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Dear Senator Urquhart,

Please find attached a submission from Marine Solutions Tasmania (MST) to the Senate Standing Committee on Environment and Communications inquiry into the regulation of the fin-fish aquaculture industry in Tasmania.

Marine Solutions Tasmania is a specialised environmental consultancy which undertakes work for many stakeholder sectors in the marine environment. Our team has extensive knowledge of, and experience in, the marine environment gained over working around Tasmania and elsewhere over the past 25 years. Maintaining close links with government, research institutions and industry MST has built a strong understanding of the important role fin-fish aquaculture has come to play in the Tasmanian context, and we feel well able to comment on some aspects which may be of interest to the enquiry.

Marine Solutions Tasmania welcomes the senate enquiry as an opportunity to highlight how the fin-fish industry has matured in a relatively short time frame, and to identify areas for potential improvement in practice so the state and the industry can move with some degree of certainty towards shared sustainable use of Tasmania's natural advantages.

Should you feel we could provide additional information which may be useful, please do not hesitate to contact me directly

Kind Regards

Sam Ibbott
Director

**Submission to the Senate Standing Committee on Environment and
Communications with respect to the regulation of the fin-fish
aquaculture industry in Tasmania**

on behalf of

Marine Solutions Tasmania



June 2015

**SENATE ENVIRONMENT AND COMMUNICATIONS
REFERENCES COMMITTEE**

**INQUIRY INTO THE FIN-FISH AQUACULTURE INDUSTRY IN
TASMANIA**

On 24 March 2015, the following matter was referred to the Senate Environment and Communications References Committee for inquiry and report by 10 August 2015:

The regulation of the fin-fish aquaculture industry in Tasmania, with particular regard to:

- (a) the adequacy and availability of data on waterway health;
- (b) the impact on waterway health, including to threatened and endangered species;
- (c) the adequacy of current environmental planning and regulatory mechanisms;
- (d) the interaction of state and federal laws and regulation;
- (e) the economic impacts and employment profile of the industry; and
- (f) any other relevant matters.

Executive Summary

Marine Solutions Tasmania is a small environmental consultancy with specialist skills and experience within the marine environment, and a long history of working in a Tasmanian context. Our association with fin-fish farming goes back over 20 years, and our employees have been involved in many aspects of environmental monitoring in Tasmanian coastal waters over this period, some related to aquaculture, yet the majority of our work is outside the aquaculture sector.

Being a Tasmanian organisation we are proud to support our clients (including the aquaculture industry), NGO's, and Government agencies in the pursuit of a shared sustainable use of Tasmania's natural advantages. Tasmania has long been the most decentralised state in Australia, with the highest proportion of people living in rural and regional areas. The fin fish aquaculture industry is a significant employer in these regional areas, and we have observed ancillary businesses spring up in support of aquaculture as it has expanded. There is no doubt the fin fish aquaculture industry is one of the drivers of the Tasmanian economy, and an iconic industry with high national recognition.

Although our role in the finfish aquaculture industry is a small one, we strive to provide industry with responsive service and the provision of high quality advice as required. This also applies to our strong relationship with other private and government research organisations with which we often collaborate to build a shared understanding of industry issues, real or perceived.

Our hope is that the senate enquiry is able to synthesise the vast array of fact, anecdotes and opinion which will be provided from many sources, and ultimately provide recommendations which will allow the aquaculture industry to prosper in a responsible and sustainable manner. This will require a regulatory model that has the confidence of the public and other stakeholders in the marine environment, as well as being flexible enough to meet industry demands and predictable enough to provide ongoing confidence to industry.

While this seems challenging, Marine Solutions has worked with the majority of the stakeholders, and in our opinion the fin fish aquaculture industry has the will and capacity to assist build on the already strong regulatory systems in place, thus cementing their position as a world class sustainable industry, and providing Tasmania with ongoing economic benefit. MST is pleased to support an industry that can stand proudly on the world stage, and yet has the motivation to keep improving its environmental, social and economic credentials.

(a) the adequacy and availability of data on waterway health

There is a significant amount of information available to assist understand waterway health. This information is based on data collected from a variety of sources, and by a variety of methods. MST is confident a summary of information collected will be provided by other submissions to this enquiry.

Importantly, MST understands one of the risks to the industry and to the environment is that raw data collected from a variety of sources is interpreted selectively, in isolation, or to address issues which it was not designed to address. With this in mind, MST believes strongly that raw data should be interpreted and presented by those who have an understanding of why the data was collected, how the data was collected, the limitations of the data, and provide an explanation of the interpretation.

In our role as consultants, MST has been contracted by individual companies, the growers association, government agencies and other stakeholder groups to undertake marine monitoring of our nearshore environment. This monitoring has been multi-faceted, and highlights the breadth of information sought (and available) in relation the waterway health. In the past 5 years MST has conducted;

- Broadscale water sampling
- Nearfield water sampling
- Sediment sampling for nutrients
- Sediment sampling for toxic dinoflagellates
- Sediment sampling for infaunal communities
- Sedimentation modelling
- Wave and wind exposure modelling
- Current measurements and ADCP deployments
- Bathymetry
- Habitat Mapping
- Algal surveys
- Fish Surveys
- Invertebrate surveys
- Intertidal surveys

Importantly, much of this monitoring has been part of large projects which are building longitudinal data sets which are peer reviewed and cross institutional boundaries. Also, importantly, much of the ongoing monitoring is undertaken by independent businesses which have a strong understanding of Tasmanian issues, and existing relationships with other stakeholder groups. The integrity of the data is central to building and maintaining community trust in the interpretation of that data.

