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Mr Alex Dobes
Aquaculture Review
Queensland Competition Authority
GPO Box 2257
BRISBANE QLD 4001

04 September 2014

Reference: Public Submission - Aquaculture Regulation in Queensland - draft report

Dear Mr Dobes

Thank you for the opportunity to provide comment on the Queensland Competition Authority (QCA) Aquaculture Regulation in Queensland draft report.

It should be acknowledged that Queensland is Australia's largest tropical aquaculture industry producing seven times the tonnage of the Northern Territory and four times the tonnage of the Western Australia aquaculture industries. Queensland ranks third nationally behind Tasmania and South Australia in terms of total production. It also ranks third in finfish production (principally barramundi) behind Tasmania (salmonids) and South Australia (tuna) and generates almost three times more finfish than the fourth largest finfish producer. Queensland also generates 93% of Australia's farmed crustaceans, producing 3,751 tonnes of prawns and a further 41 tonnes of redclaw.

It also needs to be acknowledged that one of the Nation's greatest assets, the Great Barrier Reef (GBR), is under threat from anthropogenic impacts including global warming, degraded water quality from poor land management practices and the residual impacts from unsustainable fishing practices. Expansion of the Queensland aquaculture industry has the potential to add further to the unsustainable loads at a time when significant efforts are being dedicated to improving land based farm practices. This point highlights the importance of not using the poor management practices and standards of other industries which are known to be having unacceptable impacts, as justification for relaxation of management measures for aquaculture.

While industry has long held beliefs that legislation is preventing aquaculture development in Queensland, the state currently has the second highest growth rate (compounding 4% per annum) behind Tasmania (14%) where aquaculture is dominated by 43,249 tonnes of salmonid production (100% of finfish and 90% of total state aquaculture production). If the 4% growth rate is maintained, aquaculture will increase by 300% by 2040 which far exceeds the government's double of production by 2040 target. As highlighted in the draft report, Queensland's *"regulatory frameworks have more similarities than differences, and most differences were superficial."*

Queensland proponents are however faced with additional complexities associated with the management of the natural values of the Great Barrier Reef Marine Park. The review of the Queensland Aquaculture legislation should therefore not be considered in isolation from the Reef 2050 Long Term Sustainability Plan which sets out a strategic path to improving the health of the

reef for the next 35 years. Additionally, the current review of Queensland Fisheries legislation needs to be acknowledged in the finalisation of this aquaculture review.

WWF offers the following comment on the specific recommendations and supporting comment provided in the draft report of the QCA.

Draft Recommendation 1. Terrestrial aquaculture development areas

- A. To assist investors with identifying prospective aquaculture sites, the QCA recommends that the government create terrestrial aquaculture development areas.
- The QCA notes that some development work has already been undertaken by DAFF.
 - Identification of these development areas could be led by DAFF. Broad community and industry consultation will be essential, as will support from relevant local, Queensland, and Commonwealth government agencies.
 - An audit of approved but unused sites may assist in the early identification of development areas.
 - The aquaculture development area should address issues of groundwater quality, to avoid future litigation risk from neighbouring landholders concerned about the impact of saltwater aquaculture ponds.

WWF response

The development of terrestrial Aquaculture Development Areas (ADA's) has merit. The development of these zones should include incorporation of all existing legislative and planning constraints and involve significant stakeholder input during their development phase.

Given the likely preference for the siting of the proposed 450 hectares of ADA's in areas adjacent to the Great Barrier Reef, the spatial planning process needs to be inclusive of the short, medium and long term targets a) in the Australian and Queensland governments' Reef Water Quality Protection Plan (Reef Plan) and b) proposed to be included in the Reef 2050 Long Term Sustainability Plan (Reef 2050 Plan). Reef Plan aims for 'no detrimental impact' on Reef health from the quality of water entering the Reef from broadscale landuse by 2020, and cutting the anthropogenic load of dissolved inorganic nitrogen by half compared with the 2009 level. The Reef 2050 Plan highlights the actions to be taken over the next 35 years to protect Great Barrier Reef World Heritage Area's natural values including its Outstanding Universal Value. For example, it is anticipated the Reef 2050 Plan will contain a number of actions in terms of water quality guidelines and coastal habitat protection targets.

The Great Sandy Marine Aquaculture Plan (GSMAP) provides an example of how such a plan can be developed and accredited by relevant State and Commonwealth organisations to help reduce the legislative burden to potential developers by identifying candidate areas for aquaculture development and the associated operational conditions.

- B. The QCA recommends that the government set a target for establishing aquaculture development areas.
- The target could be the identification of development areas enabling 450 hectares of aquaculture operations within two years of the Government's response to the QCA's recommendations. Public reporting of progress against this target could be provided at six-monthly intervals.

