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THE LEGISLATIVE COUNCIL SESSIONAL COMMITTEE GOVERNMENT
ADMINISTRATION A MET IN COMMITTEE ROOM 2, PARLIAMENT HOUSE,
HOBART ON TUESDAY 11 FEBRUARY 2020.

FINFISH FARMING IN TASMANIA

Ms NICOLE SOMMER, CHIEF EXECUTIVE OFFICER, AND Ms CLAIRE BOOKLESS,
LITIGATION LAWYER, ENVIRONMENTAL DEFENDERS OFFICE, WERE CALLED,
MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR (Ms Webb) - First of all, thank you for coming in today and giving your time to provide us with some extra insight into your submission.

All evidence taken at this hearing is protected by parliamentary privilege but I remind you that you will not necessarily be covered by that privilege once you are outside this building. You have a copy of the information for witnesses, if you would like to refer to it and you are not aware of the process. The evidence is being recorded and the *Hansard* of it will be published on the committee's website when it becomes available. Also, the hearing is being broadcast today.

In this hearing, you will have an opportunity to provide us with some opening statements if you would like to, speaking to your submission; following that, the committee will have questions to put to you about it. We will reference those questions primarily to the terms of reference because they are what the committee is looking into and what will really shape what we are keen to hear more about and inquire into. In the event you have evidence you believe needs to be kept private, it is possible to do that in camera. You will need to advise us that you would like to go in camera and we will consider that matter at that stage. Please speak up and make that request if you feel you need to.

Ms SOMMER - First, thank you for inviting us to appear before the committee. For those of you who may not know us, the Environmental Defenders Office is a community legal centre that specialises in public interest environmental law. I am the EDO's managing lawyer for Tasmania and I am appearing today with Ms Claire Bookless, who is the senior solicitor with the EDO. Ms Bookless is the Tasmanian subject matter expert on finfish farming and its regulation. I will leave system issues and defer to Ms Bookless on specifics.

We speak from our experience as lawyers with special expertise in environmental regulation and in working with the community on a day-to-day basis on these issues. As evidenced by submissions made to this inquiry, there is a real and genuine concern in the community about finfish farming, its impact on the environment and how it will be regulated. We acknowledge that there have been improvements made in recent years, but in our assessment - and our assessment is made on best practice regulations - there is a long way to go. The regulation is complex, hard to understand, opaque and it is unnecessarily so in our opinion.

Our written submission outlines in detail the issues and what needs to be done. We rely on that submission and I do not intend to repeat its contents. I want to highlight two issues: put simply, in our opinion there is an urgent need for transparency and a need to ensure scientific, evidence-based

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decision-making to prevent environmental harm. I will address some short remarks for the benefit of the committee to these issues.

On transparency, I am referring to the lack of public and independent oversight in all stages of finfish farming. In our assessment this lack of transparency is at the core of the community distrust of both the industry and the regulators, and yet public participation is a core part of sustainability and an objective of the legislation governing finfish farming.

There are limits to formal rights in public participation. Crucially, there is no guarantee to public notice of marine farming environmental licence applications made to the EPA or amendments to those licences. This is a core decision made about environmental impacts and specific operations and there is no guaranteed public scrutiny of those assessments.

There is no third party oversight of marine finfish farming decision-making - for instance, by rights of appeal to a third party body such as the Resource Management and Planning Appeal Tribunal. The lack of independent scrutiny is all the more important because decision-makers are not sufficiently independent of industry. The most obvious example of this is the Minister for Primary Industries and Water who is responsible for both promoting the industry and regulating it.

The lack in transparency manifests in poor access to information about decisions, the compliance monitoring and reporting and limited active disclosure by the EPA. The limitations on public participation are contrary to sustainability best-practice regulation and the objects of this legislation.

One outcome of this is that it prevents independent review of the science underpinning decisions on new marine farming areas for finfish farms because often key scientific information is not provided until key approvals are granted. As an example, in the case of Storm Bay, baseline environmental data was required to be produced only after the marine farming development plan was approved and, in some cases, after salmon farming had commenced. Indeed, DPIPWE's submission confirms this at page 20, where it says -

A baseline environmental survey must be undertaken prior to the commencement of marine finfish farming operations.

This means it is not produced at a stage when the public gets a say and consequently there would be no opportunity for public or independent scrutiny of that data before approvals are issued.

Baseline data is also used as the basis for modelling of impact; it is fundamental. This is of concern, given the Macquarie Harbor experience where, after catastrophic conditions and potentially irreversible harm to that unique environment, the EPA director admitted that the assumptions in modelling used to justify the expansion of salmon farming were, in his words, 'quite wrong'.

This leads me to evidence-based decision-making. We are concerned about the scientific basis for decision-making at all stages of marine finfish farming and how decisions are made. Unlike other jurisdictions, there are poorly defined criteria for decisions and no legislative criteria about environmental outcomes. In the absence of clear criteria, decision-makers have a high degree of discretion in how considerations are balanced and what conditions are imposed. Best practice suggests that clear criteria are desirable for all players, industry and community, and are part of ensuring effective public participation.

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One of our key criticisms is that there is no requirement to impose licence caps on biomass or nitrogen in either marine farming development plans or environmental licences. We say these should be imposed in the marine farm development plans, but they are not. We are not aware of any caps being imposed in the documents themselves to date. Caps are not set in those approvals, they are left to the discretion of the EPA director. There are also no management objectives or indicators set for the environment or transparent indicators set by the EPA, so we don't know what regulatory outcome we are attempting to achieve.

I wish to respond to one point in DPIPWE's submission in this inquiry. On page 19 of its submission, DPIPWE says that an adaptive management approach is applied to salmonid marine farming. In our experience adaptive management is used as a proxy for not setting clear limits or objectives and relying on board discretion. Without those limits and objectives, we can't know what is in fact approved, what level of environmental harm is allowed and what the consequences will be for the environment and the community.

We have experience in discretion and adaptive management operating poorly, Macquarie Harbor being a case in point. Adaptive management only works where you have solid baseline data and you set clear environmental objectives and measurable performance indicators upfront so the community knows what is expected and so does industry. Caps should be set in a precautionary manner and only moved when indicators are achieved and can be demonstrated to be achieved, not the other way around.

The issues I have identified here are necessarily high level and broad; we have taken the opportunity to identify only a few key issues. Our written submission sets out detailed recommendations to approve the regulation of finfish farming and bring the industry into line with the sustainability principles and best practice regulation. That is all I want to say by way of opening.

