AUSTRALIAN
Prawn
Farmers
ASSOCIATION

24th November 2014.

Committee Secretary
Senate Standing Committees on Environment and Communications
P O Box 6100
Parliament House
CANBERRA ACT 2600

RE: Environmental Biosecurity Inquiry

To the Committee Secretary

Australian Prawn Farmers Association (APFA) welcomes the opportunity to have input and provide comment on the adequacy of arrangements to prevent the entry and establishment of invasive species that are likely to harm Australia's natural environment.

APFA have reviewed the terms of reference and will provide comment relevant to exotic organisms, likely pathways, adequacy of current protocols and surveillance and their implementation for high-priority environmental risks and the extent to which compliance monitoring and enforcement are focused.

APFA members are extremely concerned about new and emerging global diseases and the consequences of them getting into Australia would cripple this industry.

Terms of Reference a.ii – likely pathways

Risk pathways for exotic organism entry to Australia. APFA would like to highlight that despite having regulations and inspections in place there is a high risk that exotic organisms can enter Australia via ballast water, through the use of imported prawns as bait, through dried shrimp or Australia's ALOP and testing regime of 5% of imported shipments. The DAFF failed food report on rejected shipments for imported prawns shows regular rejection for vibrio cholerae and excessive quantities of Enrofloxacin, Furazolidone and Ciprofloxacin.

1. Ballast Water – International regulations (MARPOL) drives the shipping industry to manage their waste on board through storage or incineration. Once in Australia, any waste being discharged by vessels must go into a quarantine bin for appropriate management. It is acknowledged that vessels may carry invasive species through ballast water and that Department Agriculture Fishery Forestry – Biosecurity have ballast water protocols that states vessels must manage ballast water through an exchange of port water with mid-ocean water during a voyage.

APFA are extremely concerned that ballast water, regardless of protocols in place, may still carry, harbour then deposit into Australian waters harmful algal blooms (HAB's) HAB's in aquatic systems often cause acute shellfish poisonings or mass mortalities depending of the species.

In 1999 The State of Queensland, Department of Primary Industries developed "A Guide to Phytoplankton of Aquaculture Ponds. Collection, Analysis and Identification" by Chris Stafford. Some farms are now finding species that were not identified or known back in 1999.

Reference to ballast water introducing marine pests can be found in Natural Heritage Trust – National priority pests: Part 11, Ranking of Australian marine pests. February 2005. This report stated that from a database of 1582 marine and estuarine species 207 of these the invasion history was not known however 128 were attributed to ballast water and a further 50 to hull fouling.

http://www.environment.gov.au/system/files/resources/02d33408-ad61-4d11-b5a4-6bf1aa333776/files/priority2.pdf

Greenpeace have predicted that vessels shipping coal from current and proposed terminals between Cape York to North Gladstone will increase from 1,722 in 2011 to 10,150 by 2020. These are alarming statistics given a story in The Australian (November 20, 2014) that a Chinese shipping company has just been fined $20,000 after a ute load of rubbish was dumped off one of its ships in the Great Barrier Reef Marine Park. This vessel did not make the required entries in the garbage disposal log book for which the master of the vessel was fined a further $6,000 for two breaches. The fine in total - $32,000 is pittance for the environmental damage that this type of action could cause. This was one example that was sighted and reported by a fisherman – how many go unreported? Copy of the article is attached.
http://www.greenpeace.org/australia/Global/australia/reports/Boom_goes_the_Reef_Report_4MB.pdf

a) The use of imported prawns as bait by recreational fishers is another likely pathway of disease and exotic organisms. A National survey of bait and berley used by recreational fishers in 2002 and followed up in 2006 reported that there was a significant increase in the number of fishers using prawns sold for human consumption as bait/berley. The prime reason for doing this was convenience, quality and price of the imported product. Given that eight years have elapsed since the last survey perhaps it's time for Biosecurity to get an update on this data to help guide Imported Risk Assessments (IRA) and Imported Fish Inspection Schemes (IFIS) both of which have been under review through inquiries this year.

Terms of reference b.iv- adequacy of current protocols.

