Australian Barramundi Farmers' Association

Submission to the Standing Committee on Agriculture and Water Resources: Inquiry in to the Australian Aquaculture Sector

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The Australian Barramundi Farmers' Association (ABFA) welcomes the opportunity to make a submission to the Standing Committee on Agriculture and Water Resources: Inquiry into the Australian Aquaculture Sector.

ABFA is the peak representative organisation for the Australian farmed barramundi industry. We exist to facilitate the profitable and sustainable development of the Australian Farmed Barramundi industry.

This submission outlines the issues that are critical to the ABFA, representing an industry sector that operates in regional, jurisdictional, national, and global contexts. The ABFA, as an engaged participant in the broader industry, would be happy to facilitate any further discussions involving its members, and the wider Aquaculture community.

ABFA is a member of the National Aquaculture Council and Seafood Industry Australia.

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Executive Summary

Australia's barramundi farming industry is ripe with opportunity, enjoying sustainable growth and bringing many benefits to regional and remote areas of Australia, and in particular northern Australia. We have an opportunity to be a world leader in terms of quality, food safety reputation, sustainability, and freedom from disease, and to reap the advantages these bring.

As with all primary producers in Australia, Australia's barramundi farming industry faces its fair share of challenges. With industry investment in promotion and R&D, and industry determination and commitment to continual improvement, many of these challenges can be overcome.

There are however key issues that will require actions by government to address, and when resolved, each will provide significant benefit to industry and the community in the form of increased efficiency, profitability, innovation, employment, food security, regional community sustainability and environmental performance.

Our submission therefore gives a view into the potential of Australia's barramundi farming sector, highlighting:

- The challenge and imperative of effective biosecurity.
- The Challenge of differentiating Australian barramundi from cheap imports, and the opportunities for expansion of mandatory Country of Origin Labelling to food service, and protection of the barramundi name for all Australians.
- Opportunities to streamline and increase the effectiveness of current regulatory frameworks that govern aquaculture activities in Australia.
- The opportunity to support industry growth through market and product development.
- The Challenge of Remoteness and Distance, and the opportunity to invest in a skilled workforce and to support industry growth through investment in infrastructure.
- The ability for businesses to access and commercialise new innovations to expand aquaculture.

The nature and status of Australia's barramundi farming sector

Australia's barramundi farmers operate in a national and global context.

Globally, aquaculture produced 82.1 million tonnes of aquatic animals in 2018 with a value of around US $250 billion and the FAO projects production to increase by one-third by 2030, reaching 109 million tonnes. The forecast is that aquaculture will supply the majority of aquatic protein in people's diets by 2050 (FAO, 2018).

Australia's food and agribusiness industry has been identified as a sector of competitive strength and strategic priority, and Aquaculture is one of Australia's fastest growing primary industry sectors with gross value of production increasing by 5 per cent in 2017–18 to $1.42 billion.

In identifying potential opportunities for Australian businesses to position Australia as a leading supplier of the world's protein, Food and Innovation Australia surmised that if Australian producers were to restructure their food production mix and shift into higher value protein categories such as aquaculture or differentiate their offering through the adoption of new technology and innovations to match global protein consumption, they could capture up to A$55 billion more in production value in 2025 as compared to a business-as-usual trajectory.(FIAL, March 2019)

While there are challenges, and performance varies across the globe, Aquaculture can form part of transformed food production systems that reduce overall environmental impacts. Australia has many opportunities to grow a responsible aquaculture industry, and while there are challenges to the development and operation of aquaculture enterprises, the potential to exploit these natural advantages and develop modern and sustainable aquaculture industries presents a compelling opportunity. (CSIRO 2018)

The Australian Government aspires to double the aquaculture industry to over $2 billion by 2027 (DAWR, 2017), and the opportunities for aquaculture industry development in northern Australia are bright, with estimates that the overall aquaculture industry could reasonably expand by 2030 to five times its current production and achieve GVPs of greater than $1.3 billion p.a. with an additional 1,400 – 2,300 jobs, if the identified opportunities and strengths were captured and barriers and weaknesses were addressed.

Australia has an opportunity and responsibility to provide global leadership for the responsible and sustainable production of healthy aquatic protein.