CHAIR - Thank you very much for that opening statement; we appreciate it. We might start with some overarching questions before we delve into more detail of things you have mentioned in your opening statement and in more detail in your submission. This isn't necessarily dealt with in your submission, but because our first term of reference focuses around implementation of the sustainable industry growth plan for the salmon industry, I am interested to hear whether the Environmental Defenders Office has a view on the appropriateness of a growth plan for the salmon industry and whether you have a view on how a sustainable growth trajectory would be determined for that industry.

Ms SOMMER - Thank you, Chair. We have made recommendations about spatial planning, which is what needs to happen. It's a very opaque planning term but it means you identify areas where you can have salmon farming and there will be limited environmental risk and adverse community outcomes by doing the science in identifying those locations. Then we should identify what are no-grow areas and that should guide how the industry develops. That science needs to be done upfront and that's not how the industry growth plan operates, to my understanding. Ms Bookless may have something more to say.

Ms BOOKLESS - The growth plan identifies areas for proposed growth around King Island, for instance, and the north-east; there are areas that have been identified as no-grow areas, the east coast being the most notable of those, but we would say there needs to be integrated assessment, planning and decision-making around not only where the ideal growing conditions for salmon are but the other contributing factors that lead to a successful and sustainable industry. For instance,

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access to fresh water is one of the key criteria and one of the key issues the community is most concerned about in an increasingly drying environment where fresh water resources are being diverted to salmon. These types of issues need to be dealt with upfront and in a public participatory way so the community can have faith that the right locations are being identified where all these factors are being taken into account, not just where salmon might ideally grow.

CHAIR - You mentioned spatial planning. For our information, could you contrast or compare the way a spatial planning approach is applied to this industry and its potential growth compared to other industries that require that same approach?

Ms SOMMER - The best comparator is typical planning policy - urban planning, land development. You identify settlements, where they should go and the limits to growth in that settlement. The reason you do that is because you know what infrastructure is required and what the environmental constraints are surrounding that settlement. You might have a plan for tourism growth - for instance, in the north-east - but you need to identify the infrastructure constraints up-front, and that's really what Ms Bookless is saying. We have a plan for growth at the moment without identifying what those infrastructure, environmental or social constraints might be. Ordinary planning principles should be applied to the marine farming industry, and that's why we've said that marine farming should be brought into the planning system like all other industries so that it can be assessed in the same way.

The Tasmanian Planning Commission is a body that knows how to do spatial planning and it is well placed to do it. You need to look at infrastructure constraints, environmental constraints and social constraints in addition to, as Ms Bookless says, the best place to grow salmon.

Ms FORREST - On the spatial planning question, we know there are areas around Tasmania's coastline, including King Island, that have been identified, as you have said yourself, as no-grow zones. You might not be able to answer but do you know how those areas were identified, and on the other side of the same coin, how the possible grow zones were identified?

Ms BOOKLESS - There hasn't been any public release of information about the identification of those areas. One suspects, though, that the areas of potential grow zones have been identified by the industry itself as areas probably most likely to support a salmon farming industry. Obviously most of the west coast would be out of the range of salmon farming due to conditions, so there are a lot of constraints necessarily on salmon farming and one suspects they have informed the identification of those areas.

Obviously, there was a great community outcry around the expansion of salmon farming up to Okehampton Bay and that is currently the only legislated no-grow zone. No other no-grow zones have been prescribed in legislation to date.

Ms FORREST - The information DPIPW put out some time ago now about the red coastline where it is a no-grow zone is just indicative. There is only one area that is legislated.

Ms BOOKLESS - That's right. Apart from the Mercury Passage, except Okehampton Bay itself, that is the only place that has been prescribed as a no-grow zone.

CHAIR - Your understanding is that while the map that shows those areas have a lot of red areas, they are not necessarily protected as such - they are just proposed as not for finfish farming?

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Ms BOOKLESS - That's my understanding, but, as I say, there hasn't been a public release of information about how they have arrived at these locations.

Ms SOMMER - I would just add that this is indicative of the issue we see, which is that there might be policy released or statements made, but there are no legislated criteria and there is no legislated certainty about how decisions are made. That's the core issue we've identified.

CHAIR - One of the things I'm interested in too, just as a brief comment if you have one on it, is that the growth plan talks about an industry target of growing to a \$2 billion industry by 2030 and the Government endorses that target in its statements in the plan. Is it your understanding that has been arrived at through a process that takes into account these matters about where the industry might well expand to and what the capacity might be for different regions? Do you have an understanding of how that figure is arrived at and its appropriateness?

Ms BOOKLESS - No is the short answer to that. We don't understand how that figure has been arrived at or whether it has taken into account the types of issues that have arisen. For instance, the Okehampton Bay expansion caused a strong community outcry and the vision of expanding by such an amount by 2030 might necessitate a shorthand, or shortened, public consultation period about these types of areas, which I'm sure the community will have something to say about.

Mr VALENTINE - You are talking about using the urban planning model rather than what exists at the moment. Have you put your mind to how that actually might work? Obviously, with urban planning you have neighbours who will be directly impacted and those who feel that the development is wanting or otherwise, or supported, but out there in the middle of the river or the middle of Storm Bay or wherever, who is it who can complain or put in a submission against something like that? Would it be any person who wishes to or would it be groups? How do you see that operating?

Ms SOMMER - I would see it operating in exactly the same way as any other planning application. That is because, for instance, we know in the Huon River a lot of people are affected by noise and they should have the ability to have a say on decisions that affect them. If you wanted to ensure that decisions are made in a particular manner, you prescribe legislative criteria and you say how decisions are being made. I do not think at the moment that we have any sense of how decisions are being made and how economic, environmental and social considerations are being weighted. The planning system can do that, and it has done it fairly well, particularly through the strategic planning process through the commission.

Ms FORREST - Just on that, we've read some other submissions suggesting a similar approach using our current planning system to regulate the salmon farming or the marine farming sector. This sort of goes a bit to the second term of reference in terms of the application of the current act. In your view is there any way that the act could be amended to make it more like the planning scheme and the planning system, or is it just a complete rewrite? You have gone through a lot of these factors in your submission, I accept that, but is it actually possible or does it require a whole different approach, if you are to take that approach?

Ms SOMMER - The starting point is that it is much easier to use the existing system than to model a new system. It is easier to adapt marine farming to planning system and treat it like other industries in the state than to try to make a new system for marine farming, which is basically what has been done.

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Marine farming has been carved out of being traditional level 2 activities in environmental management of the product. That has been the cause of a lot of this community distrust I have been talking about.

If you were to amend the Marine Farming Development Act, you would need to look at the governance issues we have put in our submission; you would need to restore the panel as the decision-maker; you would need to ensure the panel had on it sufficient scientific and ecological expertise, which it is lacking at the moment; and you would need to ensure there are public notice and hearings, and that the panel could consider both marine- and land-based issues.