2. APFA notes that the last Import Risk Analysis (IRA) for prawns was carried out and finalised in September 2009. Since that period of time at least one new global disease has emerged and has done considerable damage internationally for prawn production. Early Mortality Syndrome or EMS otherwise known as Acute Hepatopancreatic Necrosis Disease (AHPND).

It is of great concern to APFA that the eminent science group who evaluated the IRA at the time apparently did not take into account how Australia's biosecurity and import testing should react when a new disease appears globally – including a disease that has the potential to wipe out the Australian industry should it ever reach our shores.

Five years on from the 2009 IRA the Imported Food Inspection Scheme must be reconfigured, reenergised and reactive to new and emerging global diseases and issues.

The prawn IRA process took a lot of time and effort to establish and APFA is greatly concerned at how the controls can be quickly undone. APFA will outline the following case to prove this point.

In 2009 the prawn IRA was agreed to and under the AQIS ICON imported prawns had to be tested for several diseases that if they entered Australia would decimate our small but viable industry and we fear could have a similar effect the wild catch industry. Imported prawns must be tested for several threatening diseases.

- White spot syndrome virus (WSSV)
- Yellowhead virus (YHV)
- Taura Syndrome (TSV)
- Infectious Hypodermal and Haematopoietic Necrosis Virus (IHHNV)

Back in September 2008, APFA were led to believe, the seafood importers association bought to the attention of AQIS or DAFF that they had tested Australian farmed prawns and had found IHHNV. At the time IHHNV was another virus that Australia was supposedly free from. However - rushed testing of farmed product at that time resulted in the AQIS ICON conditions for imported prawn testing for IHHNV removed overnight.

Only 'nine' farmed Australian prawns, from a large sampling base were detected as having signs of IHHNV. To APFA's great concern the small positive sample was enough to warrant the removal of testing for IHHNV on imported prawns. Of further concern to APFA was the action was apparently bought to authority's attention by a competitor to Australian produced prawns who first alerted the Australian Government to the possibility of the existence of IHHNV in Australian domestic farmed prawns.

Much to the dismay of key industry personal and scientists who at the time were flabbergasted that testing was removed for IHHNV following a very small quantity of Australian prawns being detected to have a strain of IHHNV. Some questioned the finding and the AQIS overnight removal of testing imported prawns for IHHNV, questioning the result and whether it was a DNA sequence not a virus.

Industry experts and scientists questioned why no transmission trials were conducted, which they argued should have been the next logical step. Such trials would have compared the effects of this strain on farmed prawns with prawns that originated in another country. All that was found was molecular detection in a small sample. At the time a transmission trial was considered to be very expensive and who would pay was a contentious issue, as trials would have to have been done on imported prawns as well as Australian prawns.

The APFA urges that any future risk removal decisions be done only if and when transmission trials are conducted to support those decisions.

In the five years since the prawn IRA was finalised many more scientific reports, forums and papers have been done which the eminent science group must consider particularly as far as the new and emerging diseases are concerned.

http://www.oie.int/fileadmin/Home/eng/Internationa_Standard_Setting/docs/pdf/Aquatic_Commission/AHPND_DEC_2013.pdf

Terms of Reference b.vi – extent to which compliance monitoring and enforcement activities area focused on high priority environmental risks

3. The biosecurity risk to Australia using ALOP approach needs to take into account that if other countries are banning imported products because of particular disease risk which are not covered under this countries IRA, then Australia cannot assume that the risk will be low. This is in reference to outbreaks internationally of Acute Hepatopancreatic Necrosis Disease (AHPND) and also called Early Mortality Syndrome (EMS). The current IRA process does not take into account actions to implement when a new strain or virus or disease is recognised globally. If such a disease (AHPND/EMS) got into Australia the current prawn farming industry **would** be wiped out.

APFA has appealed and is appealing again to DAFF to include dried imported shrimp in testing, especially for EMS/AHPND.

Australia's ALOP results in a mere 5% or less of imported prawns being tested for any of the above viruses let alone taking into account any new strain that emerges globally. Outbreaks internationally of Acute Hepatopancreatic Necrosis Disease (AHPND) and also called Early Mortality Syndrome (EMS) have greatly alarmed other countries – so much so they have banned imports of shrimp from affected countries to proactively protect their own industries. To APFA's grave concern and despite appeals to various levels of the Federal Government - Australia continues to allow largely untested imports at the risk of importing these new diseases.

