4th April 2016.

Productivity Commission Inquiry (2016) into the Regulation of Australian Marine Fisheries and Aquaculture Sectors.

Submission from Australian Prawn Farmers Association (APFA).

Background

APFA is the national peak body for Australia's prawn farming industry. The Australian industry currently comprises 25 farms in NSW (1) and QLD (2) and produces 5282.8 tonnes of prawns from 600 hectares to the value of $87.7 million. No new green field farm has been developed since early 2000 in Australia and this has been attributed to complex regulatory arrangements for aquaculture particularly if a proposed development happens to be in the Great Barrier Reef Marine Park area.

Testament to this is a patient proponent, known as (3) Guthalungra, who according to a (4) Pivot North inquiry - has had to endure many frustrating years "*preparing expensive and onerous compliance reports required to meet Australia's strict environmental standards that may be unreasonable".* Some fifteen years later and the farm now has GBRMPA approval and is now awaiting local council approval.

Early 2010 the then Federal Department of the Environment, Water, Heritage and the Arts approved the Guthalungra development with the condition of "no net increase in nutrients/sediments" which has effectively curtailed development of pond base aquaculture in coastal regions adjacent to the Great Barrier Reef.

For more than a decade APFA has been campaigning for regulatory reform to allow aquaculture to develop, we have contributed to numerous Federal and State inquiries and have provided written and verbal submissions on issues relevant to our industry and development. In Queensland APFA has lobbied for an Aquaculture Act as a one stop shop for dealing with industry issues, approvals and developments.

Despite the likes of Fisheries Ministers Tim Mulherin and Henry Palaszcuk while Minister(s) of the Department Primary Industries & Fisheries during 2004 – 2005 supportive of an Aquaculture Act nothing has happened. Whilst the higher levels of government support at times the concept of an Aquaculture Act in Queensland actually getting the administrative staff to do it has been impossible and there still exists a complex and frustrating process for any new farm.

(1) NSW DPI http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0009/595260/aquaculture-production-report-2014-2015.pdf
(2) QDAF https://publications.qld.gov.au/dataset/3e2c107d-c49e-4b75-9994-63e513280824/resource/faa76a80-3bef-4591-b9f2-490068ee6b5f/download/aquacultureproductionsummary201415.pdf
(3) Guthalungra approval http://www.environment.gov.au/epbc/notices/assessments/2001/138/approval-decision.pdf
(4) Pivot North Inquiry http://www.aph.gov.au/jscna/report

APFA are pleased to provide input to this new inquiry but respectfully request that the comments and feedback that this inquiry receives does not languish among the shelves of the numerous recommendations and reports that already exist and thereby not waste the time of those who have provided comprehensive input.

INFORMATION REQUEST

Have any jurisdictions been able to successfully balance environmental and economic considerations and potential conflict with other resources uses? How did they achieve this success?

In APFA's opinion Tasmania, South Australia and Western Australia have various approaches to aquaculture development that is perceived to be more favourable for growth. These states were looked at more closely by (5) Queensland Competition Authority, Draft report, Aquaculture Regulation in Queensland, Draft 15 July 2014.

Tasmanian government's Marine Farming Planning Act 1995 promoting marine aquaculture through the establishment of aquaculture zones. These zones and permissible operational parameters are described in the Marine Farming Development Plans (MFDPs) for which there are 14 MFDPs and the total leasable area is approximately 11,000 hectares and valued at $550 million per annum. Compare that to prawn farming in Queensland alone – valued at $82.6 million from farming a mere 569 hectares.

South Australia has a total leasable area of 11,000 hectares with PIRSA as the facilitator to identify suitable locations for marine aquaculture zones.

Western Australia is in the process of creating statutory marine aquaculture zones and under their statutory marine aquaculture zone system aims for applications to be approved in an enviable six to eight weeks.

In its submission to the QCA review of aquaculture in Queensland – Seafarms, the proponent of project Sea Dragon – a proposed 10,000 hectare prawn farm development estimated to be worth $1.45 billion, stated that they had been frustrated by "*business risk associated with the complex regulatory environment in Queensland, and has looked to Greenfield development in WA or the NT as an alternative."* (6) (7)

(5) Queensland Competition Authority (QCA) Aquaculture Review http://www.qca.org.au/Productivity/Productivity-Projects/Review-of-Queensland-Aquaculture-Regulation
(6) QCA draft report submissions **http://www.qca.org.au/getattachment/63e1babe-f0b0-46b5-8c36-a1c13c5374dc/Seafarms.aspx**
(7) Seafarm History & Sea Dragon proposal **http://seafarmsgroup.com.au/seafarms-history/**

INFORMATION REQUEST

Are existing regulatory arrangements well-targeted and efficient means for managing aquaculture operations and addressing potential environment impact? Have regulatory arrangements inhibited the productivity and competitiveness of aquaculture in Australia?