One of the things we are talking about in integrated planning is considering the whole of the marine farming activity. Okehampton Bay is the example we have used where there a number of land-based decisions needed to be made but the marine decisions were made first and then the commission felt it had to approve the land-based decisions because the marine farming had already been approved and it needed that infrastructure.

We say that it all needs to be part of one decision where you consider both marine and land -

Ms FORREST - By the same body?

Ms SOMMER - By the same body so you are spatially planning for the particular marine farming area, as a whole, and the infrastructure it requires and the impacts it has on the community and the environment. That way you are not segmenting the decision-making only to the marine area, only the marine waste, and then you are considering only the infrastructure needed on land and a board of requirements et cetera.

That is why we say the planning system is best suited for that because it already deals with land-based planning very well and it would simply need to include marine farming.

Ms FORREST - On that point, there are obviously different considerations for the land-based activities, and all finfish farms have land-based activities so there are different considerations than there would be in the marine environment.

Do you think that one body would be able to do that or are we creating a really big task here that requires a whole range of different skills in the one body?

Ms SOMMER - Ultimately that is the purpose of the Tasmanian Planning Commission. It can appoint committee members with particular expertise in ecological impacts and the like to advise them. It does that already for a whole range of industries. You often have the case where you are looking at whether you should have a quarry or a large industrial development, as well as what the impacts are in terms of what you would ordinarily consider as land use planning.

It also has powers to consider projects of regional and state significance, and those have all of the same complexities you are talking about in relation to marine farming, marine environment, ecology and science.

Ms FORREST - If you have a development - say, a proposal for a finfish farm - that may cross council boundaries in terms of where the actual sea-based activity is and the land-based activity, do you think that if your proposal were to be accepted, it would require a project of regional significance approach?

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Ms SOMMER - Yes. That is why you would want an integrated assessment so that the assessments are carried out looking at the whole impact as opposed to looking at it in a segmented way.

CHAIR - To be quite clear in trying to have it mapped out, you are suggesting that the Tasmanian Planning Commission would undertake the roles that currently look like they are undertaken by the secretary of DPIPWE as the planning authority and the minister in terms of decision-making? That the panel would be retained as an advisory decision-maker to the planning commission in the same way that land-based decision-makers or councils and entities like that would also feed through to the Tasmanian Planning Commission? It is the ultimate entity for decisions in this space.

Ms SOMMER - The way we have thought about it is that the commission takes on the functions of the panel as well as the minister. At the moment, what the panel does is effectively what the commission does: it looks at representations and conducts hearings. The commission knows how to do that - it does it every day - so that is why it is best placed to do that and to make decisions.

Mr VALENTINE - Can you please clarify that? Obviously, the Planning Appeals Tribunal takes in appeals after councils have dealt with a matter and there is a challenge. The commission does not actually hear those. It is the Planning Appeals Tribunal. Can you clarify for me where you see the commission and a planning appeals tribunal fitting into that?

Ms SOMMER - The way a normal planning process works is the commission deals with strategic planning. So whether you are rezoning land or the like, it can include a permanent application or it could be for, of course, a [inaudible] process. Let's just use the normal planning process. It considers the rezoning application, which is basically what an application for a marine farming development plan is, and it has public hearings in relation to that application.

Once the planning scheme is amended, an application is made to the planning authority, which is the council. If it is a level 2 activity, that application is referred to the EPA. That is how we would see it operating here. Then you would just go through that ordinary process: make an application to the council for your marine farming licence; it is advertised; it is referred to the EPA; the EPA imposes conditions; and then the council makes the decision, not inconsistent with the EPA's decision. Then there are appeal rights to the Resource Management and Planning Appeals Tribunal. It is the same process - a strategic planning process and an individual operation appeals process.

Mr VALENTINE - At the moment you can put a zoning change in with a development application at the same time and the commission then deals with that.

Ms SOMMER - Yes, you could do it that way.

Mr VALENTINE - Thank you.

Mr FINCH - Nicole, in respect of the contact you have had with our current Government or even the previous government in respect of these issues you have presented in 37 pages with appendices, which is quite a big submission, Have you dealt with the governments, present or previous, on the issues you are raising here for this inquiry?

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Ms SOMMER - The short answer is yes, but I personally have not. I started in this role in March last year. We made a submission in relation to a bill, the Environmental Legislation (Miscellaneous Amendments) Bill 2019. Ms Bookless would be better placed to answer this.

Ms BOOKLESS - We have been active in promoting better regulation on finfish farming for quite some time.

Mr FINCH - How long?

Ms BOOKLESS - It would precede my time with EDO as well.

Mr FINCH - Two years, 10 years?

Ms BOOKLESS - Ten years, yes.

We have been making submissions to Senate investigations and inquiries for a long time and we have referred to those in our submission. They are available on our website as well. We have also been involved in organising community forums, which involved industry, government and the community, to talk about finfish farming issues.

We have written to ministers about our concerns when our clients have raised those with us. Most recently, we wrote to the then minister for primary industries and fisheries, Mr Rockliff, as about the Okehampton Bay proposal. That proposal did not require any kind of amendment to the marine farming development plan that was in place for the Mercury Passage because marine farming was approved in this one zone, in that plan. Over 10 years prior to that point, Tassal could just apply for a lease and licence to farm salmon with no opportunity for community input into such a proposal. Obviously, the science has moved on since that original marine farming development plan was proposed, so we wrote and raised those concerns with the minister. Thereafter, and I'm not saying those two things are directly related, there was a referral to the Marine Farming Development Panel to look at whether the science was still up to date with respect to Okehampton Bay.

As a result of that inquiry, further baseline environmental studies were required to be undertaken by Tassal. Obviously, we would say that is quite a back-to-front process where you are requiring baseline environmental monitoring to occur after you have actually approved a lease and a licence for salmon farming in a location. That should really be the other way around.

We have had dealings with governments of all stripes in relation to salmon farming.

Mr FINCH - What sort of sense do you have in respect of the future engagement of the Environmental Defenders Office and the Government in respect of cutting through your concerns? Is this inquiry your best opportunity so far, or do you feel you can develop a good relationship with the Government to have your concerns listened to and maybe acted upon?

Ms SOMMER We would be very open to having discussions with ministers, with the EPA director and members of the EPA to improve the industry. These sorts of public hearings are a good opportunity, but our advice is not sought. The Environmental Legislation (Miscellaneous Amendments) Bill is a very good example of that. My understanding from the EPA is that stakeholder consultation was undertaken prior to a public release of a draft bill. I contacted the

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EPA when it was released and said, 'We need more time, we're a small office and we want to look at these issues seriously. We weren't included in stakeholder consultation and no offer was made to discuss those issues with us'.

We would be very open to it, but that is not the way that it is operated.