WWF Response

WWF questions the basis of this target, particularly its ecological sustainability. Given the current level of nutrient pollution to the GBR is known to be unsustainable and the key driver of GBR decline (De'ath et al 2012; Brodie et al 2013; Fabricius et al 2010), and the vast investment in attempting to reduce by at least half agricultural nutrient pollution of the GBR to date (~\$200 million), a target for a framework of development for an industry almost certain to increase nutrient pollution, if not offset in some way, is worrying. The development of 'codes' could go some way to addressing this issue if those codes included no net increase in nutrients and other suitable mitigation of other potential impacts, as minimum requirements. WWF further suggests that a target for 'identification of development areas' can only occur responsibly following the determination of baseline codes, in the context of the current threats to the GBR and dependent industries worth ~\$5 billion, to ensure that those targets do not incentivise unsustainable development at the expense of the 60,000 sustainable jobs supported by a healthy GBR.

In addition, the current departmental situation in Queensland makes the accurate setting of timeframes to implement terrestrial ADA's very difficult. Accepting a two year time frame would be on the proviso that the project is suitably staffed with experts, suitably funded, receives appropriate attention by the Government of the day at all levels, and does not take short-cuts to artificially meet set deadlines.

The two year timeframe appears optimistic given the state government's aquaculture team has been dispersed, and the current legislation that applies to aquaculture is currently under review with recommendation to be provided to the DAFF Minister in late 2014. Furthermore, the consultation required to identify the conditions that would apply to ventures within ADA's will require significant time to identify issues that may be raised during the later application processes. Additionally, once the list of conditions have been identified for each ADA, they will need to be approved at each level of government which may also require independent public consultation periods prior to any accreditation of the ADA's.

Public reporting of the progress of the team working to develop the ADA's is strongly supported.

Draft Recommendation 2. Codes as a clearer process for regulatory approvals

A. The QCA recommends that development applications in terrestrial aquaculture development areas be assessed against public criteria set out in a code applicable to each area. The code would address key issues such as:

1. The species that can be farmed in the development area.
2. The maximum load and concentration of nutrients and suspended solids that can be discharged each year from the development area.
3. The amount of environmental offsets required to offset the permitted discharge of nutrients and suspended solids.
4. Approved locations for water intake and discharge structures.
5. Construction conditions related to matters such as acid sulphate soils, impact on threatened species, clearance of native vegetation and impact on marine plants.
6. Operational restrictions such as disease management precautions, noise restrictions, setback from residential housing, traffic restrictions, and permitted hours of operation.

WWF Response

The preference to a code-assessable ADA scheme where “governments could use of model planning scheme code that would, to a large extent, standardise procedures in different locations” is supported because of the issues outlined in Table 8 of the draft report.

It is imperative that these codes are outcome based and measurable to ensure that they have the capacity to objectively and consistently maintain environmental standards. The model planning scheme should adopt the ASC standards or better for those species where the standards exist, or to use the standards as a reference point where ASC standards are currently not available. Farm performance exceeding the Code’s conditions should also be rewarded as a mechanism for driving continual farm management improvements.

With respect to the key issues provided in the draft recommendations, the following comments apply:

1. The species that can be farmed in the development area

WWF Response.

In addition to the species that can be farmed in an ADA, the code needs to specify details in relation to the genetics of the species being farmed based on current best practice understanding of risks to local genetic biodiversity. While suitable constraint mapping will minimise the risks associated with escapements from adverse weather conditions, the potential impacts of a mass escapement on the local genetic stocks needs to be considered. The recent destruction of the

Blue Water Barramundi sea cage facility and associated dominance of barramundi stock in Hinchinbrook Channel from the same two parents highlights the potential risks.

2. The maximum load and concentration of nutrients and suspended solids that can be discharged each year from the development area

WWF Response.

Further details are required in relation to this issue. While noting a maximum load and concentration of nutrients and solids discharged per year is required, further details will need to be included into the code to adequately address water quality guidelines for receiving waters.

3. The amount of environmental offsets required to offset the permitted discharge of nutrients and suspended solids

WWF Response.

The development of the ADA should be focussed on constraint mapping that selects sites that avoid environmental damage and contain conditions that mitigate impacts of proposed farming operations.

Specifying the environmental offsets for the residual impacts prior to formal application stage will have significant benefits for proponents who will be better able to assess the economic viability of its proposal prior to investing significantly in the application process. In addition to the amount of environmental offsets required, the use of Reef Trust to strategically allocate funding has the benefit of maximise environmental returns from the available funding and should be promoted.

