FRDC Submission to the 2024 review of the Inter-Governmental Agreement on Biosecurity (IGAB)

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Background

FRDC appreciates the opportunity to comment on this 2024 review of the inter-governmental agreement on biosecurity (IGAB). FRDC welcomes this review and hopes that this submission adds some useful perspective that may improve IGAB arrangements that are important for protection of Australia's \$3.58 billion seafood industry.

A substantial component of funding provided by FRDC (\$5.7 million since 2016) supports R&D projects related to biosecurity preparedness, improving surveillance, increasing diagnostic capabilities and treatments for aquatic animal diseases. FRDC fund the Aquatic Animal Health and Biosecurity Co-ordination program to advise FRDC and industry on R&D designed to improve biosecurity outcomes and achieve priority biosecurity R&D activities and outcomes of Australia's national AQUAPLAN 2022-2027 (https://www.agriculture.gov.au/agriculture-land/animal/aquatic/aquaplan). Aquatic biosecurity is also supported by AQUAVETPLAN (https://www.agriculture.gov.au/agriculture.gov.au/agriculture.land/animal/aquatic/aquavetplan) that has developed disease strategy manuals, operational procedures manuals and management manuals to guide responses to aquatic disease incursions.

Aquatic diseases are the major threat to Australia's aquaculture industry and many diseases also pose threats to fisheries, and aquatic ecosystems. Most aquatic biosecurity outbreaks that have occurred in Australia have not achieved eradication as the connectivity of aquatic systems make this task virtually impossible with "control and containment" the best outcome. In addition, there has been an increasing incidence of exotic aquatic disease outbreaks (Figure 1) over the past decade (i.e. abalone viral ganglioneuritis (AVG), Pacific oyster mortality syndrome (POMS), white spot disease (WSD)) that continue to have significant impacts on Australian aquaculture industries. WSD, caused by White Spot Syndrome Virus (WSSV), continues to pose a significant threat to Australian prawn farms, a sector that continues to expand production, as well as impacting capture fisheries in south-east Queensland and northern NSW. Most recently in August 2022 and February 2023 this threat was realised on prawn farms near Yamba, NSW following the most recent previous outbreaks on Logan River (Southern Qld) prawn farms in 2021. Genetic analysis of the virus indicates that WSSV detected in 2022 is of a separate origin to earlier detections in south-east Queensland, suggesting that repeated biosecurity breaches at the border have allowed this exotic disease to enter aquatic ecosystems. In May 2024 further WSD detections were reported in wild prawns from Richmond River (Ballina) and near Evans Head NSW. AVG, caused by haliotid herpesvirus 1 (HaHV-1), also continues to cause significant disruption to wild abalone fisheries. HaHV-1 was first detected in farmed abalone in 2006 and has caused significant mortality in wild-capture fisheries since 2011, with recent mortality events across South Australia's southern zone occurring since February 2024.

FRDC are supporting biosecurity preparedness planning for Australian prawn, Barramundi and oyster farmers through FRDC project "2021-048: "Ready, set, go!" preparing for emergency disease outbreaks in aquatic animals" that addresses an activity of AQUAPLAN. Recently complete disease outbreak simulation exercises "Operation Flywheel' (Barramundi farmers) and "operation Black Tiger" have been very successful at identifying elements of the biosecurity system that are working as well as gaps for governments and industry to improve.

Timeline of major aquatic animal disease outbreaks in Australia

(By B. K. Diggles)



Figure 1. Timeline for major aquatic disease incursions into Australia (adapted from Diggles)

FRDC continues to fund a large quantum of biosecurity related RD&E in conjunction with our industry partners, with much of this investment relating to preparing for failures in the biosecurity at Australia's international border. FRDC contend that a very high level of pre and at border biosecurity is paramount to prevent entry of exotic disease threats to Australia aquatic environments and the subsequent spread to aquaculture systems and fisheries. Consequently, with respect to aquatic biosecurity threats, the Commonwealth has a greater responsibility within IGAB as pre and at border biosecurity is the only real protection that can be provided against exotic aquatic disease threats that will have devastating impacts on Australia's seafood industries, recreational users, Indigenous communities and the environment. The lack of options available to eradicate and contain diseases once introduced within aquatic systems needs to be accepted to improve the framework described within IGAB for governments to build a stronger and more effective national biosecurity system.

FRDC RESPONSES TO SURVEY QUESTIONS

Question 1. Is the IGAB functioning as intended?

• Are there specific clauses that impede or promote the successful operation of the IGAB? If so, which clauses?