APFA would argue that current regulatory arrangements are ineffective do not allow aquaculture to develop on any national scale and particularly in Queensland in regions of Great Barrier Reef Marine Park. The 'elephant in the room' that will continue to inhibit aquaculture development within GBR regions continues to be complex state and federal bilateral agreements and GBRMPA a separate jurisdiction who can veto any decision for aquaculture development through its ability to turn on or off aquaculture regulations as confirmed with relevant State environmental authorities and outlined below:

Great Barrier Reef Marine Park Authority has jurisdiction over the development of aquaculture facilities in the Great Barrier Reef Marine Park under the Great Barrier Reef Marine Park Act 1975 (the Act) and the Great Barrier Reef Marine Park Regulation 1983. Any proposed development of an aquaculture facility within the Great Barrier Reef Marine Park or that proposes to have an intake or outfall structure within the Great Barrier Reef Marine Park requires an approval under the Act.

The Great Barrier Reef Marine Park Authority also has jurisdiction over the discharge of water from new or expanding aquaculture facilities in the Great Barrier Reef catchment under the Great Barrier Reef Marine Park (Aquaculture) Regulation 2000 (Aquaculture regulation). The Commonwealth Minister for Environment and Heritage accredited Queensland Law in 2005 as providing the requisite degree of protection for animals and plans in the Great Barrier Reef Marine Park and as such this regulation has not been applied since that time. Please note that this accreditation agreement only applies to the Aquaculture regulation (i.e. the discharge of aquaculture waste from the Great Barrier Reef catchment to a waterway leading to the Great Barrier Reef Marine Park) and does not apply to approvals granted under the Act. *(8)*

The Great Barrier Reef Marine Park (Aquaculture) Regulations 2000 (the Principal Regulations) commenced on 23 February 2000. Currently the Principal Regulations are 'turned off' as Queensland law has been accredited under the Principal Regulations. The accreditation of Queensland law proceeded on the basis that it provides the requisite degree of protection for the Marine Park environment. The accreditation of Queensland law will be reviewed after a specified number of new aquaculture facilities are permitted by Queensland. As a consequence of a review, the accreditation may remain, may be revoked in full or may be limited as it applies to particular premises. If the accreditation were to be revoked or limited, the Principal Regulations would be 'turned on'.

(8) Com Law GBR Aquaculture Regulation 2002 http://www.comlaw.gov.au/Details/F2007L00537/Explanatory%20Statement/Text

These Aquaculture Regulations were put in place around 1999 when a prawn farm proposal called Armstrong Beach in the Mackay region (9) was approved by local government. The farm was apparently poorly designed and sought to discharge directly onto the beach above high tide line.

Public outcry at the time was akin to a "lynch mob" with well organised protests, helicopter rides over the proposed area and protesters wearing "No Prawn Farm" t-shirts. This led to GBRMPA putting in place the Aquaculture Regulations 2000. The then Commonwealth Minister used this action to trigger to request a Public Environment Report (PER) on 15th January 1999. Needless to say the proponent at the time did not provide one and the farm was never developed and still sits idle today.

Some fifteen years later that one incident has locked up prawn farming development as environmental vandals leading to Commonwealth agencies still living in the past and using the EPBC Act's precautionary principle against any new prawn farm application despite the rest of the industry having been operational now for around thirty years.

APFA were extremely pleased with (10) Joint Select Committee on Northern Australia – Scaling Up – Inquiry into opportunities for expanding aquaculture in Northern Australia released February 2016 – recommendation 4 – stated "*the Committee recommends that the Great Barrier Reef Marine Park Authority, in accordance with the planned actions outlined in its Regulatory Plan 2014-2015, revoke the Great Barrier Marine Park (Aquaculture) Regulations 200 (Cwth).*"

Further this same Joint Select Committee released a paper on (11) Northern Australia, Pivot North, Inquiry into the Development of Northern Australia: Final Report, September 2014, Canberra – and provided the following recommendations into aquaculture:

Recommendation 35

5.115 The Committee recommends that the Australian Government facilitate the development of the aquaculture industry in Northern Australia by improving the regulatory framework.