I should also add that on a day-to-day basis, Ms Bookless, mostly, is in contact with the EPA asking for information on behalf of the community. We're often engaged with the EPA. We ask for information again and again, but it shouldn't be on us, a very small community legal centre, to be constantly asking for information and trying to engage with the Government.

Ms FORREST - On that particularly, did you end up putting a submission into the EL(MA) draft bill that's out?

Ms SOMMER - Yes, I believe it is an appendix to our submission to you.

Ms FORREST - That's the one, right.

Ms SOMMER - It was quite a lengthy submission in the end as well.

Ms FORREST - I didn't make the link between them. Do you believe that a number of the matters you've raised in the attachment to the submission, which I will come to with a couple of questions in a minute, would address a lot of the changes that need to be made in this draft bill? I am not sure what the status is and when the Government plans to bring that forward, or whether another draft will be released.

Ms SOMMER - It's interesting because when I asked for an extension of time to make a submission, I was told it was going to be introduced last year and it wasn't. I'm not aware of its status either.

Yes, if our recommendations were implemented, that would go, in particular, to addressing a lot of the transparency issues we've identified. It deals with the same issues we discussed this morning about integrated planning.

Ms FORREST - There were no page numbers, but I've numbered page 11. I am not sure how to identify it, but there's a comment, for instance, in the Storm Bay off Trumpeter Bay North Bruny Island Marine Farming Development Plan 2018 Storm Bay MDF Plan. At the bottom of the page, 3.2.1 states -

CHAIR - It's different to my page 11.

Ms FORREST - I must have started numbering at a different spot. Point 3.2.1 states -

The director EPA may from time to time determine the total permissible dissolved option output within specific periods attributable to marine farming operations within a specified area covered by this plan.

You mention in your opening comments that you didn't believe that had ever happened; that the EPA has actually put in permissible limits. Is that the case?

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Ms FORREST - I'm looking at Macquarie Harbour. I'm quite familiar with Macquarie Harbour, obviously.

Ms SOMMER - You have two real approvals here that I am talking about - the marine farming development plan and the environmental licence issued by the EPA director or the board. There are no caps in those documents but there are conditions that say the director can impose those sorts of caps. My understanding is that they were imposed in Macquarie Harbour at that discretion but we only knew about it because there was such public discussion and public statements about those caps. The same goes with any other marine finfish farm. We could ask for the information on the caps for each of those existing marine farms, but they are not specified in the actual licence or the plan themselves.

CHAIR - Or in public documents available readily subsequent to that?

Ms BOOKLESS - In relation to Macquarie Harbour, the EPA director published information about the biomass determinations. That was a voluntary step he took but there isn't any legislative requirement for that information to be publicly available. There aren't any criteria for the decision, so what is the basis for the biomass determination? What are they actually seeking to achieve in terms of the environmental outcomes when they are making those biomass determinations? They're not subject to any kind of independent review so there isn't any opportunity for even the salmon farming companies themselves to challenge those decisions. Huon Aquaculture ended up trying to take the EPA director to the Supreme Court about a particular biomass determination for Macquarie Harbour but that proceeding was ultimately withdrawn, we understand, but there were real questions around whether it would have been able to have been heard by the Supreme Court. We're not suggesting they need to be subject to that kind of review, but there should be some scrutiny and criteria around those biomass determinations.

Ms FORREST - The question about whether it could be taken to the court in relation to the fact that there wasn't any legislative basis on which that was made - is that the point here?

Ms BOOKLESS - Yes, that's the point.

Ms FORREST - We know the EPA director did react there, maybe a little bit later than might have been preferable when you look at what happened in the harbour, but the action was taken and by all accounts the harbour is slowly recovering.

Ms BOOKLESS - It is slowly recovering but there is still a real question mark around the long-term impacts on the maugan skate, which is critically endangered and only found in Macquarie Harbour and Bathurst Harbour. He did react, albeit belatedly, to what were deteriorating environmental conditions. Huon Aquaculture put forward a great deal of correspondence it had in relation to asking for those biomass determinations almost from the outset, and it took a good four years for there to be a determination reducing the biomass, by which time Tassal had already stocked its lease with smolt for the next year of production, so it caused flow-on consequences where they were trying to find a solution to the waste coming from those leases, and really nothing has changed. The EPA director still has that discretion and may or may not react to the changing environmental conditions. There is nothing to prompt him to make a determination to lower the biomass, given the science.

Ms FORREST - Having sat across the table from him in other forums, if he were of a view that there was a concern of a mass mortality because of the lowering dissolved oxygen levels or

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other factors, he could act more swiftly at that time. I believe there was a concern at one point about an imminent mass mortality.

Ms BOOKLESS - Yes, but that was mass mortality of salmon. What about the mass mortality of maugan skates? Are they being monitored to the same extent? Obviously there are animal welfare issues in relation to the salmon but the environment is caught short here. We are looking at placing economic considerations well above environmental considerations in a lot of these decisions. That is actually borne out by the EPA director's decisions and the statement of reasons for decisions that he voluntarily released and are available on the website.

CHAIR - I want to bring it back to that structural level because we could be having a discussion about the appropriate structural approach to this even if we didn't have any examples of any negative events or delays to decisions. Even if we had exemplary behaviour from the EPA director and exemplary decisions being made at times that prevented harm, you are saying that structurally there is no requirement in the legislation, in the issuing of the environmental licence or the approval of the development plan that certain criteria need to be met, a cap imposed against those criteria and a justification for that cap to be available in the public domain so you can see the rationale for it. That structurally does not exist, so while we may have absolutely exemplary decision-making and behaviour of entities within our regulatory structure, the structure itself does not guarantee that or provide for that to happen.

Ms SOMMER - That's right, and we're entirely reliant on the discretion of the director to act. We are talking about reactive actions. Any good environmental regulation system should have the ability to react to adverse situations and impose controls to restore the environment to what it was before. There needs to be an up-front assessment and implementation of controls so that we know what is going to happen and that it prevents that adverse decision being created in the first place. What we are missing here is the up-front controls that prevent adverse environmental impacts.

CHAIR - Can you point to a similar regulatory arrangement in a different industry or a different circumstance that would be an example of what you are describing as needed here?

Ms SOMMER - Yes. Normally, in any polluting industry, you would have licence conditions on environmental outcomes. If you were building a coal-fired power station, you would have a cap on sulphur dioxide emissions and particulate matter emissions and the like. Those licence conditions are clearly stated to be at a level so there is no harm to the community. What that means is you manage for the airshed of that community. You don't manage particular operators individually without having regard to that cumulative impact in that airshed context. What that environmental licensing system does is say, 'This is the cap, this is the environmental objective that we want for our airshed. We want particulate matter at this level, 100.'