The transcript of an email trail from Biosecurity in response to issues APFA raised on EMS show the nonchalant manner in which Australia looks after its farming industries such as prawn farming.

Transcript below from Biosecurity interspersed with comments from an APFA key global expert advice. (March 2014) the comments in red are from the world renowned and trusted global shrimp expert.

We have been monitoring the EMS situation closely. Our view, based on the available scientific information, is that Australia's currently import conditions on prawns and prawn products effectively manage the biosecurity risk. These conditions are based on the Department of Agriculture's Generic Import Risk Analysis Report for Prawns and Prawn Products 2009 (IRA) which assessed the biosecurity risks associated with importation of non-viable, uncooked prawns and prawn products intended for human consumption. AHPNS (or EMS as it was called then) was not known about in 2009 and therefore could not have been considered in that 2009 IRA report. I think it should be modified and updated as the situation has changed with the appearance of AHPNS. AHPNS is a bacterial disease which is quite unlike any of the viral diseases considered in the IRA report. Its mechanisms and vectors of transmission are quite different from viruses.

The IRA report includes consideration of potential post-import misdirection of prawns or prawn products for use as bait or aquaculture feed. The IRA team recognised that there are a range of shelf-stable food products (for human consumption) that are not specifically covered in this risk analysis report. Shelf-stable food products containing prawns such as dried prawns, canned prawns or condiments containing prawns as an ingredient (e.g. prawn balachan, shrimp paste) are considered to pose a negligible risk because they are highly unlikely to come into contact with live crustaceans in Australia. Although this direct contact is unlikely, it is not impossible and these dried shrimp can still be used as bait and hence come into contact with wild crustaceans.

The following for your information is an excerpt from the 10 December Global Aquaculture Alliance webinar on EMS. Asked how the disease had spread so far, University of Arizona professor Donald Lightner and the webinar's chair, George Chamberlain of the GAA, said the shipping of live shrimp between countries was presumed to be the main factor. "Presumed" is the key word here. The truth is that with the current unavailability of a commercially

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available PCR test kit (one should be released by early next year), the truth is that nobody has any idea how this disease is being transmitted, and transmission by live shrimp is at best a "best guess", and , as mentioned, may be but one of many possible mechanisms, hence the words in his statement "the main factor", not the only factor. I think that we need to be a little more proactive here and at least investigate these potential sources of contamination rather than assuming they are safe because they are thought to be a small risk, but without real science available to confirm the validity of those assumptions.

"Once the disease reaches a location, it is horizontal transmission, between ponds often placed too close together," said Lightner, whose team led work that identified the bacteria that causes EMS. "Good quarantine systems should limit the movement of the disease." *Yes, good quarantine systems should be effective, but not testing all possible sources for infection does not constitute a "good quarantine system". A good quarantine system will systematically check each potential vector for each potentially serious disease and rule it out before ignoring it.*

Indonesia's strong stance on importing live shrimp was said to be the reason it has avoided contracting EMS, said Lightner. *Again, this is pure speculation with no scientific evidence to back up this claim. The truth is no-one has any proof whatsoever as to the vector which is transmitting this disease around the world. India is the latest country to have contracted it and all broodstock imported is from certified SPF stocks which pass through a government run quarantine system, but still it got there. And before that, Mexico contracted it, despite the fact that they do not import live shrimp from Asia, only frozen ones. So the live shrimp explanation is hard to defend under those circumstances.*

Importation of live prawns to Australia is not permitted. Nonetheless, the situation with EMS (now termed acute hepatopancreatic necrosis syndrome, AHPNS) is evolving and we will continue to monitor developments to ensure that our import controls are based on the most current information. *This is good news, but please be aware that the information presented in the webinar was not backed up by scientific proof. It was only a best guess, before the tools become available by which to verify these hypotheses. Meanwhile, I would suggest that it would prudent for Australia to take the precautionary approach rather than assuming that we are safe without actually checking all possible sources of infection with this bacteria which would certainly devastate the Australian prawn industry if it entered. The PCR test kit specific for this disease is available now (although not commercially), so it might be advisable to get it to do some checking for the disease in all imported crustacean products to be safe.*