5.116 In the evidence presented to the Committee, it was argued that there was a serious problem in the regulation of prawn aquaculture. Despite massive investment in science by governments to prove the economic viability and environmental sustainability of prawn aquaculture, and commensurate investment by the industry to comply with strict environmental guidelines, the industry is stalled in the approvals process on the cusp of a major expansion. The result is that it is easier to import prawns from overseas countries that have benefited from access to Australian research than it is to grow the prawns here.

(9) Armstrong Beach – APFA media archives "Hundreds unite to protest Sarina aquaculture facility (23/11/99)". Attachment.
(10) Scaling Up – Inquiry into opportunities for expanding aquaculture in Northern Australia, Joint Select Committee on Northern Australia, February 2016 http://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Northern_Australia/Aquaculture/Report
(11) Pivot North Inquiry http://www.aph.gov.au/jscna/report

5.117 The Committee notes that a lot of money has been spent on the science of Farming prawns, especially regulating nutrient levels in the water, and that Australia has developed best practice for the management of farming tiger prawns. ***Australia's high level of expertise in this area, however, has largely been exploited for the benefit of foreign growers.***

Despite our industries strict adherence to environmental regulations, the imposition of a development condition requiring a new prawn farm to operate with a zero net nutrient or sediment discharge in their discharge waters, APFA believes has hamstrung the prospect of prawn farming expansion in the north and GBR regions.

Commonwealth authorities need to be challenged on the decision making process that insists one industry have "zero net" nutrient release under the EPBC Act while other industries are not treated the same. This anticompetitive and discriminatory way in which the principles of the EPBC Act and the Precautionary Principles is evident in what GBRMPA allow with other developments.

The EPBC Act referral guidelines misrepresent economic sustainable development (ESD), by suggesting that the next generation's impacts even if they are small are additional to those of the existing generations and therefore 'significant' placing the onus on the future to change its ways. ESD suggests the present day should change practices, not the future but if the present day doesn't make allowances for future then an intergenerational debt is created. While the EBPC Act is founded on the principles of ESD and ESD is supposed to benefit future generations – who in the future of Australia benefits from ongoing market failure and protection of existing low productivity land users?

An example of this contradictory application was evident at the time APFA were providing information to the Queensland Competition Authority review into Aquaculture, and the Guthalungra proponent had endured a 14 year approval process, a cane farm development was approved by the Burdekin Shire Council, only 40-50km from the Guthalungra development and will be discharging directly into the same receiving environment. (12) The property was "Glenyarra" station at Inkerman, owned by Rushel Produce and took less than 6 months to be approved. It was a 3000ha property and approved for 600ha of 'intensive agriculture'. The reference number was Cons 13/0012 on the Burdekin Shire Council website.

Another example is the controversial Abbott Point (13) dredging project approved by GBRMPA authority.

(12) Cane farm approved http://www.burdekin.qld.gov.au/wp/media/downloads/2013/10/CONS13-0012-Chapmans-Glenyarra-Station-combined.pdf

(13) December 2013 Minister Greg Hunt approves Abbott Point project http://www.gbrmpa.gov.au/about-us/consultation/current-proposals-completed-assessment/abbot-point-capital-dredging-project
http://www.gbrmpa.gov.au/__data/assets/pdf_file/0007/139948/Statement-of-Reasons-re-Sea-Dumping-Permit-SD14-01.pdf

APFA members believe that sections of the EPBC Act use the precautionary principle against aquaculture development when in fact under Section 3A (c) the principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

In particular APFA considers this industry has been unfairly singled out and has been subjected to industry specific regulations which have been forced on us despite the best and most rigid of scientific studies which produced 46 peer reviewed research papers over a seven year period. These exhaustive studies led Dr Nigel Preston who at the time was CSIRO's eminent Flagship Director (Acting) Food Futures National Research Flagship | Marine and Atmospheric Research, are treated in a cavalier fashion it certainly casts great doubt over "the adequacy, timeliness and transparency of independent work", to support government decisions impacting the reef.

The 46 (14) scientific studies have shown our discharges have had NO adverse ecological impacts on the receiving waters and that nutrients could not be detected 2klm downstream in the estuarine environment, therefore the majority of farms do not impact on the reef.

Seafarms Group Limited ambitious plans to develop a massive 10,000 hectare prawn farm in Australia. Currently Australian prawn farms operate on a mere 600 hectares. The Sea Dragon project also responded to the QCA Aquaculture Regulation review stating that *"Seafarms has been frustrated by the business risk associated with the complex regulatory environment in Queensland, and has looked to greenfield development in WA or NT as an alternative"* (15) for the new venture. Queensland and indeed North Australia are likely to continue to miss out on opportunities (16) like this because of overly stringent regulation requirements.