Clause 13: In practical terms, zero biosecurity risk is unattainable

Although zero risk is not attainable, a higher level of biosecurity risk management needs to be enforced for threats that can enter highly connected aquatic ecosystems given the virtual impossibility to eradicate when introduced. Recognising this reality, higher biosecurity controls for aquatic disease threats need to be implemented. Greater biosecurity can be achieved through controls such as cooking imported seafoods (i.e. prawns) and restricting product formats (i.e. filleted fish rather than whole or head on gilled and gutted) to those that present lowest risk. These requirements are similar to precedents enforced for other higher value Australian animal industries such as chicken meat and pork, and to restrictions placed on the domestic movement of prawns and other crustaceans from regions in which WSSV has been detected.

Clause 16: Governments contribute to the cost of risk management measures in proportion to the public good accruing from them. Other system participants contribute in proportion to the risks created and/or benefits gained

Apart from salmon farming in Tasmania, aquaculture sectors are not considered high GVP (max \$210 million – prawn farming). Biosecurity response costs can be disproportionate to the capacity of industry to meet contributions in proportion to those from Governments, especially as costs of response activities or management in connected aquatic environments can grow rapidly.

Risk creators (e.g. seafood imports, aquarium fish imports, ballast water) do not contribute to biosecurity in proportion to the potential risks created for the aquaculture industry, fisheries and aquatic environments that provide important ecosystem services and are public resources utilised by Indigenous communities, recreation fishers, tourism operators and others.

The cost of the WSD response in 2016-2017 was estimated at >\$100 million not accounting for the immeasurable social challenges for farmers and fishers and WSD persists as threat in Morton Bay and new introductions have since impacted prawn farmers and fishers in Northern NS. It needs to be accepted that effective pre-border and at border biosecurity is by far the most cost-effective approach to minimise risks and impacts of aquatic diseases and parasites that threaten Australia's seafood industry.

<u>Clause 20: Australia's biosecurity arrangements comply with its international rights and</u> <u>obligations and with the principle of ecologically sustainable development.</u>

This clause provides justification to acknowledge the Australian governments obligation to afford higher levels of biosecurity at the national border to protect important and often unique aquatic ecosystems that are critical to Australian seafood industries, Indigenous communities, recreational fishing, tourism and the environment.

Clause 21: The goal of the national biosecurity system is to minimise adverse impacts of pests and diseases on Australia's economy, environment and the community while facilitating trade and the movement of plants, animals, people and products.

With growing globalisation and world trade aquatic biosecurity threats to Australia's seafood industry will only increase. Importantly and uniquely, once a disease is in the aquatic environment, it is highly unlikely that it can be controlled. Australia's biosecurity system is the only barrier to keep such disease risks offshore.

The desire to facilitate trade (and maintain international relations) appears to be of higher importance than providing adequate biosecurity for Australian aquaculture, fisheries, community and aquatic environments. Imported uncooked prawns continue to pose a demonstrated threat to Australian prawn farming and fisheries and is the most likely cause of

introduction and ongoing spread of white spot disease that have caused substantial economic loss and hardship to prawn farmers in Southern Queensland and Northern NSW.

FRDC and the Barramundi farming industry supported R&D (Project 2019-126: Assessing the biosecurity risk of uncooked whole and eviscerated barramundi and grouper in relation to exotic viruses) highlights an ongoing lack of adherence to import conditions for Barramundi that presents potential pathways for important disease threats. Current production and expansion of highly valued seafood industries and aquatic environments continue to be threatened by importation of inappropriate formats of imported seafoods that require ongoing at border biosecurity testing to meet a fallible appropriate level of protection.

With respect to aquatic biosecurity responsibilities, these pre and at border biosecurity inadequacies impact upon the shared responsibility expectations of State and Territory government's (and industry) that are the foundation of IGAB.

<u>Clause 23: The national biosecurity system encompasses the full range of activities undertaken</u> by all participants, of which key components include:

a. one Appropriate Level of Protection (ALOP)

FRDC notes that biosecurity measures are imposed to reduce risk to a level that achieves Australia's ALOP, and that Australia imposes conditions above those recommended by the World Organisation for Animal Health (WOAH) for uncooked prawns for human consumption. IGAB should promote similar extended biosecurity conditions for other seafood commodities that acknowledge that introduced aquatic disease and parasite threats are almost impossible to contain in aquatic systems, and that the cost to respond to outbreaks is disproportionate to the value of most fishing and aquaculture industry sectors. For aquatic diseases and parasites ALOP should consider that the only realistic biosecurity measure to protect Australia's seafood industries and aquatic ecosystems is exclusion through strong pre and at border measures that restrict entry of threats through pathways including imported seafood products, aquarium fish and ballasts water.

