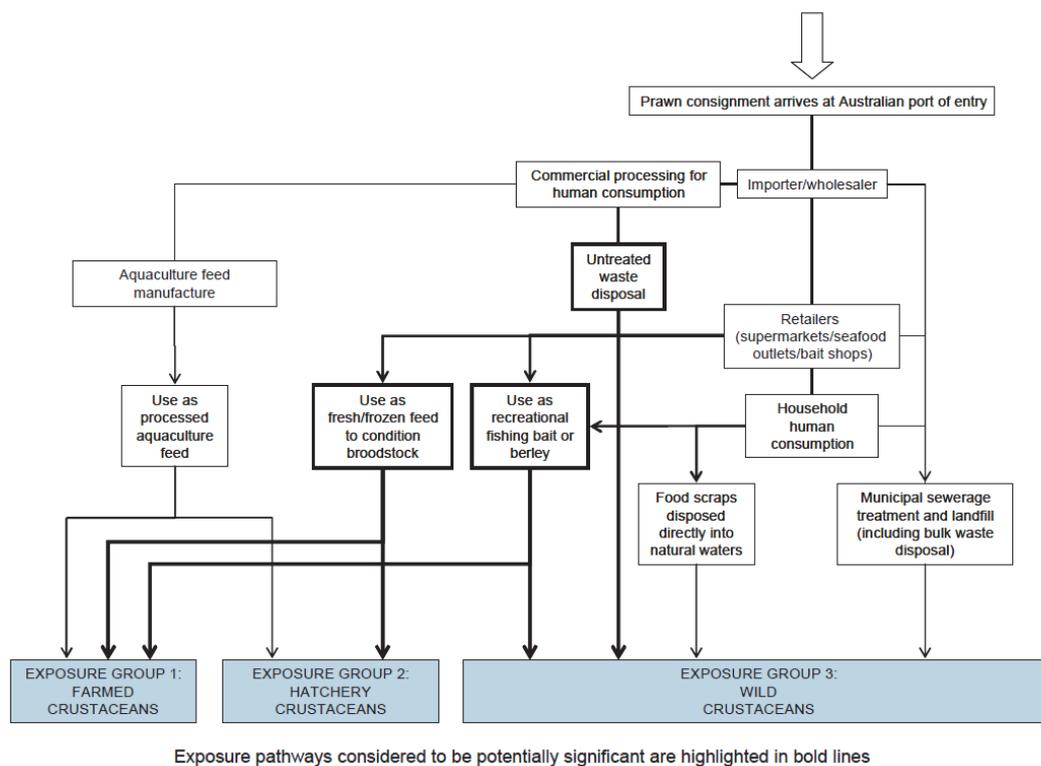


Figure 1: Major exposure pathways (Figure 5.2, Biosecurity Australia (2009) Generic Import Risk Analysis Report for Prawns and Prawn Products. Biosecurity Australia, Canberra, Australia)

While this review is underway, all current disease risk pathways are being reviewed. The ACPF assumes that, at this stage, proposed live imports from countries with past recorded WSD outbreaks are **not** included in the scope of review. The ACPF is already frustrated by the length of time taken to complete the IRA and does not want it to be further complicated or the process slowed if DAWR are requested to consider live broodstock imports as another pathway for disease introduction.

Any new outcomes for importation protocols will not be known for up to two years and may radically change Australia's prawn disease risk exposure profile. While the Australian industry can never be confident of being free of introduced disease or of a 100% effective biosecurity system, the ACPF is expecting more stringent importation protocols as a result of the review. Reducing Australia's exposure to importation risk should reduce the risk to all of

Australia's prawn industry, thereby reducing the need to find off-shore solutions to prawn breeding.

Effectiveness of and confidence in importation controls

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:

- were functionally insufficient to control the biosecurity risk
- 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)
- did not contain prescribed post-border controls as are practiced for other commodities
- allowed high risk uncooked prawns entry into a disease-free environment via more than one pathway for an unknown period of time
- 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;

- 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))
- the incursion of White Spot Disease (WSD) in prawn farms beside the Logan River Queensland in December 2016
- 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.
- Undocumented impact on marine ecosystems, through the infection of endemic species.