The potential for Australia's barramundi farming sector

Barramundi is a relatively hardy species that has wide physiological tolerances, and hatchery production of seed is relatively simple. Barramundi feed well on pelleted diets, and juveniles are easy to wean to pellets. The species grows rapidly, reaching a harvestable size (350 g – 3 kg) in six months to two years. It is recognised as having attractive characteristics for marketing. It is a white fleshed fish, that is versatile and easy to cook, and healthy - with half the calories of salmon, barramundi is still rich in Omega-3 fatty acids.

Globally, barramundi production was estimated at 169,000 tonnes in 2017-18, an increase of 20 percent on the previous year, and with an industry value of $US1,014M, and holding a 2% share of the premium white fish category. (Mainstream, 2018)

The Australian barramundi farming industry is a relatively new industry, which is expanding rapidly. Over the past five years, farmed barramundi production has been growing at an average rate of 14% p.a. (5-year Compound annual growth rate). The estimated 2020-21 value is $108 M, and with we anticipate industry value will reach $200 M pa by 2025.

Australian barramundi farms employ diverse production systems ranging from marine sea cages, fresh and brackish water ponds, and recirculation systems. Most of Australia's barramundi farms are in tropical northern Australia (Far north Queensland, Northern Territory, and the northwest of Western Australia), although there are farms in New South Wales, Victoria, and South Australia. Although there are at least 200 licensed farms, only a small number of businesses in the industry are ABFA members, however these members represent more than 96% of production, providing stable employment in regional and remote areas.

At this point in time almost all Australian farmed barramundi is consumed domestically, but globally and domestically there is substantial latent demand for a premium white flesh fish. Barramundi can fill this gap if the industry can address its strategic challenges. Some challenges however need policy, legislative or regional investment solutions.

It is unlikely Australia will ever be a major producer in terms of global volumes but we do have an opportunity to be a world leader in terms of quality, sustainability, reputation for food safety, and freedom from disease; and to reap the advantages these bring.

Opportunities and barriers to the expansion of Australia's barramundi farming sector

The opportunity to support industry growth through market and product development

As the barramundi farming sector grows there will be a need to build sustainable and profitable export markets. Given the higher cost structure of the Australian farmed barramundi industry relative to all other competitor countries, it will be essential to target premium channels in the more affluent markets, particularly in the Asia Pacific region where 'brand Australia' has value and seafood forms a large part of the diet.

The industry will need a strategic, evidence-based brand and export strategy underpinned by a combination of desk and in-country research in both premium retail and food service channels. One of the vitally important platforms of the export strategy needs to be to build export capability and readiness within industry.

The Challenge of differentiating Australian barramundi from cheap imports

The market for barramundi in Australia is estimated to be around 25,000 tonnes per year. It is estimated that up to 60% of barramundi eaten in this country is imported from Asia, wholesaling for around half the cost of Australian product. The problem we face is that consumers understandably think all barramundi is Australian with its Aboriginal name and longstanding position as our 'national fish'.

Barramundi is a premium fish marketing name. While consumers associate and expect that the barramundi they buy at the supermarket or order off the menu is Australian, we have effectively handed that naming advantage to our competitors by insisting via the Australian Fish names Standard that they use "barramundi" to sell their product in Australia, even while overseas Asian Sea Bass is commonly used to identify and market the species.

Our members strive to differentiate Australian farmed barramundi on quality, safety, and sustainability, yet one of our biggest challenges to achieving growth profitably is the difficulty Australian consumers face in differentiating our Australian product from cheap imported barramundi. Our costs associated with labour, transport, energy, and environmental management far exceed those of our Asian competitors.

We consistently see barramundi imports profiting from the consumer expectations that barramundi is an Australian fish. Truth in labelling has been wildly stretched by our international competitors. Examples of this can be easily provided.

Opportunity for Legislative Response - Expansion of mandatory Country of Origin Labelling to food service

Expansion of mandatory Country of Origin Labelling to food service provides the opportunity to transform the Australian seafood industry and deliver a powerful economic stimulus while generating important social outcomes around integrity of seafood labelling**.**

We, together with other Australian seafood producing sectors, have called for CoOL legislation be expanded to include the mandatory labelling of seafood sold in food service. This change would transform the Australian seafood industry and deliver a powerful economic stimulus in many regions, while generating important social outcomes around integrity of seafood labelling.

Labelling of seafood requires a unique approach. While nearly all domestic consumption of other major food service proteins such as beef, lamb and chicken are of Australian origin, close to seventy percent of domestic seafood consumption, or $3.5 billion worth, is imported. Australian seafood consumers are not aware of this and the situation causes an elevated risk of inappropriate pricing, import substitution and reputational damage to Australian producers.