One further point about EMS. During that webinar, it was suggested by the presenters that monodon are much less affected than vannamei – this is just not true and the Vietnamese monodon farmers have had if anything more problems with the disease than the vannamei farmers. They also suggested that if shrimp were cultured at <5ppt salinity, they were safe and George Chamberlain also suggested that transport of PL from infected areas to clean areas if they were going to be cultured in low salinity water would be OK. This is a highly controversial statement as it promotes the idea that such practices would not assist

spreading this disease. It is absolutely not true that farms in <5ppt salinity areas are unaffected by the disease. There are plenty of freshwater farms in China, Thailand and Mexico that have suffered greatly due to this disease. That statement is very misleading.

APFA urges testing on imported prawns be increased to ensure that the Australian industry remains disease free and protected from the likelihood of imported prawns being the pathway for any serious disease to gain a foothold in Australia. Current testing of 5% is way too low.

APFA has confirmed through the relevant DAFF agency, Imported food compliance division that: *Low risk food, not subject to a holding order (recent past non-compliance), has its food labelling and visual condition assessed at inspection when samples are taken for analysis. Provided that the food passed the labelling and visual assessment, the food would be released pending laboratory results. The importer may, in this case, decide to commence distribution of the product which would then be subject to state and territory legislation.*

This appears to mean that while waiting for test results to be finalised on imported prawn shipments, these shipments can be released to the buyer before the test results are finalised. So containers of prawns containing levels of banned antibiotics or vibrio cholerae have the potential to reach the consumer and market place under the current arrangements. This is a very dangerous situation.

APFA last purchased imported prawn shipment data from the Australian Bureau of Statistics back in 2012. APFA calculates that if you use an average of 20,000kg per container over the 4 months of data received it roughly equated to 255 containers of which 5% are supposedly tested – under this scenario that means 13 containers could have been tested.

Therefore if each month, based on 2012 figures, 64 containers arrived and using Australia's 5% testing regime 3 containers would have been tested. This is a dismal and worrying figure when taking into account Australian environmental biosecurity.

4. The current IRA process does not take into account a disturbing trend of the overuse of last resort antibiotics, particularly in relation to imported prawns. Testing of 5% or less will not adequately ensure that imported prawns into Australia contain allowable residue and allowable antibiotic.

In May this year APFA was alerted to a consumer health issue related to imported prawns and antibiotic residues.

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This particular consumer from the Sunshine Coast purchased imported prawns from her local supermarket and had a severe allergic/anaphylactic reaction exactly as she's had previously with antibiotics to which she is highly allergic. She reported the incident firstly to CSIRO then was advised to contact Queensland Health, which she did. APFA still have not been privy to any results from that investigation despite numerous phone calls and emails.

This prompted APFA to enquire if imported prawns were subjected to testing for antibiotics.

FSANZ have an MRL for oxytetracycline (a commonly used antibiotic overseas) but during the imported process into Australia nowhere are imported prawns actually tested to see if they were within the allowable limits.

http://www.foodstandards.gov.au/code/applications/documents/FAR_A608_MRLs_OTC.pdf

APFA have confirmed the fact that current imported prawns are not tested to ensure that the FSANZ MRL is met on imported prawns. This has been confirmed via the Director of Compliance Division within DAFF. Extract of communication is detailed below: (March 2014)

Thank you for your email of 8 May 2014 to ……about testing of imported prawns for residues of oxytetracycline. He has forwarded your email to me as I am the Director of the Imported Food section that is responsible for the matters you raised.

Under the Imported Food Control Act 1992, the department administers the Imported Food Inspection Scheme (IFIS) to verify that importers are sourcing food that complies with Australian food standards. This risk based inspection scheme targets foods known to pose a medium to high risk to human health and safety following a Food Standards Australia New Zealand (FSANZ) risk assessment. These risk foods are targeted initially at a rate of 100 per cent with the rate reducing over time as a history of compliance from the overseas producer is established. All other food is subject to surveillance under the IFIS at a rate of five per cent of consignments. No seafood has been classified as a risk food for the presence of low level antimicrobial residues.