Ms FORREST - Or below.

Ms SOMMER - Yes, and everybody operating in that space has to meet that objective. If new operators come into that space, they have to show how they're not going to increase that objective, or everybody else is managed down to allow for that new operator, depending on particular circumstances.

Ms FORREST - So the key issue here, from what I am hearing, is that the current system does not provide for the setting of limits of pollutants. If I go back to the pulp mill debate, one of the biggest factors there was what was going into the sea out the pipeline and what was going into the

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air. Concern was raised about the overall impact on the Tamar Valley because there are other emitters in the area, so they had to demonstrate they could keep within a set limit. What you are telling me here is there are no set limits for the amount of dissolved oxygen or emissions of other sorts?

Ms SOMMER - We could set those limits in the marine farming development plans for those area. Those limits could be set, but they are not set at that stage in the document.

Ms BOOKLESS - To provide some context, in 1997 the state policy on water quality management was introduced. It provides for a system whereby you set what are called water quality objectives for catchments and estuarine areas and even marine waters. Those are the objectives the community aspires to for those areas. To date they haven't been set by the EPA.

I have been in contact with the EPA for over a year now trying to get to the bottom of where they are at. I met with their water quality management policy officer late last year to discuss this issue and we were advised in that meeting that they set water quality objectives on a case-by-case basis for a project. For instance, if you want a hatchery on the Wayatinah or in the Florentine River, we will set the water quality objectives when you come to us with that proposal. We will take your data and look at that in determining what is an appropriate limit.

That doesn't take into account who is upstream, who is downstream, what the community wants for that catchment. The protected environmental values for that area have been set, so if it is for recreation use or for drinking water, those high-level objectives have been identified but the real thresholds for how you are going to achieve those uses have not been set by the EPA to date.

CHAIR - Has that become publicly available even if it's done on that case-by-case basis?

Ms BOOKLESS - No.

CHAIR - Are there other stakeholders involved in determining what those objectives are in that case-by-case basis?

Ms BOOKLESS - No, the EPA's decision in the case of - there were some drum filters proposed for the Wayatinah and Florentine hatcheries. They went through the environmental licence application process but the EPA's decision doesn't identify the water quality objectives and how they are going to be achieved by the licence limits that were imposed.

Mr VALENTINE - You are advocating for a precautionary approach versus an adaptive management approach?

Ms BOOKLESS - They go hand in hand. You can't have one without the other. So, in the absence of scientific certainty - and we would say it would be a very rare circumstance where you are going to have scientific certainty about the impacts on the environment - you really need to have set clear criteria for the baseline or whatever key levels at which these pollutants can be received into the environment and we can still achieve the uses we derive from certain waterways.

Ms SOMMER - The precautionary principle is one of the objectives of each of the acts that regulate this industry so that in fact is the way it ought to be operating. An adaptive management approach is only part of that. You still need to have the baseline data and you still need set objectives so you know what you are adapting and monitoring for.

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Mr VALENTINE - In your submission, on page 3, just under Tasmania's salmon industry, you say that

... the scientific reports demonstrating the adverse impacts of salmon operations in Macquarie Harbour challenge the view that the industry is meeting community expectations and satisfying the sustainability objectives of the managing legislation.

I am not across this document you have put in for the Environmental Legislation (Miscellaneous Amendments) Bill so you will have to forgive me for that, but do you believe the sustainability objectives of the managing legislation are adequate or do they need to be changed?

Ms SOMMER - I think the sustainability objectives are the same objectives for the resource management planning system across Tasmania. They broadly keep up their principles of ecologically sustainable development. I don't think they specify them adequately. They don't set out the principles of ecologically sustainable development but they do set out that there are grounds to be achieving sustainable development. That includes public participation, and that includes the proportion principle, and those three elements are key and I am satisfied they are in the resource management planning system objectives.

Mr VALENTINE - You are happy that if the process was reasonable in terms of working out caps and all those sorts of things, the objectives are reasonable as they stand?

Ms SOMMER - I think the objectives are the least of our issues, if I can say it that way.

Mr VALENTINE - It is the big picture, isn't it, the overarching picture?

Ms SOMMER - Certainly I think the objectives could explicitly reflect the ecologically sustainable development principles. They are not quite exact. The DPIPWE submission refers to the national statement on ecologically sustainable development. That statement includes the principles in their proper form. Our objectives do not exactly reflect that and I think they should. I am saying that I think that is the least of the issues because they do pick up on the key principles.

Ms FORREST - On that point, do you believe that marine farming can be conducted in an environmentally sustainable manner?

Ms SOMMER - Yes.

CHAIR - In terms of the comment around the objectives being the least of the concerns, is it that the actual mechanics then outlined in the act do not actually give effect to the objectives of the act?

Ms SOMMER - Yes, that is right.

CHAIR - The things you are suggesting are about establishing ways in which that act could give effect to its objectives more transparently and accountably?

Ms SOMMER - That is right because public participation has a particular meaning in international law and that is how we are applying it. We have set that out in our submission. Public

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participation means all those transparent processes, including access to information, clear objectives, public notice and review rights.

CHAIR - I have some questions on access information, but I am going to go to Kerry first. What would you like to pick up on?

Mr FINCH - In your submission, you raised eight main issues and made seven recommendations. I am curious as to whether there is an operation somewhere in Australia or overseas that is doing it as well as they possibly could do it, to your way of thinking? That there is a comparison that could be made to say, 'Here is the template - this is a template we could follow in Tasmania' which would satisfy your requirements?

Ms SOMMER - In our 2012 submission, I think to a Senate inquiry, we analysed Scotland's, Canada's and New Zealand's regulatory frameworks for finfish farming. I think we found that Scotland and New Zealand have the best approaches. They did all the things we thought they should do in 2012. I have not gone back to that structure. Ms Bookless might.

Ms BOOKLESS - Neither have I. We have to take into account the particular Tasmanian context and while we could point to some of these other regulatory systems, each are quite different in terms of their structure of government. I think the approach we have recommended here in terms of rolling in marine farming into our land use planning system is probably the best fit for Tasmania and addresses all the issues we have identified in the current approach.

CHAIR - I would like to talk a little about access to information. It is from the perspective that the industry would say, and I think quite rightly, that a lot of data are collected and a lot of monitoring is done. There are a lot of sets of expectations and requirements that the industry currently works to in both a regulatory sense and a voluntary sense around third party accreditation.