Most importantly, the ADA framework must acknowledge and identify where an offsets approach is not appropriate, and where it is a prerequisite to avoid or mitigate an impact. Offsets should not be considered an appropriate management option for all impact scenarios.

4. Approved locations for water intake and discharge structures

WWF Response

The issue of location of water intake and discharge structures including associated parallel piping infrastructure will require significant consideration in the development of the ADA because of the likely impact to:

- landholders that are required to provide access during the installation of infrastructure and the associated short and long term economic implications;
- the environment, particularly in relation to declared Fish Habitat Areas, marine plants and Marine Parks;

- fishing stakeholders who may be effected by the physical location of infrastructure or the release of waste water influencing catches; and
- the general public's natural appreciation of an area and lost aesthetic value of a previously natural area.

Each of these issues will need to be address in the development of the ADA.

5. Construction conditions related to matters such as acid sulphate soils, impact on threatened species, clearance of native vegetation and impact on marine plants.

WWF Response

In addition to the construction conditions listed, which should also be minimised during the spatial planning process, best practice construction practices should be required across all facilities within ADA's including pond construction, water management, fish processing plants and fish husbandry. Best practice pond design characteristics in relation to improved released water quality should be reviewed using case studies of existing Queensland farms to ensure new facilities are appropriate to the location environmental conditions.

6. Operational restrictions such as disease management precautions, noise restrictions, setback from residential housing, traffic restrictions, and permitted hours of operation.

WWF Response

Local operational aspects will need to be determined in consultation with local councils and adjacent landholders in the earlier stages of the development of the ADA's. Particular attention will be needed to minimise any potential impacts on adjacent land values or business opportunities. For example, placement of a large scale aquaculture development has the potential to reduce the value of adjacent business based on ecotourism and would not be a comparable land use activity.

Prior to any further work in the development of the ADA's, and the associated key issues to be addressed during the development of the codes, a forum needs to be held with relevant stakeholder groups to ensure the constraints mapping captures appropriate limiting factors for future aquaculture developments. The stakeholders should include: all levels of government involved in the application development and approval process, a cross section of industry groups including potential buyers of the product, traditional owner representation, researchers with experience that could be used to refine the spatial planning process and environmental NGO.

The current mapping is overly simplistic, and the value of this type of product can be maximised by early stakeholder involvement in the development of "constraint layers". This stakeholder forum would also provide another opportunity to confirm the likelihood of future development with varying modifications to constraints. That is, industry can provide appropriate feedback on the interrelated impacts of issues like: offset values, water quality guideline impacts on discharge rates, and distance to water source vs scale of operations. By refining the development potential of ADA's

and associated conditions early in the planning process, significant savings could be made by the government by minimising the efforts spent developing ADA's with limited potential commercial interest.

Draft Recommendation 3. Environmental offsets

- A. The QCA is aware of discussions between the Queensland and Commonwealth governments to establish a consistent environmental offsets framework. The QCA recommends that the Queensland government provide potential proponents with the maximum possible certainty about the future price and availability of offsets.
- Mechanisms for providing certainty might include the provisions for financial offsets likely to be included in the Reef Trust.

WWF Response

The use of offsets payments and programs for residual impacts after avoidance and mitigation options have been exhausted is supported. However, as indicated earlier, the ADA framework must acknowledge and identify where an offsets approach is not appropriate, and where it is a prerequisite to avoid or mitigate an impact. This is particularly important to areas adjacent to the Great Barrier Reef where load levels already exceed sustainable levels and significant efforts are being directed at reducing existing load levels.

The use of a coordinated and strategic approach to implementing complementary offsets to the environmental damage from development through an initiative like Reef Trust is strongly supported. There should however still be options for the development and implementation of offset arrangements by the proponents who may be able to more cost effectively deliver local or on farm offsets using company staff and equipment.

Draft Recommendation 4. Structure to implement the reforms

- A. The QCA recommends that the government consider the best structure to ensure the implementation of this review's recommendations.
- Options include a task force consisting of representatives of relevant agencies, or a dedicated administrative unit.
 - DAFF is a likely candidate for lead agency of a task force, or location for a dedicated administrative unit.

WWF Response

WWF does not have a strong position on the body administering such a scheme except to say that its objectives must include environmental sustainability as paramount, its functions must be clear, and its operations and decision making must be transparent.

Draft Recommendation 5. A single Act for aquaculture

- A. The QCA recommends that the government defer consideration of the merits of a single legislative instrument for regulating aquaculture.

WWF Response

The use of a single Act for aquaculture is not supported as it would potentially see a proliferation of Act's to accommodate point source release operations like waste treatment plants and other intensive farming industries. The location of legislation within the relevant environment, planning and fisheries acts should be continued as it provides a consolidated location for all similar development activities and issues.