Over two thirds of consumers have indicated they would be prepared to pay a premium of up to 30% for Australian seafood - and participants in the supply chain have taken this opportunity to price imported product as if it was Australian. Market investigations prove that a significant proportion of imported Barramundi is sold under false pretences, either because Australian consumers assume Barramundi is an iconic Australian fish, or because unscrupulous distributors source cheap imported Barramundi and represent the product as Australian.

The economic damage caused by this situation for just one sector (Australian farmed Barramundi) within the broader seafood industry is significant. We have a realistic target to double national production to become a $200 million industry by 2025, but our biggest challenge to achieving this is the uneven playing field we face in competing with cheap imported barramundi farmed.

Expansion of mandatory Country of Origin Labelling of seafood to food service could support:

- Growth in economic value add of $100M for the Australian farmed Barramundi sector.
- An additional 250 direct jobs and 1,000 indirect jobs providing stable local employment in regional areas.

Notably, Barramundi is less than 5% of the total Australian seafood sector. If we extrapolate this gain across the Australian seafood landscape, these proposed reforms present as a massive opportunity to transform the Australian seafood industry by generating $2 billion in economic value and 20,000 full time jobs.

The market share of Australian Barramundi has increased significantly in recent years after mandatory Country of Origin labelling laws were introduced in the retail sector. Once this happened, consumers gravitated towards the Australian product, which typically sells at twice the price of the imported alternative.

In summary, Australian farmers are required to operate to higher standards than many competitors, and Australian consumers want to eat Australian barramundi, and are prepared to pay premium for it. Transparency will enable market forces to operate. Australian consumers ought to be enabled to make informed choices. It is fair, appropriate and feasible. NT legislation has enforced COO labelling requirement for many years. Both local and imported product are on offer on the menus and there is no significant resistance to it from any sector in the local economy.

Opportunity to protect the barramundi name

There is another opportunity to recognise the unique Australian origins of the barramundi and protect the name through applying a geographical indication and registering ‘Australian Barramundi’ as a Certification Trademark (CTM).

The name Barramundi is Aboriginal in origin, but Australia has been slow to take advantage of the opportunity to protect the name, and to market it both domestically and internationally.

While application fees for seeking a CTM may not be too much of a barrier, the process for obtaining a CTM is rigorous and the case would need to be defensible under dispute from other countries.

The resources needed to pursue (and potentially defend) GI rights would be beyond what the ABFA could muster – and in addition, the ABFA sees that the name barramundi belongs to Australia, not to

the barramundi farming sector. Government would need to take the lead to go down this path in partnership with both the farming and wild caught sectors.

The Challenge of Remoteness and Distance

While the aquaculture industry is largely based in regional Australia and makes a significant and positive contribution to regional development and adding diversity to a region's economic base, the remoteness of many farms impacts supply chain costs and makes it difficult to attract and retain skilled labour.

In summary, Australian farmers are required to operate to higher standards than many competitors, and Australian consumers want to eat Australian barramundi, and are prepared to pay premium for it. Transparency will enable market forces to operate. Australian consumers ought to be enabled to make informed choices.

Opportunity to invest in a skilled workforce

The northern Australia aquaculture industry will need between 1400 and 2300 new skilled staff by 2030 to support projected industry growth. (CRC Northern Australia, 2019). Availability of suitably skilled labour has been identified by the barramundi farming sector as a major growth blocker over the next five years.

There is a requirement for industry and governments to build skills to meet industry growth needs, including professional development for current staff, aligning training with industry needs and promoting career opportunities in the northern Australian aquaculture industry among regional communities.

Where needs can't be met domestically, the barramundi farming sector has a significant interest in filling skilled labour needs with skilled migrants. The growth of the aquaculture sector and its skill needs must be reflected in policy associated with funding and places for training and migration.

Opportunity to support industry growth through investment in infrastructure

As with other aspects of the agriculture industry, the fisheries sector would benefit from investment in off-farm infrastructure, from sector specific infrastructure such as cold chain facilities in regional areas to more general infrastructure such as improved telecommunications and space based infrastructure systems, better roads and transport, and social infrastructure in regional and rural areas like schools and hospitals.
Infrastructure improves access to markets and lowers transaction costs for businesses, reduces reliance on government support, increases regional productivity and output and creates new jobs in regional areas. (FRDC submission into the Inquiry into growing Australian Agriculture to $100 billion by 2030)

There is an opportunity for governments to coinvest with the barramundi sector, and potentially other sectors, to establish regional cold chain facilities and processing cooperatives to develop new product forms and distribution channels through economies of scale and co-investment in research and development. Such investment has the potential to grow jobs in regional areas of northern Australia.