In the industry submission they make those claims and I think can defend those claims. We will ask them to talk more around the fact that the salmon industry in Tasmania is one of the most transparent industries, that they go above and beyond their requirements in terms of collecting data and monitoring their arrangements. It is claimed their datasets are robust, often publicly available from independent sources, peer reviewed and audited. A claim has been made in one of the industry submissions that the issue is that the public does not readily and properly understand the number of regulatory requirements being met by the industry. That's a very long-winded preamble, but I think issue is that where there are calls for more data to be publicly available and more disclosure, the industry is saying it has made all this data available and all this disclosure and all these requirements are met, so there seems to be a disconnect. From your point of view, where is that disconnect structurally and how might we best meet it? I don't think it's necessarily that we're making an argument that more data is needed, it might be about where and how that data is collected and presented. Can you comment on that?

Ms SOMMER - I think this is more a question for Ms Bookless, but an obvious example is that the baseline data about environmental conditions should be available before a marine farming development plan is advertised. It should go out with the public notice. I would also say that if there is a good story to be told on compliance, that information should simply be released. We have continuing issues trying to obtain documents from the EPA setting out this data, and I will let Ms Bookless speak to that.

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CHAIR - Before Ms Bookless expands on that, in terms of this concept that baseline data should be available before plans are approved, is there agreement on what constitutes the suite of baseline data you're saying should be available? Would there be agreement between you and what you think should be put out in the public domain to fulfil that and what, say, IMAS might think it is and what the industry might think it is? Is there an agreement on that?

Ms SOMMER - I think there would be a scientific consensus on what that could mean.

CHAIR - So we could identify that and have that as a clear suite of information?

Mr VALENTINE - A minimum dataset.

BOOKLESS - We'd have to take into account local conditions. For instance, with Storm Bay some baseline data was released when the marine farming development plans were assessed, but there were subsequent requirements for further baseline environmental monitoring of things like inshore reefs and rocky reef communities, which is where a lot of the threatened species and threatened vegetation communities arise. So yes, there is a release of some data, but whether it actually answers the questions the community has is the real question here.

There is a lot of information to wade through. There are a lot of websites. Each of the different salmon farming companies has a sustainability dashboard or something like that where they release information about their operations. The real issue is that just saying whether you're compliant - tick/cross - with an environmental licence or a marine farming development management control doesn't actually answer the questions of: If you're not compliant, by how much? What are the impacts of that? How long has that been occurring? What is the response from the EPA to that noncompliance? These are questions we've been asking and making numerous and repeated right to information requests to DPIPWE and the EPA over a long time. It's those types of questions I think the community really wants answered. We notice a new website was uploaded just on Friday with further information -

Ms FORREST - On DPIPWE's?

CHAIR - Where is that located? Is this the data portal from DPIPWE that began a few months back?

Ms SOMMER - It seems to be a new website called salmonfarming.dpipwe.tas.gov.au. I saw it in a media release on the minister's page.

CHAIR - Dated?

Ms SOMMER - This month.

Ms BOOKLESS - There is some information out there, but we would say that a lot of the data is aggregate. We can't interrogate it, look at who has compiled it or what the limitations are on it. I think there is a sense in the industry and perhaps from government that the community doesn't understand science but I think that's really not correct. There are numerous members of the community with scientific backgrounds who would be very interested in looking at the raw data and having a good sense of whether the conclusions being drawn and being released to us are correct. Are there competing interpretations of that data that could be available?

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CHAIR - Where do you see the responsibility rightly lies to aggregate and present that data in an open and transparent way and make it available?

Ms BOOKLESS - Ultimately I think it's the regulator's job to make that information available. Industry is being granted a right to use public waterways. With that right comes responsibilities to monitor their activities and ensure and really satisfy the public that they're not adversely affecting them, so it's a joint responsibility but ultimately it should be through the regulator and having that information available through a single portal. It's great that they've started on that journey of having this portal, but we say there needs to be further information within it, more detail about the data that sits behind some of the conclusions that are aggregated and put onto that website.

Over time when we have been applying for information at that approval stage we've really struggled to get the information we need to inform our clients' representations to the various decision-making bodies. For instance, we recently had a decision from the Tasmanian Ombudsman to a request by our client, Environment Tasmania, in relation to Okehampton Bay. It took 1273 days for us to get that information and it was baseline data we were seeking about their application to get a lease and licence in Okehampton Bay. We wanted to understand how the minister had granted that lease and those licences, given that the marine farming development plan hadn't been looked at for over 10 years. It was a really obvious example of how difficult it is for our clients to operate in this space and have informed representations. Obviously that was well outside any of the statutory decision-making time frames in which that data and information would have been helpful.

CHAIR - What you're describing about seeking data access and presenting it through a portal with a regulator responsible for administering that, is that something that would be unique to this industry and an expectation above and beyond what would be put on similar industries or other sorts of operations in other circumstances? Is what you're proposing an unreasonable and non-comparable impost?

Ms BOOKLESS - It is a unique industry in that it is in our public waterways. It's a lease of public property and the data you need to collect in order to determine the impacts of this industry are necessarily great. You can't get around the fact that there are multiple different variables that you need to take into account, and this data is already being collected by industry to inform its own stocking and compliance with the environmental licence and marine farming development management control. We're not saying they need to collect something more; we're just saying they're already collecting it, so how about they make that publicly available so we're all operating with the same information?

CHAIR - Through a consolidated independent portal of some sort?

Ms BOOKLESS - That's right.

Ms FORREST - Going back to the baseline data, there doesn't appear to be an agreed understanding at this point of what baseline data should be made available before any fish are put in the sea in a farming setting. When you look at the mining industry, where they're similarly exploiting our natural resources, mining companies have to apply for an exploration licence to drill and look for the resource, and they have to have that before they can go out and put a drillhole down. I am trying to understand what you're actually asking for here in terms of someone going out to do the monitoring. The first time any fishermen going past - recreational, commercial or otherwise - see someone out there with a buoy doing some monitoring or something, the alarm bells

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go off and everyone says, 'What are they doing?' There needs to be some sort of formal process around enabling that baseline data to be collected with some certainty for the organisation that they will be able to access the area to do it. Do you believe it is adequate at the moment?

Ms SOMMER - I don't think I can answer the question about whether it is adequate at the moment.

Can I just use an example? If you were just going for an ordinary environmental impact assessment process in any other state in Australia, you would have to set out all the different impacts on the environment and you would do baseline studies about all sorts of things, including threatened species and where vegetation communities are. For instance, in Western Australia about cave-dwelling species and impacts on taking groundwater and those sorts of things. You have to do those initial explorations to understand what the environmental impacts are.

Ms FORREST - Do they already have a lease?

Ms SOMMER - Often it is on private land, so it may be different in terms of needing to obtain some permission to do that baseline monitoring but that doesn't mean it shouldn't be done. You have to do it in every other industry, I think - where farmers put up wind monitoring stations and miners undertake mining exploration. In every other situation, you have that as part of your environmental impact statement. What we are saying is that the data contained in the environmental impact statement submitted with the marine farming development plan request is inadequate.