(b) the impact on waterway health, including to threatened and endangered species;

The fin fish aquaculture industry, as with any industry, has a goal of limiting their impact where possible. Despite this, there is some level of impact on waterways, and intermittent interactions with threatened and protected species. In our opinion, the aquaculture industry is committed to understanding their impacts, and removing, mitigating or minimising them where possible. MST is again confident a summary of nearfield impacts, farfield impacts, water quality, sediments etc. will be provided within other submissions, and this information is well documented.

Less well studied in a Tasmanian context, but important in understanding the perceived impact on waterway health is the concept of sliding baselines and attribution of change. In the Tasmanian community, often we hear comments relating to the marine environment which lament ‘it’s not how it used to be’, ‘the salmon farms have stuffed the kelp’, ‘it’s hard to catch a flathead now’

These types of observations are a personal view of people who are recalling earlier times in the same area, and using their recollections compared to current observations to attribute causes to changes they have observed. This type of attribution is likely to be erroneous on many levels.

Broadscale change has undoubtedly occurred in the Tasmanian marine environment over recent years, however this change is likely to have been occurring for much longer, and the baseline of recall is likely to be living memory, or perhaps 30/40 years. It has been shown in recall surveys that individuals overestimate their catch when compared with logbook records. Similarly, extreme events such as a large fishing catch, or a thick coverage of kelp are likely to be recalled some years later as the normal situation in earlier times. In this manner, a skewed sliding baseline is developed.

Further, giant kelp forests were once widespread throughout Tasmanian coastal waters. This iconic species supported a commercial harvest industry on the East Coast, but over time it has declined and disappeared from much of its original range, until recently it was listed under the EPBC as a threatened community. As it reaches the surface and may form a large visible canopy, giant kelp is one of the only species which non-divers may observe, and therefore gain an appreciation of its extent. An examination of aerial imagery since the 1940’s has shown a large scale and long term decline in giant kelp, starting from the North East of Tasmania and gradually moving further south – likely influenced by the increasing strength and longevity of the warm nutrient poor East Australian current. Thus the attribution of kelp decline to the increased impact of the fin fish farming industry is nonsensical. This does not mean there is no interaction between the two, nor that it is a negative

interaction (increased soluble emissions may assist kelp growth), but the attribution of broadscale kelp decline to salmon farming is erroneous.

Finally, there has been a huge expansion of recreational vessels over recent years, and the recreational vessels are increasingly seaworthy and have high quality fish finding equipment. This has resulted in increased pressure on fisheries from a number of points of view. There is less of a weather refuge when people don't go fishing, there is less of a distance refuge as fast vessels may travel further to catch fish, and there is a targeted effort to find fish from the vessel. The dynamics of inshore fishing have clearly changed over recent years, and this is true around the state, not just in areas where fin fish aquaculture is occurring.

The examples of observed impact cited above indicate there has been broadscale change in our waterways over living memory, however the attribution of that change must be carefully assessed with due regard to relevant data and informed interpretation.

(c) the adequacy of current environmental planning and regulatory mechanisms;

The fin fish aquaculture industry has numerous legislated compliance points, and we are involved with assisting the various companies meet these compliance points. Importantly, MST has become increasingly involved in assisting the industry address voluntary compliance points, undertake additional monitoring not required by legislation, and assisting with external independent certifications.

In the view of MST, the regulatory mechanisms are operating effectively, and have been for some time. When we compare the contemporary mechanisms available to aquaculture in Tasmania with other states undertaking fin fish aquaculture, the Tasmanian system is working well from an environmental and industry perspective. The increase in voluntary monitoring programs, addressing non legislated compliance points and undertaking pro-active surveys within the marine environment is evidence the industry has matured and is looking to address its obligations to the environment and wider community.

A strength of the existing framework is the relationships between the companies, industry body, government regulators, government research organisations and independent service providers. The current regulatory framework allows a transparent and timely flow of information resulting in an ability to use adaptive management in a responsive manner.

(d) the interaction of state and federal laws and regulation;

MST are not heavily involved in this space and so do not feel qualified to provide comment.

(e) the economic impacts and employment profile of the industry;

Over the course of the past 5 years, MST has had a number of contracts with the aquaculture industry to provide support, research, modelling, training and community liaison. We would estimate this equates to 2.5 FTE staff members over this time. These staff are postgraduate qualified, and of the seven staff we currently employ, three have moved to Tasmania to live, work and/or raise a family.

Importantly, from our small business perspective, the knowledge that we would likely have ongoing monitoring work related to the fin fish aquaculture industry provided the confidence to invest in additional infrastructure and equipment. This means we have built our in-house capacity and expertise which MST regularly uses for other clients outside the aquaculture industry, thereby providing improved outcomes and expertise to other unrelated industries and businesses.

(f) any other relevant matters.

In our role as consultants, MST has also acted as facilitators for public meetings, and as subject matter experts for community forums. We believe this willingness to engage with the community is one of the strengths of the industry. While there are a broad spectrum of views about fin fish aquaculture held by the community, the industry has a genuine willingness to engage, listen, and where appropriate adopt ideas and suggestions.

Along with the direct engagement with the industry representatives, MST believes it is critically important to continue to provide the correct information to the community in a transparent manner.

The Tasmanian community often operates with the concept of 'low fences', and the continued accessibility of researchers, managers and industry representatives to address community issues as they arrive, and sometimes just for information is a critical part of building trust and disseminating the correct and contemporary information.