Queensland State Government's own Reef Quality Water Protection plan baseline date from 2009 (17) revealed 16,800,000 of total suspended solids were released into GBR regions and our industry accounted for a mere 1,314 tonnes (0.008%) of that. See table below:

(14) CSIRO The environmental management of prawn farming in Queensland – worlds best practice, research summary
http://apfa.com.au/wp-content/uploads/2015/01/CSIRO-Research-summary-1.pdf
(15) http://www.qca.org.au/getattachment/63e1babe-f0b0-46b5-8c36-a1c13c5374dc/Seafarms.aspx
(16) http://www.heraldsun.com.au/business/in-the-black/prawns-a-top-commodity-for-changing-group/story-fni0d787-1227060787333
(17) http://www.reefplan.qld.gov.au/measuring-success/report-cards.aspx

Region	Suspended solids per annum/tonnes	Total nitrogen tonnes	Dissolved Nitrogen tonnes	Total Phosphorus tonnes	Dissolved Phosphorus load tonnes	PSII pesticides/kg
Cape York	2,000,000	14,000	5,500	1,500		
Wet Tropics	1,400,000	16,000	11,000	2,000	530	10,000
Burdekin	4,700,000	14,000	5,700	2,600	430	4,900
Mackay Whitsunday	1,500,000	8,100	3,300	2,200	370	10,000
Fitzroy	4,100,000	15,000	2,700	4,100	245	2,300
Burnett Mary	3,100,000	13,000	2,800	3,100	350	990
Totals	**16,800,000**	**80,100**	**31,000**	**15,500**	**1,925**	**28,190**

APFA data from a (18) 2002 Productivity Commission report:

Suspended solids (TSS) per annum/tonnes	Total nitrogen tonnes	Dissolved Nitrogen tonnes	Total Phosphorus tonnes	Dissolved Phosphorus load tonnes	PSII pesticides/kg	Suspended solids per annum/tonnes
1,314	53		6.5			

To put these figures into perspective - if our 1,314 tonnes of TSS was five inches high, the 16,800,000 would represent the height of Queensland's highest mountain - Mount Bartle Frere.

To justify the need for “zero net” discharge mentality when clearly the above table shows prawn farming contributes very little to the loads currently impacting the reef. In fact this was confirmed in the Great Barrier Reef Strategic assessment and 25-year management plan. (19)

Prawn farming has a point source discharge and farms in Queensland must adhere to Environment Heritage Protection strict licence conditions, measure and report discharge of total suspended solids, Nitrogen and phosphorus.

What if any, development have there been in the aquaculture industry since 2004 that the Commission should specifically consider in this inquiry?

In 2013 CSIRO announced a new prawn feed called Novacq that was produced using no fish meal. Some APFA farms have assisted CSIRO commercially develop this new feed which has been hailed an enormous success and a huge tick for sustainability. (20)

(18) http://www.pc.gov.au/__data/assets/pdf_file/0003/17607/sub045.pdf
(19) Refer Page 159 http://www.gbrmpa.gov.au/managing-the-reef/reef-2050.
(20) https://www.youtube.com/watch?v=hM0djCmj7_8

In 2013 Seafarms Group undertake a feasibility study to develop a 10,000 hectare prawn farm in Northern Australia called Sea Dragon. The $1.45 billion project said to create 1600 jobs is awarded Major Project Status by Australian and Northern Territory Governments in July 2015 and in September 2015 Nordic investment bank Pareto Securities is hired to help secure financiers for the project. (21)

While there have been no new prawn farms developed in Australia since around the year 2000, some existing farms have started expansions. A Mackay farm is in the process of adding 30 hectares to its existing 33 hectare farm and a farm in Mossman is currently undergoing plans to double its size adding an extra 30 hectares to the current farm.

