Queensland Seafood Industry Association
Submission to the Climate Change: Adaptation for Queensland Issues Paper
October 2011

1. Introduction

The Queensland Seafood Industry Association (QSIA) is the peak industry body representing the Queensland Seafood Industry. Our members include professional fishers, seafood processors, marketers, retailers and other businesses associated with the seafood industry. Our representation to members and the community at large is to promote the consumption of wild caught Queensland Seafood.

The following submission provides a Queensland industry perspective on the myriad of issues that climate change will bring to the sector. The QSIA is pleased to make a submission to the State government through the Department of Environment and Resource Management (DERM).

2. Background

There has been a near saturation in the print and television media about what are the primary drivers of climate change. Add to this a robust political debate on how as a nation we should address the problem then superimpose global activity or inactivity and the climate change debate 'noise' overshadows the actual impact of climate change on the environment, people and businesses. This has been the challenge in delivering messages and undertaking collaborative work across the industry, government and researcher divide regarding the potential impacts of climate change in the Queensland seafood industry.

The QSIA and the Great Barrier Reef Marine Park Authority (GBRMPA) have recognised this and are working together to ensure industry can better prepare itself for the impacts of climate change. The QSIA and GBRMPA formed a climate change and fisheries partnership in 2009 and work with fisheries management to ensure a sustainable future for the Great Barrier Reef (GBR). The following section will provide responses and themes for consideration by the State government.

The QSIA has various roles within key fisheries bodies that help shape the long-term health of the environment as it relates to the GBR. Some of these bodies include:

- Ecosystem Reef Advisory Committee: a high level strategic policy setting body that advises the GBRMPA.
- Reef Guardians Fishers: program designed to educate schools on steps taken to protect the GBR and fishers role in that process.
- Burdekin Regional Management Project: local fishers at the forefront of moves to manage fisheries issues with all stakeholders.

The QSIA will respond to five sections of the issues paper from a seafood industry perspective to the following areas: (1) Scientific and Policy Context, (2) Infrastructure, (3) Ecosystems, (4) Primary Industries and (5) Emergency

Management. Some questions in each of the sections have not been answered as the QSIA cannot provide relevant commentary.

3. Issues Paper Sections

3.1. Scientific and Policy Context

3.1.1. Queensland Government Questions - Part 1

Have you considered how climate science can deliver more for you, and what new climate science initiatives could be considered for Queensland?

QSIA Response

Climate science must continue to outline the potential impacts on fisheries, marine species and frequency of serve weather systems. The QSIA supports continued funding of climate change research at a broad national scale but also at a regional and local level.

As well as continue to outline the potential impacts of climate change is it not incumbent of those undertaking such research to identify and develop frameworks and resources focused on maintaining productivity and resilience despite the apparent increasing impacts of climate change.

New Initiatives

a) Mapping of agriculture and fisheries[1] climate change programs

At this stage there is no single point of reference in terms of climate change programs undertaken across the agriculture and fisheries sectors in Queensland. Why develop a map of this kind?

- To better understand the funding flows between agriculture and fisheries.
- To identify the level at which climate change programs have been oriented, that is, have programs been operationally (business level) focussed; or industry focussed?
- What learnings can the research community identify across the agriculture and fisheries sectors that could be collated and disseminated for use by industry?

b) Tax incentives to encourage changes in business practice

The agriculture and fisheries sectors are under a vast range of regulatory instruments to ensure the production processes do not impact the environment. Given that many of the businesses in the agricultural and fisheries sectors are small business what tax incentives could the State government offer as incentives for continued savings or reductions in the use of fuel and electricity?

[1] For the purposes of this submission 'fisheries' include wild harvest and aquaculture sectors.

3.1.2. Queensland Government Questions - Part 2

1. Do you feel well informed about the risks that climate change poses to your community?
2. Are there any specific areas of climate change science research that the Queensland Government should be undertaking or enhancing?
3. What areas of climate science need better communication?
4. How can we make the modelling of Queensland's future climate more relevant for you?

QSIA Response

Q.1. Climate change information at a State level is not easily identifiable by industry. Peak bodies such as the QSIA and industry champions that have taken an active interest in the topic are more willing to inform themselves.

Q.2. The State government should encourage greater collaboration across disciplines in order to fully address climate change. This has been taking place in the fishing industry for some time. Larger grants should be made available to peak industry bodies that can demonstrate work to improve the understanding of climate change and identify operators that have incorporated better practice in their businesses.

Q.3. Better communication is a constant need; climate change research is often presented in very detailed terms. Data needs to be bundled in such a way as to meet the needs of specific audiences.

Peak bodies, through their nature, will try and be as informed as possible on climate change. The communication challenge is disseminating this through the wider membership. What resources are available to maximise this engagement, thereby substantially increasing the level of understanding required for individual entities to be able to make informed decisions on managing climate change impacts on their business.