Opportunities to streamline and increase the effectiveness of the current regulatory frameworks that govern aquaculture activities in Australia

ABFA and the industry supports regulation that is fit for purpose.

The negative impacts on productivity for the Australian farmed barramundi industry arising from complex, inconsistent and overlapping regulatory frameworks has been identified as a key limiter to industry operations and growth.

Challenges of Environmental regulation

Fish farmers rely on a clean and healthy environment for their operations and support appropriate controls to protect the environment. Uncertainty and excessive regulatory burden on industry however, stifles innovation, long-term investment, employment, development incentive and profitability. Aquaculture legislation is frequently tortuous and covered by too many regulations. After many reviews into regulatory burden, it is still far too difficult to navigate the process, across agencies often with different objectives, too narrow a focus, with veto powers, or the capacity to cause substantial and costly delays.

Many current measures are not science based or are applied without a comprehensive understanding of aquaculture practices and impacts. In Queensland, new sediment and nutrient emission standards for aquaculture under the Reef protection regulations commence on 1 June 2021. Aquaculture operators will be required to meet new discharge standards to ensure new development does not worsen nutrient or sediment pollutant loads – that is have no residual impact.

The high conservation value of the reef is respected, but CSIRO research has demonstrated that most nutrients from prawn farming are assimilated in the receiving environment, far away from the reef, and have had no adverse impacts. Introducing a zero-discharge regime on aquaculture will stymie the growth of the industry in Queensland but will do nothing to save the reef.

We have unsuccessfully proposed that nutrient and sediment loads be based on the residual nutrients after environmental assimilation in the receiving environment has been reviewed. On the intake side, at certain times of the year, discharge from barramundi farms can be demonstrably better quality than intake water. Therefore, our members have argued that the net load in intake water should be deducted from the net load released in the receiving environment. To do otherwise is to penalise our members for environmental services. Regulation must acknowledge this. The use of advanced technologies such as remote sensing could be an excellent auxiliary in this field.

In summary, the aquaculture industry is consistently penalised to an extent far beyond other land and water users purely because we are new sector. An evidence-based, streamlined approach to environmental regulation, in partnership with industry, is needed to allow Australian producers to do what they do so well – responsibly produce high quality, healthy products and provide economic opportunities to regional and remote Australia.

The regulatory burden experience:

"We already highly constrained with water quality parameters that sometimes cannot always be achieved as a result of high rain fall or even just the natural run off from the national park and wet tropic areas. Natural decaying vegetation and feral pigs create a lot of nutrients which pass past and even into our farm's intakes. Any higher requirement for water quality parameters will make some farms discharge parameters unachievable.

I should not be put in the position where compliance costs render my farm unviable. Nor should we have to spend copious amounts of money to comply with policy that constrains an industry that is passionate about water use already and one that is doing more with water treatment than any other farming sector that has diffused water runoff.

The process of attaining approval for the expansion of an existing farm, let alone a new farm, can burn thousands of dollars in red tape. For me to tell a person in the department that nil discharge of nutrients and suspended solids can be achieved when there are so many unknown variables - and the fact that CSIRO has done the studies that show that our waste waters do not enter the barrier reef lagoon - is outrageous." Qld barramundi farmer

The opportunity from Aquaculture Development Areas

The identification of aquaculture development areas/zones are an opportunity to support industry growth, but it must be recognised that unless there are streamlined paths to approvals and regulation, they make little difference.

Additionally, they must be sited within the optimal growing zones for aquaculture species. As an example, in Queensland, six Aquaculture Development Areas (totalling approximately 7048 hectares, for the purpose of land-based marine aquaculture) are in the main, outside the optimal temperature zones for barramundi farming.

There is opportunity for jurisdictions to adopt spatial modelling and remote sensing tools to guide aquaculture development planning, identify appropriate thresholds, and monitor impacts.

Harmonised access to safe and effective Agvet Chemicals

The ABFA supports the review recommendations to deliver an efficient, evidence-based national system for Agvet Chemical Regulation, while recognising the small scale of the Australian market.

The challenge and imperative of effective biosecurity

For the barramundi industry to reach its full growth potential, it is essential that optimal health of farmed stock is maintained, and significant disease impacts are minimised. The competitive advantage of being free from many important diseases also must not be jeopardised.