The ACPF and the Inspector-General of Biosecurity (2017) have been clear about years of demonstrated failure of Australia's biosecurity system to apprehend intentional or inadvertent abuse of importation protocols as evidenced below:

- timeliness of inclusion of emerging disease in importation protocols and the lack of incentive for importers to declare disease
- easy access to and use of uncooked prawns as bait by recreational fishers
- re-purposing partially processed uncooked prawns that are exempt from testing
- re-purposing prawns that are packaged as cooked but are not randomly inspected on arrival
- 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

The ACPF acknowledges

- a) the proposed importation checks and balances in the '*Environmental Assessment Report – Import of Specific Pathogen Free Penaeus Monodon into Australia*'
- b) the low volume of proposed live broodstock imports, compared to that of uncooked

prawn meat for human consumption, and

- c) the rigour of assessment employed by DAWR to decide which analysis might be used in this circumstance: whether a Biosecurity Import Risk Analysis, under the Biosecurity Act 2015, or a non-regulated risk analysis, reviewing existing biosecurity measures.

Despite the proposed checks and balances compared to Australia's track record of raw prawn importation the ACPF has no confidence that disease introduction risk is acceptable.

Past importation biosecurity failures have completely undermined any confidence amongst Australia's wild prawn fisheries that live imports would be immune from biosecurity failure at some point. One of the critical points for potential failure is at the point of certification and disease free declaration. Hawaii and Thailand have both suffered past (WSD) disease incursions and, despite best practice quarantine practices, there is no guarantee that stock will remain disease free. For example, Saudi Arabia's aquaculture prawn industry was disease-free and on the verge of exporting frozen prawns to Australia without the need for border testing when a WSSD outbreak decimated Saudi P Monodon prawn farming production.

The ACPF's members have been very clear regarding their concerns about further disease risk and their lack of confidence in the biosecurity system to manage another risk pathway:

"I do not want to risk any further disruption to the industry" Northern Territory and Queensland

"Can there be a 100% guarantee of no bio-security risk by importing live broodstock? If the answer is no then why would you even consider this? Our prawn fishing industry is much too valuable to risk." South Australia

"What comfort can we take in the word "certified" when import rules have been blatantly broken in the past?" Queensland

The risk is too high to import live product, particularly given we cannot contain the environment in which they are linked. Once stock is released, there are limited controls. South Australia

"After all the trouble in Brisbane/Moreton Bay caused by white-spot in Penaeus monodon, I think it is a totally ridiculous proposal to allow the live importation of them into Australia, despite all their () assurances that they will be disease-free."* Queensland

"Given the elevation in risk, since Biosecurity Australia has struggled to maintain a disease free status from an indirect route, we are not supportive of live imports which represent a more direct and riskier route for disease transfer." South Australia

"Until such time as we have a National biosecurity system that has addressed all of the failures that have emerged from the WSSV disease outbreak, it is ludicrous to support any more potential disease pathways at this time." Western Australia

EMERGING AND SUBCLINICAL DISEASE

The ACPF has previously raised concerns that Australia's biosecurity system is designed to manage existing diseases and their known pathways of infection but suffers time lags in diagnosing and notifying new forms of disease.

In addition, viruses may be in subclinical form and only expressed when the animal is

stressed or the environment is conducive. A virus may be harbored without detection and/or specific testing. Routine testing for known pathogens can manage known disease risk. Routine testing is unlikely to manage the risk of emerging diseases that are only expressed under certain circumstances or for which there are no diagnostics developed to identify them.

Another possible method of managing emerging disease may be to breed stock in quarantine for an additional generation, exposing the animals to the stress of two breeding cycles in the search for emerging disease.

DISEASE RISK TO AQUACULTURE PRODUCTION FROM WILD BROODSTOCK

The ACPF acknowledges that while the two main sources of *P. Monodon* broodstock (North Qld and Northern Prawn Fishery) are currently free of WSSV, this is not guaranteed long term and there is risk of WSSV introduction from other pathways. There are also other diseases that are found in Australian prawns that threaten the viability and productivity of farm stock. *P. monodon* are known to be susceptible to disease. The option for Australian farmers to switch from *P. monodon* to *P. vannemei* is not available to Australian prawn farmers as *P. vannemei* are not endemic to Australia.