Even the Mackay farm expansion has not been without its issues, delays and frustrations:
1999 – The farm is issued a licence pre-EPBC act and GBRMPA to operate a 42ha prawn farm. The farm has only ever had 33ha and the converted 9ha into settlement system to remediate water.
2005 – The farm receives a letter from the Minister of Environment, in conjunction with GBRMPA, stating that the Federal Government deems that the State Government has jurisdiction to look after aquaculture licences, and that the farm can operate under the original licence as managed by the State.
2006 - The State Government introduced the concept of running farms on a load based system. This would not affect the farm licence and the farm was supportive of the change. It allowed the farm the same nutrient output, but the allowed nutrient output was contingent on number of ponds. 2007 – The farm started the process of expansion and went through the QLD State Development application process. There were no triggers in the application process to defer to GBRMPA or Federal Government for any further approvals. The development meant the same level of discharge but over a larger number of ponds. Hence the farm met the same nutrient allowance; however the farm was more efficient. There were Referral agencies to contact as part of the Development Approval. The farm contacted them all, shared all relevant information, and published a public notification. GBRMPA or any other Federal Agency was not on the list. GBRMPA did not contact the farm following the public notification.
2008 – It took more than 18 months to finalise the development application. In 2008, the farm also applied for an extension of the development but due to financial concerns the farm did not proceed.
2015 – The farm was still operating 33 ponds and received the relevant development approvals and extension. They started building ponds. They then received a letter from Federal Department of Environment stating that the farm was potentially in breach of the EPBC Act – Section 18, and there was a potential impact on a sensitive area.

(21) http://seafarmsgroup.com.au/seafarms-history/

The farm has undertaken impact monitoring studies since the start of their licence, which proves scientifically that there is no impact. The farm was asked to provide all archived documents within 2 weeks (which was challenging), only to find out that the relevant person at the department was on leave for an undefined period of time, yet demanded documents within a very short time frame. 2015 – The Mackay farm received their official approval.

With existing farms expanding, some latent farms have started to come back into production with new ownership and over the last couple of years APFA has fielded numerous enquiries from Asian investors eager to get into the Australian prawn farming industry.

A recent mortality syndrome that affected two regions in Queensland highlights the need for vigilance in maintaining and strengthening biosecurity protocols, procedures and plans. (22)

Are there any factors outside the regulatory environment that have significantly limited the productivity and competitiveness of aquaculture production in Australia?

No new farm development has meant that those who study aquaculture related subjects are not able to find employment in their chosen field and hence some institutions have ceased aquaculture studies in their curriculum. An example of this was Sunshine Coast TAFE and the teachers who taught aquaculture subjects were made redundant about five years ago. One of these is now a Registered Training Officer for aquaculture in Queensland and has been delivering successful up skilling for on farm workers over the last couple of years.

Full time employees on farms have remained stable and farms use different methods for employing seasonal workers at harvest and processing time. When the mining sector was strong seasonal workers were difficult to source and farms relied on back packers, grey nomads or casual workers from neighbouring cane farms.

With anticipated growth of prawn farming expected to increase 17 fold the number of hectares farmed and the Sea Dragon project stating it will require 1600 staff having access to qualified personnel will be a challenge.

Knowing that proposed developments and expansions will require access to trained staff APFA have already started to prepare for these upcoming shortfalls. Thanks to funding from Agrifood Skills Australia APFA partnered with James Cook University to undertake "Career progressions analysis – prawn farming sector", October 2015. (23)

(22) http://www.shrimpnews.com/FreeReportsFolder/NewsReportsFolder/AustraliaVibrioOutbreak.html
(23) Career progressions analysis – prawn farming sector, October 2015. http://apfa.com.au/wp-content/uploads/2015/01/Career-Progression-Analysis-Final-Report-28-Oct-2015.pdf

What are the major challenges and opportunities facing the aquaculture industry over the next 20 years?

Lack of political will for aquaculture to develop at a Federal level is a major issue. There is currently only an Aquaculture Statement and industry nationally has been consulted during 2015 on what is required for a National Aquaculture Strategy. If there was a Commonwealth Aquaculture Policy supported by an Aquaculture Act, Australia may not need to import 75% of its seafood needs.

A Parliamentary inquiry 2012 – into the Role of science for fisheries and aquaculture and a submission by Emeritus Professor of Fisheries, University of Canberra, Robert Kearney, PhD, DSc, AM highlighted this perfectly – stating "In a 2009 estimation of adherence to the UN Code of Conduct for Responsible Fisheries, Australian ranked fourth out of the 53 countries surveyed, (Pitcher et al., 2009). Thus by continuing to import the bulk of its seafood from countries with inferior records for sustainable fisheries Australia is effectively exporting responsibilities for the sustainable management of the worlds fish stocks to countries with lesser ability or interest in doing so (Kearney and Farebrother, 2012)". (24)

In the same submission Professor Kearney discusses third party accreditation – "Third party accreditation is actually, rather perversely, giving the impression that the certification that Australian governments provide by accrediting Australian fisheries under various state and Commonwealth fisheries and environmental management acts is not credible. In effect the claim that third party accreditation of the sustainability of fisheries in Australia is necessary represents a public statement that Australia's fisheries research management agencies and the environmental agencies that accredit fisheries through the Environmental Impact Assessment processes, The EPBC Act, or similar processes, are either not competent or they are not to be believed. Why do government agencies not comprehensively and effectively refute such claims, or even assertions?