Under the IFIS, five per cent of consignments of imported farmed prawns (whether cooked, raw, fresh or frozen) are tested for the presence of antimicrobial compounds. The current testing does not include testing for residues of oxytetracycline.

The current IFIS testing includes analysis for residues of the nitrofurans and fluoroquinolone classes of veterinary drugs. The nitrofurans members included in the testing screen are Furaltadone, Furazolidone, Nitrofurantoine and Nitrofurazone. The fluoroquinolone members included in the testing screen are Ciprofloxacin, Enrofloxacin, Gatifloxacin, Levofloxacin, Moxifloxacin, Norfloxacin, Ofloxacin and Sarafloxacin.

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The department undertakes reviews of the testing that is applied to imported food at the surveillance rate of five per cent of consignments. During the last review of the antimicrobial testing applied to prawns, a key consideration was that these two classes of drugs were considered to be of greater importance to public health.
The information you have provided to the department will be retained by the department and considered in the next review of IFIS antimicrobial testing applied to farmed prawns.

APFA is greatly concerned Australia's ALOP means we are prepared to accept inferior products that other countries are refusing to buy or allow to be imported. Japan had stopped buying shrimp from Vietnam because of the level of banned antibiotics that are used and detected – please refer to the links below.
http://vietnamnews.vn/economy/254296/japan-may-stop-vietnamese-shrimp-imports.html
http://www.shrimpalliance.com/fda-expands-import-alert-on-chloramphenicol-to-cover-all-crustaceans-including-shrimp/

A variety of chemicals are routinely used and are being regularly detected by other importing countries who test to ensure levels are within allowable limits.

The DAFF failed food report alerted APFA to a cocktail of chemicals routinely used by some international countries to farm prawns –
http://www.daff.gov.au/biosecurity/import/food/failing-food-reports

This failed food report regularly and alarmingly shows imported prawns being rejected for detection of vibrio cholera, thankfully this means that either the testing regime is working or that the testing unit knows proponents who are likely to send product containing the element.

- Ciprofloxacin
- Enrofloxacin – shipments of these from Vietnam on green garlic marinated prawns were rejected in March and Frozen black prawns in February & January 2014 (from the same supplier – looks like AQIS see the name Quocviet Seaproducts and automatically test)
- Furazolidone – from some raw vanemei prawn meat in February from China.

APFA asked a trusted expert what these chemicals were used for and the response was:
Ciprofloxacin, enrofloxacin are from the family of fluroquinilone antibiotics- essentially the top-line antibiotic.
They are not permitted for use on any food producing species in Australia, to try and prevent the development of bacterial resistance to these drugs which are often required for treatment of humans.
Furazolidone- is also an antibiotic. It is banned from use in all food producing species of animals in Australia and USA. There are risks associated with toxic impacts on people who use it.

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I suspect the use is to control bacterial gill disease/ bacterial issues with tails/pleopods/periopods. Diseases which are associated with poor pond bottom management, and poor water quality. Probably being used as a "magic bullet" when what is needed is improved farming techniques.
http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm137145.htm

If there is an opportunity for APFA to nominate an eminent scientist to provide advice as part of an eminent science group to deal with specific prawn issues, APFA would nominate a Dr Matthew Briggs. Dr Briggs is currently employed in Australia with Ridley Aqua feed and continues to work towards developing a sustainable aquaculture feed.

Dr. Briggs is well qualified on all aspects of prawn farming and his credentials combined with his professional scientific knowledge as well as hands on approach - has worked in Aquaculture for the past 32 years, specializing in all aspects of the culture of *P. vannamei* in both Latin America and Asia. He has given lectures and runs courses on shrimp culture techniques worldwide. He is also an auditor for the Aquaculture Certification council (ACC) for shrimp hatcheries and farms.

APFA fears that Australia's ALOP and complacency will put its Australian environment and industries at risk unless environmental biosecurity is taken more seriously and introduces new measures or upgrades existing protocols to ensure invasive species, pests and diseases are kept out of Australia.

Yours sincerely

Helen Jenkins
Executive Officer
Australian Prawn Farmers Association.