In 2015, samples of *P. monodon* taken from North Qld and Northern Prawn Fishery locations (Figure 2) did not test positive for WSSV but tested positive for Yellow Head Virus (genotype 7) (YHV7), although YHV7 was also found in hatcheries and it is not known which was infected first.

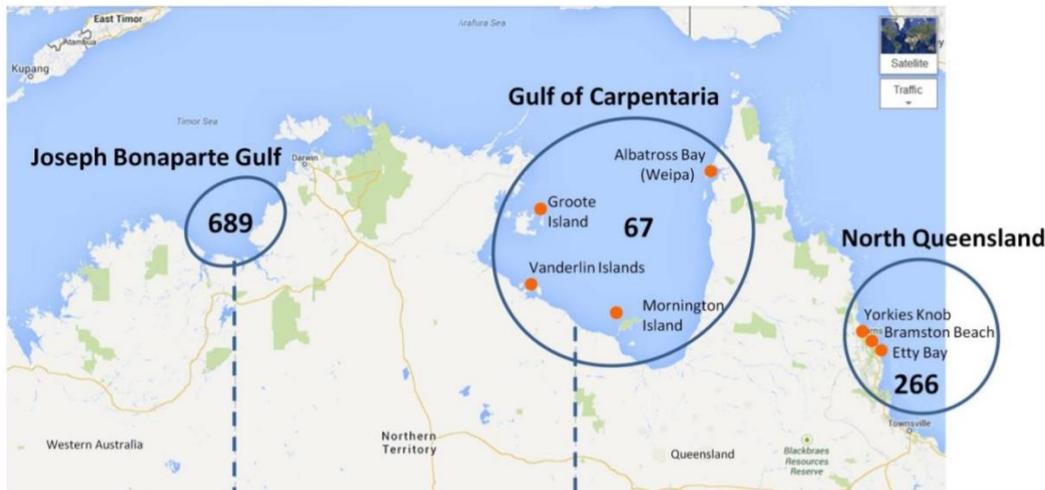


Figure 2: Sample numbers and general locations from where *P. monodon* broodstock were collected.

Since January 2017, the Department of Agriculture and Fisheries Queensland (Qld DAF) have put in place movement control orders in an attempt to eradicate WSSV from the wild in the SE Qld area or, at worst, contain it to the infected area. A surveillance program has also taken samples north along the Qld coast which has returned negative WSSV results in the *P. monodon* broodstock capture zone.

Current disease freedom in the broodstock collection zone and in waters neighbouring prawn farms provides no certainty that WSSV or another emerging aquatic animal disease will not affect the farmed *P. monodon* industry in future. There is also no certainty that, once introduced in the wild, a pathogen will remain contained.

Testing methods, such as were trialled by Cowley et al (2015), are vital for the detection of any pathogens before broodstock is introduced into hatcheries and the ACPF members assume that wild broodstock is tested before entering hatcheries and being distributed.

While the Environmental Assessment Report (EEA, 2018) promotes the benefit of importation of disease-free stock, the ACPF is unaware of progress in the prawn aquaculture sector to manage the risk of potentially infected intake water. This poses a critical biosecurity weakness for the farmed sector. Despite the rigour of broodstock testing and importation of specific pathogen free stock, farms may still be disease susceptible to disease introduction and outbreaks - importation of broodstock will not alleviate this risk.

AUSTRALIAN AQUACULTURE PRECEDENCE

Broodstock importation

The Department of Agriculture and Water Resources has confirmed industry reports that there is no recent precedent for approved importation of aquatic animals into Australia for aquaculture purposes.