APFA would like to see aquaculture separate from fisheries. Environment constraints and implementation of marine parks has seen wild catch fisheries to remain stable or in some cases reduce. Having aquaculture as a separate sector governed with strong but supportive regulations could allow growth and development to occur. An example of this would be to change the name of Fisheries Research Development Corporation (FRDC) to Aquaculture Fisheries Research Development Corporation (AFRDC).

(24) http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_committees?url=arff/fisheries/subs.htm

Increased shipping into Australia and the risk of pests and diseases coming into Australia via ballast water. APFA are extremely concerned that ballast water, regardless of what protocols are in place, may still carry, harbour then deposit into Australian waters harmful algal blooms (HAB's) and cysts or microsporidia that can lie dormant until an environmental trigger sets them off.

Reference to ballast water introducing marine pests can be found in (25) 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.

The Senate Finance and Public Administration References Committee – Progress in the implementations of the recommendations of the 1999 Joint Expert Technical Advisory Committee on Antibiotic Resistance (JETACAR) June 2013 – reported that 2 recommendations relating to surveillance and monitoring on Anti Microbial Resistance (AMR) found that *"while systems for resistance surveillance in humans were found to be well established in Australia, there was no similar system of surveillance for animals. The lack of reliable data on antibiotics usage, including monitoring of import volumes and individual consultations, prescription and dispensing data for both human and animal antibiotic use was also identified."*

Australia's Appropriate Level of Protection (ALOP) and biosecurity screening of imported prawns and the Prawn Import Risk Assessment does not take into account new and emerging diseases that have devastated global prawn industries. APFA have been advised by Biosecurity that if a disease is discovered in Australia it is up to the industry to prove that it was not here all along. APFA are currently undergoing an industry surveillance project in an effort to discover prevalence and pathogenicity of Acute hepatopancreatic necrosis disease (AHPND) like syndrome that has been detected in two Australian regional locations. AHPND emerged as a new global shrimp disease in 2010. The Australian strain is being called Penaeus Monodon Mortality Syndrome (PMMS).

Offsets creeping into terminology and regulations that do not have clearly defined rules, costs and parameters. APFA regard environmental offsets as another punitive and expensive regulatory burden which could – depending on the dollars required for such remedial work - very well curtail any expansion or new development. APFA consider an offset to be anti-competitive and ask the future to "forgive" the environmental debts of competing land users, reinforcing the market failure already observed and contrary to the principles of ESD.

The Joint Select Committee on Northern Australia – Scaling Up, Inquiry into opportunities for expanding aquaculture in Northern Australia, February 2016 – recommendation 5 also highlighted that framework for developing offsets in the GBR must be comprehensive, transparent and accessible for potential aquaculture investors.

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

Time frames for approvals – depending where a new farm approval is located and the lack of a Queensland State or a national Aquaculture Act means that any new development must go through a frustrating process of departments who have no set timelines for decisions. A potential new investor could do a quick google search and come across Guthalungra, see the amount of time taken for an approval and either choose a different industry or go overseas where they would most likely be welcome with open arms.

APFA support the National Aquaculture Council submission which makes special mention of the plethora of Acts, State Agencies and other guidelines, policies, codes of practice, strategies and or management plans detailed for the Tasmanian Salmon industry. This was surprising as it appears to APFA that Tasmania has a simple two step approval process.

APFA highlight a CIE Final Report – Comparative review of aquaculture regulation, prepared for Queensland Competition Authority Office of Best Practice Regulation, January 2014. This report was prepared for the Queensland Competition Authority review into Aquaculture and details the myriad of regulations in Queensland and compares them to other states. (26)

The CIE Final Report (27) – Aquaculture in Queensland, Prioritising regulatory reform, prepared for Queensland Office of Best Practice Regulation, 28 February 2013 stated that regulatory barriers to expansion were:

- Costly, uncertain, inefficient and prohibitive environmental regulations
- No structured approach to the allocation of aquaculture space and
- The fragmented regulatory framework

INFORMATION REQUEST

Do the existing regulatory arrangements adequately recognise the different sectors and production methods used in aquaculture and their differing environmental impacts and interaction with other resources uses?

