



AUSTRALIAN  
**Prawn**  
Farmers  
ASSOCIATION

31st March 2014.

**Submission to Environmental Offset Bill 2014.**

**Prepared on behalf of the Australian Prawn Farmers Association (APFA).**

APFA thanks you for accepting our submission to the AREC Committee on the issue of environmental offsets and the proposed legislation to achieve them.

We are providing a written submission on the above however, should the committee require it we are only too happy to nominate a representative from our association to appear in person before the committee.

On behalf of the APFA I ask that the committee consider that we are expert at what we do and have always produced a top quality, environmentally friendly farmed product. We sell all we can produce, and will continue to do so if the industry is allowed to expand from \$70 million to \$412 million as we have planned for.

An expansion of our industry could result in 2000 direct jobs being created.

Queensland's Aquaculture Industry - of which prawn farming is the biggest sector - has been constrained to just a mere 700 hectares of production. It is the only primary industry requiring water quality discharge measurements and we must meet the strictest discharge standards in the world.

That of course is how it should be.

From its inception - despite our small size - our industry has been subjected to many more comprehensive, scientific studies into its environmental impacts - 42 AT LAST COUNT - than any other primary industry in Queensland.

Our discharges have had NO and I stress NO adverse ecological impacts on the receiving waters.

Our confident assertion is backed by Dr Nigel Preston, Flagship Director (Acting) **Food Futures National Research Flagship | Marine and Atmospheric Research** CSIRO. We have attached a statement attesting to this from Dr Preston.

To eliminate any risk of adverse environmental effects on the Great Barrier Reef and recapture otherwise wasted nutrients – the industry in conjunction with the scientists have designed and implemented pond discharge treatment systems - which comply with the strictest aquaculture discharge standard anywhere in the world.

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IN fact the standard was established by Queensland's Environmental Heritage Protection Agency (EHP) and endorsed by GBRMPA.

To our horror and dismay - six years ago - SEWPAC and GBRMPA imposed a new constraint - insisting ANY NEW PRAWN FARM must operate with zero net nutrient or sediment levels in their discharge waters.

This has EFFECTIVELY BANNED development of pond based aquaculture in coastal regions adjacent to the Great Barrier Reef.

The cumulative effects of the BAN on jobs both full time and seasonal are very evident. A boost to support industries and to regional communities in the central and north of the state DENIED. Lack of PROSPECTIVE JOB OPPORTUNITIES has seen a number of aquaculture courses being dropped at university and tertiary levels. INVESTORS HAVE SHIED away.

Recently a \$3,000,000 dollar aquaculture venture, I'm told – did not even consider Queensland, a perfect place for aquaculture, the investors commissioned a Queensland company to set up an aquaculture facility in China instead.

Environmental offsets are being suggested as a way forward out of this unfair regulatory impasse; however prawn farmers reject this possible solution. The majority of our operations have no impact on the Great Barrier Reef lagoon.

**We 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 of our expansion or new development plans – because of any extra cost.**

No other primary industry in the Great Barrier Reef Zone is being subject to these same restrictions. Other agricultural enterprises are being approved right now with no requirement for GBRMPA assessment nor regulation. This is despite GBRMPA's own data showing the vast majority of nutrient and solids discharged to the marine park is from other agriculture.

State Government's own Reef Quality Water Protection Plan baseline data from 2009 revealed 16,800,000 of total suspended solids were released – our industry accounted for only 1,340 tonnes (0.08%) of that. See table below.

To put that into perspective if our 1340 tonnes of TSS was 5 inches high, the 16,800,000 would be the height of Queensland's highest mountain - Mt Bartle Frere

The study showed an even greater comparison for nitrogen. Just 53 tonnes (0.066%) versus 80,100 all up.

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As for pesticides – an alarming stark result – we discharge no pesticides compared to over 28,000 tonnes for other rural industries.

Data that can easily be collated from 6 reef catchment areas – Cape York, Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary record the baseline releases in 2009 from grazing, sugar cane, horticulture activities are summarised in the table below:

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
<b>Totals</b>	<b>16,800,000</b>	<b>80,100</b>	<b>31,000</b>	<b>15,500</b>	<b>1,925</b>	<b>28,190</b>

In comparison prawn farm results from 2002 report.