Q.4. The best approach the State government can take is to include industry in the development of models to ensure industry can have some involvement in the development of models.

3.2. Infrastructure

3.2.1. Queensland Government Questions - Part 1

Have you considered any other issues for human settlements in the context of climate change adaptation, and what new initiatives could be considered for Queensland?

QSIA Response

With weather patterns being markedly different across regions in Queensland; it is essential that both the State government and industry develop approaches to securing infrastructure.

With growing pressure on Australia's land resources, growing regions of densely populated domestic dwellings subject to the effects of climate change and a seemingly unwillingness to explore and develop new centres for population, Government must make allowances to ensure that appropriate industry infrastructure and favourable operating sites are not lost due to domestic housing pressure.

3.2.2. Queensland Government Questions - Part 2

1. How should the Queensland Government improve adaptation of infrastructure that is privately owned?
2. Where do you see vital connections between infrastructure sectors and systems that could lead to cascade failures if impacted by the climate risks identified above?
3. Do you have any other suggestions or ideas for protecting critical infrastructure in Queensland?

QSIA Response

Q.1. The Queensland government already has assistance available to industry to recover from the impacts of destructive weather events. The Queensland Rural Adjustment Authority (QRAA) provides industry with assistance. There are many factors that will limit the capacity of businesses to apply for funds.

In flood prone areas or amongst communities that depend on certain types of infrastructure[2] should be encouraged to start infrastructure investment funds in order to maintain and repair economic infrastructure. The State and Local government have an obligation to invest in these funds which, in the long-term might help communities to recovery in a more timely manner[3].

What funds are available for industry to make proactive changes to existing infrastructure? This would allow existing infrastructure to be 'climate proofed' prior to a natural disaster, thereby reducing the pressure on recovery assistance schemes through the reduction of numbers of persons applying. An audit could be carried out to ascertain what climate proofing was needed. In most cases government should fund this with the private entity on a dollar for dollar basis. The government contribution component should increase dependant on the worth of the business entity to the local community, region and wider economy.

[2] Key marine infrastructure was severely impacted by the 2011 floods. The infrastructure is privately owned and is still not functioning as full capacity.

[3] Overall the State government recovery response in Bundaberg has lagged behind other areas in Queensland and it is this difference in response that will only be exacerbated as climate change brings more severe weather events along the Queensland coast.

Q.2. Without access to port infrastructure the wild capture component of the seafood industry cannot operate at full capacity. A loss of local caught product means limited to no supply for local seafood retailers.

In a time where Australia claims to be well placed to secure its own food security and meet the food debt of other countries, the inability to secure industry infrastructure from climate change will render this government statement futile and have a detrimental impact on the domestic food supply chain.

Q.3. A co-investment needs to be established between government and the wild capture sector to start infrastructure investment funds to help industry recover from catastrophic weather events.

Conduct an audit so as to identify key industry infrastructure. Ascertain the true economic value of this infrastructure in the supply chain and enter into appropriate funding models so that it is climate change ready and the integrity of 'the chain' is reinforced.

3.3. Ecosystems

3.3.1. Queensland Government Questions - Part 1

Have you considered any other issues for ecosystems in the context of climate change adaptation, and what new initiatives could be considered for Queensland?

QSIA Response

The Queensland government biodiversity paper titled, '*Building Nature's Resilience: A Draft Biodiversity Strategy for Queensland*', outlines a number of threats to biodiversity. In terms of the marine environment it makes the following observations:

> Marine environments in Queensland are suffering from land source pollution, as evidenced in the Great Barrier Reef where land run-off with high sedimentation is degrading the inshore reefs and habitats... a number of human activities continue to have a modifying effect on ecosystems with consequent potential for stress on biodiversity.
>
> These include dredging and spoil disposal, fishing and the impact of recreational use, especially in coastal areas with high population densities[4].

The term 'fishing' is mentioned but no distinctions are made between the recreational, charter or commercial sectors in the document. In this way the term groups very different users of the marine environment. There is no reliable

[4] Biodiversity Strategy (2010, p.6).

estimate on the number of recreational fishers in Queensland so how is this sectors environmental impact assessed?

The commercial fishing sector has and continues to engage on producing better environmental outcomes through participation in environmental management systems (EMS) work[5] and a burgeoning industry take up of climate change mitigation and adaption processes[6].

The ongoing development of ports along the Queensland coastline and the millions of tonnes of dredge spoil that will be produced will have significant impacts on the marine ecosystem. The strategy is silent on the policy debate regarding coastal development where heavy industry (e.g. liquefied petroleum gas (LNG) and mining) will have environmental impacts in the short and long-term versus the political driver of increasing employment and investment. The ongoing development of the mining and LNG sectors in the state will also increase bulk vessel movements along the Queensland coast yet this is not mentioned in the strategy document.