- B. The QCA recommends that the government consider a single legislative instrument for regulating aquaculture after the regulatory reforms recommended in this report have been well established.

WWF Response

The use of a single Act for aquaculture is not supported.

Draft Recommendation 6. Marine aquaculture

- A. The QCA recommends that the government investigate the potential for marine aquaculture development areas.
- The most prospective areas are likely to be in the Torres Strait, Gulf of Carpentaria and other less populated areas with a low possibility of conflict with other users of marine resources.
 - The investigation may be led by DAFF, with input from local governments, Queensland government agencies, and Commonwealth government agencies.

WWF Response

While conflict with existing users and local residents is a key consideration for the expansion of the marine cage culture in Queensland it is not the only matter that needs to be addressed. Clearly receiving water quality has been identified as a key issue for cage culture development in Queensland's marine parks. Significant planning considerations will be required to address the waste levels generated through the deployment of cage culture systems in Queensland, irrespective of the proposed locations.

Furthermore, greater consideration is required to address potential biodiversity issues associated with the escapement of large volumes of genetically similar farm stock during cyclonic events like

that which destroyed the State's sole cage farm in Hinchinbrook Channel. This unfortunate event should be used as an empirical case study to develop appropriate development Code conditions and management responses for future cage culture ventures

Additionally, significant investigations are required to address disease control vectors between farmed species and adjacent wild stocks, and also to address interactions between farm operations and wildlife, particularly listed species.

Bonds and guarantees
A. No recommendation

WWF Response

Bonds and guarantees should be retained as a requirement for all marine based aquaculture operations. Ongoing issues with the reclamation of oyster growing area within marine parks and cleaning the sea cage venture destroyed during a cyclone highlight the issues of not having a sufficient bond or an insurance policy to "make best" the marine environment after marine operations cease.

WWF disagrees that the use of bonds and guarantees are not relevant to terrestrial aquaculture operations where the land is freehold. Bonds and guarantees will be important particularly where infrastructure is required to be installed outside the bounds of private property. Equally, such provisions should be implemented to help restore impacts from the farm to the environment, e.g. a fish escape to an aquatic environment.

Research and marketing levies
A. No recommendation

WWF Response

While not specifically a research or marketing levy, future aquaculture developments should be developed to be consistent with the Aquaculture Stewardship Council (ASC) standards and be required to implement the accreditation process. By developing to these standards or greater, the Queensland aquaculture industry will ensure appropriate standards of environmental management are adhered to and also enhance market access to key retailers who are implementing sourcing programs to meet increasing consumer demands for sustainably sourced seafood. Furthermore, advances made by Queensland proponents in food technologies, water management and animal husbandry could assist enhance the global standards for sustainable seafood.

Additional comments

It is commendable that the draft report suggests funding should be provided for the development of ADA's and associated development codes. It should be made clear that this funding should extend to the support of the conduct of baseline surveys, ongoing monitoring to facilitate adaptive management capacity and adequate compliance to ensure codes are complied with. The historical practice of farms providing monitoring data to the department, and current practice of maintaining this information on farm for a certain period, needs to be reviewed. A comprehensive analysis of this information could substantially address many of the water quality issues facing growers and regulators, and form an integral part of the development of ADA's. Additionally, the analysis could help provide clear examples of best practice farming operations in the Queensland which could be used to reduce overall industry impacts through the development of extension material.

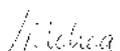
A review of this information could also assist in developing strategic compliance programs to enhance compliance activities through the generation of targeted operations that considers factors like environmental conditions, season and grow-out stage.

With a deliberate effort to increase aquaculture development, there must come a commitment to ongoing high level monitoring, regulation and enforcement. Results from these programs must be delivered to the community through regular and transparent reporting of compliance levels and impacts.

Further consideration also needs to be applied to the collection of baseline information. Baseline information has wider implications than reducing the potential litigation associated with changes to ground water quality. It should be an integral component of the development of the ADA's and associated codes, and is a field that requires considerable expert input to adequately address relevant environmental (air, water, soil noise, biodiversity), social and cultural conditions. It also provides vital reference points from which to identify environmental impacts and to direct improvements. Minimal standards should be put in place for the establishment of baseline information. It is unclear in the draft report whether this baseline is gathered by the government or by proponents. In any event, the development of these standards should be developed in consultation with key stakeholders including WWF.

If you require any further clarification in relation to the points raised in this response please contact Mr Jim Higgs, GBR Fisheries Technical Advisor, on 0409 628 396 or jhiggs@wwf.org.au

Yours sincerely



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References:

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