[http://www.pc.gov.au/data/assets/pdf\\_file/0003/17607/sub045.pdf](http://www.pc.gov.au/data/assets/pdf_file/0003/17607/sub045.pdf)

Table four – prawn farm contribution to GBR loads.

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			

Farms have already invested \$millions of dollars a year in environmental practices by locking up valuable production land as settlement ponds (e.g. a Mackay farm denotes 20ha of settlement system out of 53 ha in total to achieve current best practice – this equates to lost production value of \$4,000,000 per year.

APFA formally requests that prawn farming aquaculture be exempted from this and any future consideration of imposing offsets on this industry.

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Given that comprehensive research and studies have already been undertaken on this industry APFA vehemently opposes having any offset policy regulation imposed and calls for an exemption of prawn farming aquaculture under **Division 2 section 7** - of the Environmental Offsets Bill 2014.

APFA states this under **section 8 - What is a significant residual impact** of the Environmental Offsets Bill 2014 on the grounds that we don't to have any significant residual impact on the receiving environment.

I commend our submission to you.

Yours sincerely

Helen Jenkins  
Executive Officer

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## The environmental management of prawn and barramundi farming in Australia

Author: Dr Nigel Preston Acting Director CSIRO Food Futures Flagship

### What science was done:

- Between 1995 and 2001, Australian scientists conducted a major, multidisciplinary program of research that examined several prawn farms throughout the production cycle for several successive years. A key focus was on the ecological impacts of farm discharges on downstream environments and the development of cost-effective effluent treatment systems. The research program was the most comprehensive analysis of the environmental impacts of prawn farming ever conducted.

### What the results revealed:

- **Untreated** discharges from Seafarm (Australia's largest prawn farm) resulted in levels of elevated nutrients that were only transiently detectable for a short distance (2 km) from the point of discharge and there were no obvious effects on downstream sediment processes.
- A subsequent study of a barramundi cage farm in a tidal creek demonstrated that elevated nutrient originating from the activities could not be detected, due to the inherent dynamics of mangrove creeks.

### Outcomes of the research:

- To even further reduce or eliminate the risks of any adverse impacts, and recapture otherwise wasted nutrients, the Australian prawn farming industry developed and implemented **discharge water treatment systems** that enabled them to comply with the strictest aquaculture discharge standard in the world (set by QLD EPA and endorsed by GBRMPA in 2002).
- A direct result of the comprehensive body of scientific research on the environmental impacts of prawn farm discharges, the introduction of discharge treatment systems and compliance with the strictest discharge water quality standards in the world, is that the industry has operated for 20 years with no adverse impacts on adjacent ecosystems.

### Subsequent developments:

- In 2008 SEWPAC/GBRMPA imposed the new constraint that any new prawn farm must operate with zero net nutrient or sediment levels in their discharge waters. The technology to enable the industry to operate under the new constraint is yet to be developed and the industry already operates under the strictest discharge water quality standards in the world. In effect, this is a ban on the development of aquaculture in coastal regions adjacent to the Great Barrier Reef.

**Potential options to enable environmentally, economically and socially sustainable development of aquaculture adjacent to the Great Barrier Reef lagoon:**

- A potential solution to moving beyond the current aquaculture development impasse with SEWPAC/GBRMPA would be to develop a spatial planning framework that includes; environmental and social values, species, production systems, market demand and surrounding uses of on-shore, nearshore and offshore regions. The approach has already enabled the Gold Coast City Council to achieve sustainable expansion of prawn farming in South East Queensland. This was achieved using the discharge water quality standards ratified in 2002. In this context, there is no scientific basis for imposing a constraint of zero net nutrient or suspended solids.
- The outputs from a spatial planning framework would provide a rigorous basis for establishing aquaculture zones along the Queensland coast. Tasmania and South Australia have already successfully developed and implemented science based aquaculture zones and the associated policies. If Queensland were to adopt a similar approach, in collaboration with all stakeholders, this could remove the most critical obstacle to environmentally, socially and economically sustainable development of aquaculture in Queensland, including coastal areas adjacent to the GBR, while ensuring that there continues to be no adverse impacts to the ecosystem health of the GBR.

*Note Peer-reviewed reference to the body of research cited above can be supplied*