Past importation of aquatic animals into Australia for establishing an industry occurred decades before the EPBC Act was enacted:

- Salmon and trout ova into the Gaden Hatchery for breeding (1960's)
- Pacific oysters into Tasmanian, South Australian and then NSW waters (1950's – mid-1980's)

The ACPF has also been advised by DAWR that import conditions are in place to manage the trade in live ornamental fish, and to support temporary landing of tropical rock lobster into Cairns (wild-caught in the Torres Strait Protected Zone), for re-export. Neither of these are permitted to be used for aquaculture breeding purposes.

The ACPF appreciates that breeding an animal with higher disease resistance and faster growth than a wild animal is a key priority to improve the aquaculture industry's profitability. The ability to increase stock throughput and survival rate can provide important competitive edge against imports.

At least Australia's salmon and oyster industries co-operatively manage broodstock and breeding programs at national scale. CSIRO (2017) reported significantly increased yields as a result of ten years of world leading *P. monodon* domestication and selective breeding program with the Australian prawn farming industry, managed by Gold Coast Marine Aquaculture (GCMA). ACPF notes the loss of all late generation CSIRO-GCMC selectively bred broodstock as a result of the 2016 WSD outbreak and notes that a number of other prawn hatcheries have subsequently begun their own selectively breeding programs since 2016. However, the co-ordination between breeding programs is unknown, as is whether or not breeding programs are focusing on survival.

The ACPF is unclear about the genetic trait advantage of imported SPF lines when Australian prawns have been selectively bred by world leading Australian expertise and commercially available in the past. Importing specific pathogen-free (SPF) broodstock does not solve disease resistance needs.

The ACPF is aware of the existence of many other commercial aquaculture hatcheries and private breeding programs in Australia in sectors such as prawn, pearl, barramundi, oyster,

mussel, yellow tail kingfish, trout and marron. All are utilising broodstock sourced from Australian waters on a routine basis or are holding selectively bred lines for breeding.

While precedence should not determine future practice, it is clear that Australia's aquaculture industries are able to be self sufficient using Australian stock and it is possible to do so in order to protect Australia's disease-free status.

Breeding, domestication and biosecurity

Many of Australia's hatcheries draw in water from surrounding disease-free environments and distribute stock to other disease free waters. Facility biosecurity is not always a high priority as many areas are simply unaffected by disease and full biosecurity comes at added cost. This is not the case for industries affected by disease where, by necessity, hatcheries have made significant investment to implement measures to ensure facilities are fully biosecure eg Shellfish Culture in Tasmania.

The ACPF supports recommendations made by Stephens (2017) and the WSD Scenario Planning Advisory Panel (2017) for the farmed prawn sector to resource new infrastructure and better practices to improve on-farm bio-security to mitigate disease risks to wild catch crustacean populations. These initiatives are not only vital for protecting prawn farms from threats from the wild, protecting the wild from diseases that may have been introduced into the farm, but are important for protecting hatcheries.

In the absence of specific knowledge on progress on improving on-farm/hatchery biosecurity and reducing prawn escapees from farms, the ACPF is concerned by disease risk from other sources to impact the farmed prawn sector and the potential for disease to reach the wild. Stock produced from SPF-imported broodstock are not immune to disease incursions if farms are not biosecure.

CONCLUSION

The ACPF draws the following conclusions:

1. Broodstock importation risk should not be reviewed at this time as current disease risk pathways and importation protocols are under review as part of a two year process in the "*Review of the biosecurity risks of, and import conditions for, prawns and prawn products*" conducted by the Australian Government Department of Agriculture and Water Resources (Animal Biosecurity)
2. The historic performance of Australia's biosecurity system to prevent disease introduction has caused extensive damage and lack of confidence amongst the wild sector and is not a sufficient reason to import live animals
3. Until the Australian farmed prawn industry invests significantly in facility biosecurity in the aftermath of 2016 WSD, there is not a strong enough case for introducing animals potentially affected by emerging and undetected disease that might affect the wild.
4. The risk of disease infection from external sources into farms is a risk that could bring undone the best plans for specific pathogen-free stock production.

5. Given there is no recent precedence for the importation of broodstock for breeding purposes in Australian aquaculture *AND* there are successful Australian-based aquaculture breeding programs, including history of *P. monodon* domestication and breeding success, there is not a strong enough case for importing broodstock.

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