c. risk analysis system

It is noted that the following IRAs are in progress or have been recently completed:

- Review of live marine ornamental fish import policy Current
- Import of live sturgeon for aquaculture: Final biosecurity import risk analysis Completed
 2024
- Review of the biosecurity risks of prawns imported from all countries for human consumption Completed 2023
- Review of fish and fish products for use as pet food and stockfeed Completed 2022

As imported seafood products are the greatest threat to Australia's seafood industries the IGAB would benefit from regular updates to import risk assessments (IRAs) that prioritise existing major and emerging industry sectors. Unlike the non-existent Australian sturgeon farming industry, the existing \$120 million Australian farmed Barramundi industry continues to grow and has justifiable concerns relating to biosecurity threats from the 70% market share

attributed to imported Barramundi. While several diseases have emerged in overseas Barramundi farming countries, Australia's biosecurity measures to manage import biosecurity risks from these countries remain based upon an outdated 'Import Risk Analysis on Non-viable Salmonids and Non-salmonid Marine Finfish' completed in 1999. It is difficult to accept that IGAB shared responsibility principles can be achieved if Commonwealth government responsibilities are based upon outdated import risk assessments relating to important industry sectors. It is suggested that IGAB should help to ensure that IRAs be maintained for important sectors based upon their value, potential for future development and existence of biosecurity threats.

As global aquaculture production increases so to does the emergence of diseases. Consequently, there is a need to increase monitoring of the emergence and spread of exotic disease threats to adequately inform risk assessment and per and at border surveillance. Australia needs to implement active monitoring of official and un-official (e.g. social media) reports of occurrences of aquatic disease threats and make this information available to inform border surveillance, governments and industry. To increase disease preparedness Australia could also investigate building collaboration with overseas aquatic disease R&D agencies to investigate control options offshore.

d. offshore, border and interstate inspection and assessment processes

IGAB principles can only be achieved when governments meet their agreed biosecurity responsibilities. Australia's seafood industries are diverse (i.e. species, locations, production systems) making biosecurity inspection and assessment difficult to manage and enforce. Regardless there are some substantial established and emerging industry sectors that can be prioritised. Imported Barramundi (and non-salmonid finfish) is an example where there is currently no routine post-border testing program for imported uncooked whole and head oneviscerated Barramundi (and non-salmonid marine finfish) to confirm the absence of exotic diseases in these commodities, prior to or upon entry into Australia and no routine compliance assessment to confirm that imported Barramundi match current biosecurity import conditions (BICON) (i.e. species, size and level of processing is correct). This deficiency was highlighted by the detection of kidney tissue in 100% of 119 imported fish samples assessed by FRDC Project 2019-126 "Assessing the biosecurity risk of uncooked whole and eviscerated barramundi and grouper in relation to exotic viruses", while heart, liver, spleen and various mixed organ remnants, were frequently identified in samples. Furthermore, exotic pathogens known to cause high mortality in Barramundi and Grouper were detected in more than 5% of imported fish samples.

e. national surveillance and diagnostic systems

FRDC are supporting IGAB through research to assess the sensitivity of Australia's aquatic animal disease passive surveillance system and undertaking an assessment of the future needs of Australia's aquatic animal disease diagnostic system. These projects that address AQUAPLAN priorities will support IGAB through identification of gaps in surveillance and future resource and capability needs to improve national aquatic biosecurity outcomes to protect Australia's seafood industries.

f. national emergency preparedness, response and recovery arrangements

FRDC highlight the benefits achieved from conducting simulation exercises and supporting enterprise biosecurity planning to support IGAB national preparedness, response and recovery arrangements responsibilities. Recent exotic disease outbreak simulation exercises have been organised by the Department of Agriculture, Fisheries and Forestry (DAFF) and conducted with Australia's Barramundi and prawn farming industries and governments through the FRDC funded project 2021-048 "'Ready, set, go!" preparing for emergency disease outbreaks in aquatic animals". Both exercises have highlighted the benefits of having government staff responsible for biosecurity engaging directly with industry to build appreciation of roles and operational limitations within the context of a disease response. IGAB should consider a greater emphasis on biosecurity preparation during "peace" time as the recent simulations stress this is the best time to identify system gaps and build trusted relationships between industry and levels of government.