Ms FORREST - In the amount of baseline data? You said that the Storm Bay did have some baseline data.

Ms BOOKLESS - There was some baseline data but there was also a requirement as a condition on the grant of the approval that they collect further baseline data, which leads to the conclusion that it was not sufficient necessarily to establish what might be the impacts of that activity.

Ms FORREST - Doesn't that show that the system is working?

Ms BOOKLESS - No, if you don't do it already and it is not being used to inform your modelling, the assumptions that are input into your modelling - the modelling showing how the emissions from salmon farms might interact and spread throughout Storm Bay and impact on various communities - could well be wrong, as they were in Macquarie Harbour.

Mr VALENTINE - With respect to the collection of that data, who do you see would be best to do that modelling? Is it organisations like the CSIRO and IMAS? Or is it the EPA itself employing scientists to go out and do that work?

Ms BOOKLESS - IMAS is already doing that work for both the companies and for the EPA in various research capacities. So they are working in conjunction with industry and with the EPA to develop those models. I note in its submission, even the CSIRO pointed out that some of those models are not taking into account things like climate change. Tasmania's east coast is warming four times faster than the rest of marine waters around the world. If you are not considering climate change in modelling, that seems to be a fairly obvious omission and something that needs to be addressed.

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Mr VALENTINE - Do you see any conflict there at all because scientists are actually working with industries as opposed to being independent?

Ms BOOKLESS - I don't see any real way around it. Industry obviously has the infrastructure and they are preparing the proposals, so they have to work with industry in order to establish -

Mr VALENTINE - There are only so many scientists to go around.

Ms BOOKLESS - Certainly, I think there is more scope for IMAS to inform the assessment process in a greater capacity.

Ms FORREST - Do you trust IMAS information and the science that comes out of there?

Ms BOOKLESS - When you are looking at various research projects, some of those projects are funded by industry. I am not suggesting for one moment that necessarily means they are only going to get a certain answer, but they have asked a certain question so the question that is being asked is -

Ms FORREST - Someone has to fund the research.

Ms BOOKLESS - Someone has to fund the research. But they have also asked the questions so that will necessarily mean that there might be other questions that are just as valid that aren't being asked or answered.

Ms SOMMER - This is the reason we need the EPA or the relevant regulator to identify the criteria in a public and transparent way so we know what questions should be asked. That is one of the reasons we need those sorts of criteria and outcomes.

CHAIR - Presumably the sharing and transparency of data also helps offset any questions that might arise around independence.

Ms BOOKLESS - That's right.

Mr FINCH - In respect of our terms of reference point 2(c), management of finfish farming operations with respect to the prevention of environmental harm, you mentioned in your overview that improvements had been made by the industry in recent times, probably since Macquarie Harbour.

Would you mind highlighting the improvements you have witnessed? Also, are there areas of concern that you would like to highlight that still need to be focused on? Where does the industry still have a way to go in terms of environmental harm?

Ms SOMMER - I will defer to Ms Bookless on this question.

Ms BOOKLESS - In terms of improvement, we were referring to regulatory changes that have transferred responsibility for the environmental regulation of salmon farms to the EPA.

We say it is a good and important move to separate out the promotion of the industry and the regulation of the industry. But our submission highlights that there is still a way to go in terms of making sure that EPA decisions are based on clear, scientific criteria with clear objectives that they

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are trying to achieve, and that there is a real opportunity for public participation and access to the information that is the basis of those decisions. That is where we are at.

In terms of environmental performance, we are still in a situation where Macquarie Harbour is slightly improving, but we still do not know what the long-term impacts of the historical biomass has been on the critically endangered maugean skate and in the Wilderness World Heritage Area. These are really special places, found nowhere else. To think that through salmon farming we have perhaps irreversibly impacted them is of real concern. It should give us pause to consider how we might better do this in the future.

Ms SOMMER - To add to that, there needs to be objectives for various environmental values so that we know what it is that finfish farming operators are managing for.

Ms Bookless has referred to inshore reefs and the maugean skate. You could easily identify what the key values are. In licences and management plan conditions, you should identify what the outcomes and objectives are for those species or for those values. You should identify what the objectives are for managing a waterway, so that the public knows what management measures the finfish farming operators have to comply with.

Mr VALENTINE - To clarify couple of things, in your submission under 'Lack of scientific certainty and adaptive management', paragraph 1(c), on page 11, it states -

We are concerned that 'adaptive management' has been relied on to such an extent in salmon farming regulation, that it has justified decisions that have the potential to cause serious or irreversible damage to environmental values in the absence of scientific uncertainty.

I presume that should be 'certainty', for the record? It is only a small thing.

Ms SOMMER - Correct.

Mr VALENTINE - page 12, first paragraph, under 'Compensation payable', section 22(1) of the Marine Farm Planning Act is quoted as stating '... that a draft plan 'prevent the use of any water within a lease'.

Is that correct?

Ms SOMMER - That is correct.

Mr VALENTINE - That's just been missed out?

Ms SOMMER - I should say - and I meant to say this at the beginning - that there are some corrections that we need to make. There are a few substantive corrections I can identify for the committee, but I suggest that we send through a marked-up version of our submission for the committee that can be published on the website with our corrections.

CHAIR - That would be excellent, thank you.

Mr VALENTINE - It's just that if we want to quote, we need it to be accurate and that's why I raise those two small things.

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CHAIR - Put some page numbers on it too, maybe.

Ms SOMMER - And we will.

Mr VALENTINE - That would be good.

CHAIR - Thank you, we have gone five minutes over time. We appreciate you coming in and talking with us more about your submission. I know you mentioned early on in your 2012 submission to the Senate inquiry that you had done mapping across different jurisdictions and the way they dealt with their legislative and regulatory approach and come up with some suggested other jurisdictions that were doing it well. If there is any opportunity for you to revise that and have a look at it and provide us with an updated view on that, I think the committee would be open to hearing that updated assessment. You can have the opportunity and the capacity to do that. I appreciate you are operating under constrained capacity.

Ms FORREST - Some indication if there were a model we could perhaps look to in doing that, as Kerry was asking earlier.

Ms SOMMER - Is there a time frame in which that would be input to the committee?

CHAIR - A month's time perhaps?

Ms SOMMER - We could do it in a month.

CHAIR - If you need that to be outlined, we can put that in correspondence to you as a request subsequent to this hearing.

Ms SOMMER - That would be helpful to be clear on the scope. As you can see we like clarity and certainty.

CHAIR - Thank you for your time; we appreciate it very much and appreciate the information you have provided.

Ms SOMMER - Thank you.

THE WITNESSES WITHDREW.