In terms of population pressure the South East Queensland (SEQ) region has a current population of over 2 million residents[7]. By 2031 the Queensland population will be approximately 6.3 million persons with Brisbane holding almost half of the State's population.

Table 1. Actual and Projected Population and Percentage Share of State Population as at June 30

Statistical Division	1986 (%)	2006 (%)	2031 (%)
Brisbane	1,194,132 (45.5)	1,820,400 (44.5)	2,726,800 (43.5)
SEQ	1,592,897 (60.7)	2,706,297 (66.1)	4,243,800 (67.6)
Mackay	117,511 (4.5)	159,869 (3.9)	255,600 (4.1)
Far North	162,981 (6.2)	247,589 (6.1)	344,500 (5.5)
Queensland	2,624,595	4,091,546	6,273,900

Source: Planning Information and Forecasting Unit, Department of Infrastructure and Planning; ABS 3218.0; and Queensland Government Population Projections.

Population will have a bigger impact on biodiversity than the operations of commercial fishers yet this threat is not referenced.

There are extensive areas of the marine environment that are closed to commercial fishing as well as seasonal closures for certain species during their spawning

[5] Commercial fishers have engaged in EMS projects in conjunction with the QSIA; please see http://www.qsia.com.au/ems-project/

[6] The QSIA has collected approximately 30 emissions reports from fishers in the Great Barrier Reef Marine Park. This number may reach 80 by the second quarter of 2011.

[7] Estimated resident population by statistical division and subdivision, Queensland, 2001 to 2009; Queensland Office of Economic and Statistical Research.

period. These permanent closures are more extensive than for recreational fishers. These closures are due to both State and Commonwealth Marine Protected area legislation.

New Initiatives

a) Increased dialogue between DERM and seafood industry

The climate change issue will continue to pose threats and offer opportunities to both government and industry. The continued policy development processes undertaken by DERM will help inform how government responds to climate change but do not necessarily take into account the needs of industry.

3.3.2. Queensland Government Questions - Part 2

1. What key information gaps must be addressed to inform Queensland's response to climate change impacts on ecosystems and biodiversity?
2. Does the projected scale of climate change impacts on biodiversity warrant significant changes in biodiversity management, such as adopting a triage approach?
3. Should government be seeking to conserve existing ecosystems or manage for change?
4. In what ways might current land use and biodiversity management practices be modified and enhanced to address the need for increasingly dynamic and adaptive management of natural systems in a changing climate?
5. In light of inevitable species loss and ecosystem change, how might the Queensland Government prioritise the use of limited public resources and encourage private investment to protect the intrinsic and economic value of Queensland's biodiversity?

QSIA Response

Q.1. DERM and other government agency bureaucrats need more information on the industry level impacts before policies are developed in terms of ecosystems and biodiversity.

Q.2. The focus of biodiversity management should be focussed on coastal development, climate change and illegal fishing. Marine protected areas do not mitigate against these problems and provide a false sense of protection. If water quality (beginning on land) is not monitored and appropriate legislative controls enacted the impacts on ecosystems will have cumulative impacts on the marine ecology and the many end users of Queensland's waters.

Q.3. Government and industry should take a collaborative approach to managing for change.

Q.4. Land use practices are regulated and ongoing reviews of how to get better biodiversity outcomes should not impose a burden on agriculturalists.

Q.5. The underlying causes of species loss should be investigated. This does not mean that industries must actively prove that they are not the cause of injury or death to species of conservation interests.

3.4. Primary Industries

3.4.1. Queensland Government Questions - Part 1

Have you considered any other issues for primary industries in the context of climate change adaptation, and what new initiatives could be considered for Queensland?

QSIA Response

The primary industries sector in Queensland have, at various levels, engaged on the issue of adapting industry to climate change. The QSIA supports the initiatives outlined in section 3.1.1. namely:

- *Mapping of agriculture and fisheries climate change programs*
- *Tax incentives to encourage changes in business practice*

New Initiative

The QSIA is aware of the EcoBiz program has been a success. The generic nature of the tools offered could be tailored to the seafood industry and specifically tailored to the needs of small business that dominate the seafood sector.

3.4.2. Queensland Government Questions - Part 2

1. What would be the most effective and relevant way to present information on the risks and impacts of climate change to your sector and/or region?
2. Who would you trust and be willing to work with to assess the risks and identify opportunities for your business under changed climate conditions?
3. What type of support do you, your sector or industry need from the Queensland Government to help take action to ensure your business is able to respond (adapt) to changing climate conditions?
4. What would be the best approach to providing such support services, i.e. publicly, private or industry based, joint public-industry, or some other model?
5. What would you need to make deeper structural changes in how you undertake your business in the event existing types of agricultural production could not continue?
6. What may make such structural change difficult for you, or your sector?