j. a national information and intelligence system

IGAB needs to provide greater guidance and commitment to national data sharing initiatives such as the Australian Agrifood Data Exchange. Together with the rapid increase in use and capabilities of AI, digitisation and real time sharing of biosecurity related data will increase the ability of IGAB members to prepare, identify and respond to biosecurity threats. IGAB should consider greater focus on biosecurity related benefits that may be possible through developments in AI and digital data collection and sharing.

l. nationally coordinated priority research

IGAB should acknowledge and maintain linkages to existing aquatic animal disease and biosecurity R&D co-ordination structures, to promote priorities identified to improve biosecurity outcomes for Australia's seafood industries and governments. Aquatic biosecurity R&D priorities relating to IGAB are identified by members of the Sub-Committee for Aquatic Animal Health (SCAAH) comprised of government aquatic biosecurity representatives of each Australian jurisdiction, CSIRO Centre for Disease Preparedness and Seafood Industries Australia (SIA) as an observer. SCAAH provides policy, scientific and technical advice on aquatic animal health and biosecurity to the Animal Health Committee. FRDC Aquatic Animal Health and Biosecurity Co-ordination Program receive R&D priorities for funding consideration from SCAAH representatives on this program.

The national AQUAPLAN 2022-2027 sets out activities and outcomes to improve aquatic animal health and biosecurity developed through a collaborative consultation process between governments, industry and aquatic animal health and biosecurity experts. AQUAPLAN is a about achieving outcomes and is collaboration and action focussed. FRDC supports DAFF to complete R&D activities required to achieve the ambitions of AQUAPLAN and it is suggested that this nationally coordinated research prioritisation for aquatic biosecurity aligns with IGAB.

Balancing R&D investments so more funds were invested in prevention and surveillance RD&E would be a priority. However, there is no clear adoption and impact pathway for RD&E invested in fishing and aquaculture biosecurity prevention. Having a clear understanding of the priorities and who would be responsible for implementing the RD&E outputs would address this. A commitment to adopt recommendations arising from aquatic biosecurity RD&E by government quarantine agencies would improve the RD&E investment in this area.

• How does the IGAB promote collaboration between Commonwealth and state and territory governments?

As described the opportunity for collaboration provided during aquatic disease simulation exercises is an example of a mechanism that has demonstrated the significant benefits gained from bringing together responsible representatives from Commonwealth and state and territory governments (and industry). IGAB should identify and promote tangible activities that require participants to actively engage in activities designed to build biosecurity capabilities and relationships between Commonwealth and state and territory governments (and industry). It is suggested that these types of activities will achieve greater biosecurity related coordination and connectivity between governments (and industry).

Question 2. What changes, if any, could be made to the current cost-sharing and funding arrangements for cross-jurisdictional activities outlined in the IGAB?

From 2008 the Australian seafood industry started involvement in developing an aquatic Emergency Animal Disease Response Agreement (EADRA), referred to as the Aquatic Deed, following the Victorian outbreak of the exotic Haliotid Herpes Virus (HaHV-1) that causes the disease abalone viral ganglioneuritis (AVG). Between 2014 and 2019 industry participated in a protracted process to draft the Aquatic Deed led by the Department of Fisheries and Forestry (DAFF). The Aquatic Deed was based upon the plant and animal deeds that have been developed for terrestrial primary industries. The draft Aquatic Deed described funding arrangements for biosecurity responses to exotic disease outbreaks and proposed agreed costsharing between Commonwealth and jurisdictional governments and industry along a 1/3 – 1/3 – 1/3 principle.

Ultimately the Aquatic Deed was not support by the primarily aquaculture industry sectors that would be signatories due to a range of issues including:

- the inability to fund responses to subsequent outbreaks of exotic diseases in different regions after an initial outbreak
- the substantial annual cost of maintaining the Deed falling to a number of relatively small sectors when larger sectors had withdrawn support for the Deed
- the perception that under the critical shared responsibility principle of the Aquatic Deed, industry is required to pay substantial costs towards exotic disease responses that are most likely attributed to breakdowns in boarder biosecurity that is the responsibility of the Commonwealth government
- concerns that costs to respond to disease outbreaks are likely to be substantial and beyond the capacity to pay for smaller impacted industry sectors

The increase in aquatic disease incursions into Australia suggest that there will be an increasing need for agreed funding and cost-sharing arrangements to support an effective national

biosecurity system that includes IGAB. In the absence of an Aquatic deed IGAB need to engage with industry sector representatives consider alternative mechanisms to develop agreed cost-sharing and funding arrangements.

Question 3. How did COVID-19 affect the functioning of the IGAB?

FRDC supports the observations of the reviewer.

Question 4. Do you have any further comments about the review of the IGAB?

No further comment