As discussed in detail at the first INFORMATION REQUEST section APFA believes that this industry has been disadvantaged in comparison to other agriculture and mining sectors. We have been disadvantaged because we have a point source discharge, prawn farming is still relatively new 30 years in Australia compared to other sectors and regulations for industry seemingly favour precautionary principle mentality. Other sectors have diffuse run off into GBR regions and it has been well documented that this run off together with climate change has been responsible for degradation of the reef and coral bleaching.

(26) http://www.qca.org.au/getattachment/7c69a3db-3fe4-4803-bce9-85b8ae312172/CIE-Report-Comparative-Review-of-Aquaculture-Regul.aspx
(27) http://www.qca.org.au/getattachment/4f7c7bfb-d9a5-4580-8b8f-9aabfb1dc968/CIE-Report-Aquaculture-in-Queensland-(Feb-13).aspx

Are there technological solutions to the potential environment problems associated with aquaculture?

Yes there are some solutions – and most of Australia's large farms currently use 30% of the farm as a settlement system to reduce suspended solids and dissolved nutrients from discharged pond water before release back into estuaries.

For example - farms already invest $millions of dollars a year in environmental practices by locking up valuable production land as settlement ponds. A typical 50 hectare farm devotes 20 hectare to a settlement system to achieve best practice. If a farm can yield an average of 9,000kg per hectare and sell prawns for an average of $16/kg that is almost $3 million in lost revenue to achieve an environmental outcome each production year.

Some recent developments have included algae scrubbing and worm farm technology. Both systems removing nutrients from discharge and both remedial systems and are not able to achieve 100% "zero net discharge". APFA acknowledge that both technologies are slowly being adopted by some farms.

Where and how has the industry invested to develop solutions?

As stated above an average size farm sacrifices approximately $3 million to implement settlement systems.

To what extent, and under what funding arrangements, should government be involved in developing innovative solutions?

Governments Federal and various States have already invested funds (the extent unknown) over many years conducting reviews and inquiries. Some relevant ones are listed below:

- Productivity Commission, 2004: Assessing Environmental Regulatory Arrangements for Aquaculture.
- Aquaculture Committee Report to PIMC, 2005: Best practice frameworks of regulatory arrangements for aquaculture in Australia.
- Productivity Commission, 2007: Annual review of regulatory burdens on business: primary sector, draft research report.
- Seafood Services Australia, 2009: The costs of regulatory compliance in the Australian seafood industry.
- The CIE, Final Report, Aquaculture in Queensland, 28 February 2013: Prioritising regulatory reform, prepared for Queensland Office of Best Practice Regulation.

- The CIE, Final Report, Comparative review of aquaculture regulation: January 2014 prepared for Queensland Office of Best Practice Regulation.
- Queensland Competition Authority, 2014: Draft report – Aquaculture regulation in Queensland.
- Peters, E. ANI Program, 2015: Barriers to aquaculture expansion in northern Australian – A case study into prawn farming in Queensland.
- Joint Select Committee on Northern Australia, September 2014: PIVOT NORTH, Inquiry into the development of Northern Australia, Final Report.
- 2015 Senator Colbeck initiates DAF to consult with the aquaculture industry nationally as to what a National Aquaculture Strategy would be.
- Joint Select Committee on Northern Australia, February 2016, Scaling Up, Inquiry into opportunities for expanding Aquaculture in Northern Australia.

As an industry representative who regularly contributes and provides input to inquiries, senate submissions and meets with politicians it gets frustrating to know that many final reports contain recommendations to address inhibiting regulations or policy but it seems that a final report sits on a shelf somewhere and no one does anything to address the recommendations until the next inquiry is announced.

Recommendations from each inquiry usually state the same thing that the aquaculture industry is over regulated. APFA were extremely pleased with the latest recommendations from the Joint Select Committee on Northern Australia from Joint Select Committee on Northern Australia – Scaling up, Inquiry into opportunities for expanding aquaculture in Northern Australia, February 2016. It was obvious that the committee listened to industry and understood the complexity of issues that need to be addressed for the industry to develop.

What APFA would like to see now is serious support starting at the Federal level and the initiation of a dedicated task force for at least the next five years to look at ALL past recommendations and actually start regulatory and policy reform to implement change. This task forced should include the likes of – GBRMPA, an NGO group, industry, relevant policy departments and decision makers and a futuristic economist who can evaluate the best use of our land and water resources. As the world approaches 2050 where the population is expected to explode to 9 billion who will all want to be fed aquaculture can provide a sustainable protein source. With a better yield per hectare prawn farming would far outweigh yield per hectare from the more traditional crops like cane or cotton. There currently seems to be no rationale for evaluating the best use of land and perhaps future scenarios will be able to calculate material change of use from traditional farming to aquaculture. Aquaculture is not only a sustainable solution for food production in Australia it is a regional job provider.