QSIA Response

Q.1. This will depend on the sector and its information needs. From a commercial seafood industry perspective any dialogue between government and industry on simpler climate change would be helpful. Moreover, all stakeholders should

consider modelling that demonstrates the business (financial) impacts on businesses on a single business and regional impacts. Sector specific workshops held on the 'wharf'. No nonsense language, easily identifiable benefits?

Q.2. This type of assessment should be undertaken by an independent or industry based individual.

Q.3. With the success of programs like EcoBiz the State government has a template to help the commercial fishing sector on a business level.

Q.4. A joint public-private venture to start an enterprise such as 'EcoBiz Fishing'. Initially a public-private approach transitioning to a industry managed business.

Q.5. The commercial seafood sector has and continues to undergo changes to where it can operate; continually loose access due to government intervention (i.e. national marine parks and complementary zoning); loose grounds to port development and continually justify resource allocation between industry and the recreational fishing sector.

The premise of the question is concerning as the sector is facing constant pressure from government and other sub-sectors of the fishing industry. Why? Climate change will have different impacts on land based agriculture versus the marine environment.

It is difficult to identify a climate change criteria so critical and specific to a primary production method or fisheries sector that it would warrant the cessation of an individual farming and harvesting practice. Indeed, if such an outcome were ever contemplated it would undermine the apparent transparency and balance to which legislation is apparently applied to all climate interactive operations.

Q.6. Government must become more flexible in its protection of the environment and should consider the needs of industry.

3.5. Emergency Management

3.5.1. Queensland Government Questions - Part 1

Have you considered any other issues for emergency management in the context of climate change adaptation, and what new initiatives could be considered for Queensland?

QSIA Response

The QSIA recognises that the commercial seafood industry in Queensland does not have a systematic approach to situations involving emergency management. In effect the commercial seafood industry must rely on existing emergency response systems without taking an opportunity to be more involved at a local and regional level.

Climate change impacts will vary along the Queensland coast; with predictions of more cyclone activity by the Bureau of Meteorology (BoM) in the north of the State and more flooding events in the south[8].

The emergency management issue is associated with a number of other issues that have faced the commercial seafood sector. A stronger focus on the productivity and viability of the wider seafood industry is needed so as to ensure that the sector is not unduly impacted (economically and socially) through broad spectrum adaptive measures. The impacts of Tropical Cyclones Hamish and Yasi and flooding earlier this year demonstrated the socio-economic impacts these incidents can have and the need for government to provide financial assistance in a more timely manner.

3.5.2. Queensland Government Questions - Part 2

1. To what extent are adaptive and continuous improvement processes in existing emergency management systems sufficient to accommodate increasing risk and uncertainty from a changing climate?
2. How do agencies and systems prepare for the possibility of simultaneous and serial emergency events in Queensland, Australia and the region as a result of climate change, including for recovery efforts following the emergency phase?
3. What are the opportunities and responsibilities for the private sector, civil society and community members to take account of risk and uncertainty from a changing climate in their preparedness and response for emergencies?

QSIA Response

Q.1. The QSIA would support a system that is continually refining how individuals respond at a (1) local, (2) regional and (3) State level. As the climate impacts on the severity and duration of climatic events future modelling will need to consider the time frames in which a response and recovery takes place across differing segments in the community as opposed to land based agriculture as opposed to commercial fishers operating in a marine environment.

Q.2. As noted above the modelling behind responses may need to change to deal with changing contextual factors; the more industry can be involved the quicker economic activity can recover across the State.

Q.3. In an emergency event all segments of society have an obligation to provide assistance insofar as assistance does not put in danger those providing that assistance. It may be that industry have vehicles or equipment that can also provide assistance and this should be considered by government as potentially increasing the response capacity in the event of a catastrophic weather event.

[8] As noted by BoM (2011), 'Predicting the number of tropical cyclones for the coming season is not an exact science, but rather a likely range. If we consider the average for Queensland as three to four, then we might be looking at a figure slightly higher, of four to five, with perhaps one or two making landfall', BoM website - http://www.bom.gov.au/qld/cyclone/seasonal/

4. Government Assistance Post Catastrophic Climate Events

Overall, the QSIA understands that a changing climate will have impacts across the commercial fishing sector. With potential increases in the severity of cyclone activity in north Queensland and potential repeats of the 2010/11 floods in the remainder of the floods in central and southern Queensland it is likely that commercial fishers will feel the impacts in several ways: (1) loss of access to fishing grounds (e.g. debris in the Burnett River), (2) impacts on business infrastructure and (3) displaced effort.

Government at the Federal and State/Territory levels need to identify commercial fishing impacts as relevant and devastating on those businesses and the families that rely on them. Land based agriculture is very much advanced in Queensland; the same cannot be said for commercial fishing.

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