We have been fortunate to have not yet encountered a significant exotic disease incursion, such as the incursion of white spot syndrome virus (WSSV) which adversely impacted the Australian prawn farming industry first in 2016, and again in 2020.

The most effective mechanism used globally in animal production systems to reduce the risk of external disease incursion is the maintenance of a high level of biosecurity. This must occur across all levels, from the country border to the individual tank or pond. Importantly and uniquely, once a disease is in the aquatic environment, it is highly unlikely that it can be controlled.

ABFA and its members are highly nervous that current import controls will fail to protect the industry, and wild barramundi stocks. The 1999 import risk analysis (IRA) was completed at a time when the industry was very small – somewhere in the vicinity of 1000 tonne pa. Things have changed and we are not an inconsequential or disposable industry.

We fear diseases are rapidly moving ahead of policy and the diseases listed by the OIE and within the 1999 IRA, do not account for new and emerging material disease risks. There is an expanding body of scientific evidence that backs this.

There are currently no mandatory requirements to decontaminate (e.g., cook) imported barramundi (and other species carrying exotic pathogens of concern), or processing wastes (gills, guts, skeletons).

There is currently NO routine post-border testing performed on imported uncooked whole and eviscerated barramundi commodities, so the prevalence of exotic pathogens in imported barramundi is unknown.

There is currently NO routine assessment of imported uncooked eviscerated barramundi relative to import conditions, so the compliance of imported barramundi to import conditions is not known.

There are currently NO measures that prevent further processing of imported uncooked whole and eviscerated barramundi.

There are NO functional controls on uncooked processing waste to prevent it being discarded or released into natural waterways as bait, berley, or cheap disposal.

There are currently NO methods in use to categorically determine the country of origin or differentiate farmed and wild-caught whole and eviscerated barramundi. Thus, there remains an avenue for product substitution that can avoid some controls on aquaculture product.

An independent surveillance study we commissioned will shortly be published, we anticipate that this report will demonstrate that the current controls are failing and continuing to expose our developing industry and wild stocks of barramundi that supports substantial tourism revenue to risks posed by exotic diseases.

We hold valid concerns that can only be addressed through an in-depth review and update to the 1999 IRA. We have iterated our willingness to offer support and resources to back the department to accomplish this as a matter of urgency.

In the meantime, the risks continue to expand. So, until a full risk analysis is completed, we seek an immediate halt on imports of high-risk product.

We have no issue with low risk imports such as fillets. We have a big issue with high risk products such as whole barramundi, and improperly eviscerated product that can carry viable disease agents. We are not talking about halting large volumes. Australia imported just over 20,000 tonnes of barramundi products from 15 countries between Sept 2016 and Sept 2019. Of this, 172 tonnes were whole barramundi – that is 8% of all barramundi products imported. It can be anticipated that the gap from high risk products will be filled with fillets – as happened in 2017 with tightened controls on product from Thailand.

This will have a minimal impact on trade, but it may avert a devasting impact on this industry and wild stocks.

Opportunity to identify the volume and form of the barramundi being imported into Australia.

Compounding the import biosecurity risk, under the International Import Information - Harmonised Tariff Item Statistical Code (HTISC), Lates calcarifer (barramundi) is not identified in the import data. As such, we are unable to obtain more detailed import data as to area of import, volume, and form (fillet, skin on, whole etc). ABFA understands that this is a complex matter to address and involves the Australian Bureau of Statistics and Customs and involves a fee for undertaking a review.

The ability for businesses to access and commercialise new innovations to expand aquaculture

Through innovation, investment, access to research capability and determination, the industry can continue to improve production, identify, and develop new products, develop new markets and continue to expand.

Australian aquaculture is generally well supported with world class research. The ABFA has entered into an Industry Partnership Agreement with the Fisheries Research and Development Corporation as an effective model for government and industry co-investment in industry-led research development and extension.

Challenges in R&D Investment direction

At times, and where there is no effective engagement with industry and R&D funding can be at odds with industry priorities. An example of this is investment in aquaculture of new white fish species where there are no obvious drivers for the investment, little consideration of impacts on established sectors or markets and little evidence of reasonably return on the public dollar.

Opportunities for innovation to reduce energy intensity

Aquaculture carbon emissions and energy intensity vary with farm scale, culture technology and intensity, site, and logistics. There is scope to explore more energy efficiency options, and to ensure fair and transparent pricing.

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