A 2002 report prepared for a Productivity Commission inquiry clearly showed prawns having a much higher yield per hectare than the more traditional land users. (28) Figures in the table below taken from Submission to the Productivity Commission on Industries in the Great Barrier Reef Catchment and measures to address declining water quality. A report to Australian Prawn Farmers Association (Inc) September 2002 by ACIL Consulting.

Crop type	GVP 199/2000 A$millions	Area under production 1996/97 (hectares)	GVP $/Hectare
Grazing	1,648	140,000,000	$12
Fruit & vegetables (includes only vegetables, bananas & pineapples	1,064	48,000	$22,167
Sugarcane	974	371,200	$2,624
Sorghum	585	425,000	$1,376
Cotton	485	130,000	$3,731
Prawns	52	500	$104,000

INFORMATION REQUEST

Is a regulatory framework required for aquaculture in Commonwealth waters?

APFA do not require regulation to actually farm in Commonwealth waters but rationalisation of regulation for Commonwealth waters is required for farms wanting to develop in areas of the GBR relative to intake and discharge of water for prawn farming.

APFA agree that a regulatory framework is required for aquaculture in Commonwealth waters. Optimal areas for expansion of Australian prawn farming industry would be in regions adjacent to the Great Barrier Reef. There are currently no specific zones set aside for expansion. Regulators need to agree on science that underpins nutrient discharge, understanding the assimilative capacity of Commonwealth waters and estuaries ability to absorb residual nutrients from farm discharge and why the precautionary principle is predominantly used for an industry that has been farming for thirty years without any significant environmental effect or disasters.

APFA rely heavily on broodstock coming from Commonwealth waters primarily in the Northern Territory. APFA are currently engaging with Australian Fisheries Management Authority (AFMA) and the Northern Prawn Fishery (NPF) to expand the number of broodstock permits to the fishers. At present only 3 permits are issued and individual hatcheries negotiate needs with the fishers who hold these permits.

(28) http://www.pc.gov.au/__data/assets/pdf_file/0003/17607/sub045.pdf

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Hundreds unite to protest Sarina aquaculture facility

Opposition to the Armstrong Beach aquaculture farm continues to grow with more than 350 turning out for a protest rally on Saturday.

Organised by the Armstrong Beach and Freshwater Point Progress Association, the rally featured helicopter flights above the Armstrong Beach facility, giving opponents a birds-eye view of the farm's progress.

Independent candidate for Mirani Barry Gomersall used the rally to announce that he was dumping Labor because of the party's arrogance over the aquaculture site.

The protest also featured a number of other guest speakers including international activist Sue Arnold.

"Sue Arnold currently has a law suit against the USA Government and we received some extremely good advice from her about prosecuting those responsible for the Armstrong Beach facility," Mr Gomersall said.

"We are now looking at a high court injunction on the prawn farm to cease its operations."

Mr Gomersall said Ms Arnold was intending to discuss the prawn farm at the World Heritage Convention in Paris.

"She is taking our fight to Paris and she wants a team of scientists to come out here and look at the destruction, it's a huge mess and she's definitely appalled.

"Sue is also going to assist us in setting up an international group opposing the prawn farm."

Other guest speakers included Armstrong Beach and Freshwater Point Progress Association publicity officer John Jackson, Sunfish Queensland representative Vern Veitch, Wiiri Yuwa Burra representative Norman Johnson.

Mr Gomersall said the helicopter rides over the prawn farm site were a popular attraction.

"About 60 people went up in the helicopter to see what was happening at the prawn farm site."

Other attractions were traditional dances by Wiiri Yuwa Burra people, local bands, raffles and a sausage sizzle.

He said more people than expected attended the rally and it was regarded as a huge success.

"The message from this was that we won't back down, the fight will continue no matter how long it goes on."

All proceeds raised from the event will assist the Armstrong Beach and Freshwater Point Progress Association in its battle against the prawn farm.

GRAHAM Jones, Matthew Lamb, Ian Sutton, Barry Gomersall, Vern Veitch, Sue Arnold and John Jackson rallied together on Saturday to show their support for the anti-prawn farm campaign.

NORMAN Johnson and Paul Butterworth were at the rally.

CAROLYN and George Hol[illegible]d Ca[illegible]d Graham Martin showed their support for the Armstrong Beach and Freshwater Point Progress Association on Saturday.

CHERY[illegible], Maureen Randell and Rose Clark wore their [illegible] at the rally which attracted more than 350 people.