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Mr PETER McGLONE, DIRECTOR, TASMANIAN CONSERVATION TRUST INC., WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

CHAIR - Thank you very much for coming to speak with the committee today. I appreciate your time.

We are taking sworn evidence today. All evidence taken in this hearing is protected by parliamentary privilege and I remind you that any comments you make outside the hearing may not be afforded such privilege. You have a copy of the information for witnesses, if you have not seen it already. The evidence you present is being recorded and the *Hansard* of it will be published on the committee website when it becomes available. Also, the hearing is being broadcast.

I am going to invite you to make an opening statement and then we will have a series of questions for you. If at any stage you wish us to consider some of your testimony in camera, in private, we can consider that. Please make us aware of that if you so wish to do.

Would you like to make an opening statement for us?

Mr McGLONE - Yes. It was interesting listening to a lot of the EDO presentation because it made me aware that without really deliberately doing it, I did not focus a lot in our submission on some of the issues that they did around environmental monitoring and the issues around data. They probably dealt with them very well.

A lot of our submission deals with the issue of the Marine Farming Planning Review Panel but we also make some comments about the EMCA legislation and the EPA. I will quickly run through the key points that I want to make.

The Marine Farming Planning Act came in in 1995 and the TCT has been consistently involved with this issue since before that act came in. We can attest to the fact that most of the key problems we raised in 1994 and 1995 still exist.

The industry is now growing rapidly and regulation needs to be tighter to catch up to this growth. We went close to crashing the ecosystem of Macquarie Harbour several years ago with oxygen depletion incidents. We were probably one incident away from an absolute catastrophe. There was recently the unprecedented move of the industry into the east coast where government and industry ignored massive public concern and protest, and recently we have seen the process of expansion into Storm Bay of a scale that we have never seen in Tasmania.

Just as a couple of factoids to emphasise this issue. The combined expansion depending on how far they go of the companies into Storm Bay is 40 000 to 80 000 tonnes of fish per year, nearly double the current statewide production of around 55 000 tonnes. Christine Coughanowr has publicly stated - and I am sure she has made a representation - that the nutrient load from this expansion is equivalent to 2300 to 4600 tonnes of bioactive nitrogen, which is one of the big problem nutrients that comes out of fish farms. She estimates that this is 6 to 12 times the City of Hobart's sewage outfall in terms of nitrogen and 2 to 4 times Tasmania's outfall in terms of nitrogen. It is an unprecedented - I know that word gets overused lately - but it is an unprecedented development.

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The EPA is moving through and developing and finalising licences with no public input whatsoever, plus the Marine Farming Planning Review Panel, in our view, made no serious concessions to community concerns.

A few comments on the EPA regulation. There are fundamental flaws in the process of assessing and issuing environmental licences, and it is important to note that while very significant changes were made in 2017, we think that the most significant flaws were not addressed.

The Government currently has drafted, and I imagine intends to table in parliament in autumn, a range of changes through the environmental legislation amendment bill which again touch on some of these concerns but largely don't address them.

The Environmental Management and Pollution Control Act 1994 requires a series of significant changes. We require environmental licences to have the potential in law to set maximum biomass and nutrient loads, which is currently impossible. The caps need to be set based upon the ecological capacity of each receiving environment, and it's important to note that this is what is currently happening with all our sewage treatment outfalls. The amount of different elements of nutrients that can be disposed of is dependent upon the understanding of the sensitivity of that environment.

We require the EPA to seek public input to draft environmental licences and not have it discretionary on the director, and, if this is the case, that will also trigger the potential for appeals over approvals.

In regard to lease monitoring data, there are proposed changes in the amendment that I mentioned that the Government seeks to introduce, but again, release of that data is discretionary on the director.

The Marine Farm Planning Review Panel has a key role in reviewing draft marine development plans, seeking community input and making recommendations to the minister. The EPA and the panel are the crucial institutions in Tasmania when it comes to come to marine farm planning and approval. Marine plans establish the areas that are available for farming, for the leases and the farm type and set a range of environmental controls.

It's not an exaggeration to say, looking back at the 25-year history of the panel, that it has been an absolute rubberstamp for industry. There has been one occasion in 25 years when the panel has recommended refusal of a marine farm plan. That was for Soldiers Point on Bruny Island and was a very famous example. It was refused on the basis of information that came, not through the environmental assessment process formally, but through public submissions that there was a sensitive marine reef that was identified that would have been greatly affected, and the panel, largely led by one woman, an environmental scientist who was on the panel at that time, recommended against approval. The minister at the time, Bryan Green, subsequently changed the legislation to give him the power to overturn that refusal and that's what he did, so there has never been an instance where a marine farm plan has actually been refused by the panel.

The panel generally has never taken seriously community or social concerns, and our submission identifies the range of issues that I call social concerns, and you will hear a lot about that from representations today and on other days. The panel's recommendations to the minister cannot be appealed, the minister is not bound to implement the panel's recommendations and the minister's decision cannot be appealed, so at every step of the process there is a lack of any right to legal review.

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I want to comment quickly on the resignation by two of the experts who were on the panel and I do not know whether they've made a representation or, if so, if they intend to come, but if they do, I want to flag a few key issues. Legislative amendments in 2017 created two new positions on the panel, one for a biosecurity expert and one for a person with expertise in environmental management. The first nominees for those new positions resigned in August last year after spending eight months on the panel.

The letter of resignation - and you can read key quotes from that letter in my submission - is freely available. I obtained it originally from the ABC website. That letter, I believe, shows the panel's assessment for Storm Bay was not science-based, objective or rigorous. The minister approved the Storm Bay marine farm plans in spite of these complaints and resignations. I remember the interview Mr Barnett gave to Leon Compton where he continually responded to every complaint that those environmental scientists made that he had complete confidence in the panel. I think this issue of confidence in the panel is where the community and conservation groups divide with the industry and the Government. If you didn't have any knowledge or concerns about the panel before the experts resigned, you have ample reason now to be fundamentally concerned.

These are the key recommendations we make. First of all, the legislation needs to be amended to recognise social and recreational values. These need to be identified, assessed and have management measures put in place to attempt to mitigate or manage impacts. The panel's review of public submissions should be subject to review by the Tasmanian Planning Commission, which is a normal process with a lot of other analogous management plans. Reserve management plans can go through the TPC process, as can water management plans and planning scheme changes.

The panel's final decision needs to be subject to an appeal and we need to remove or greatly constrain the minister's veto over the panel's recommendations. Our submission also makes further, more detailed recommendations about panel membership and panel processes. There are some comments and recommendations in there about seal management and I can go to those too, if you wish.

CHAIR - Thank you. I am going to start with a general question. Does the Tasmanian Conservation Trust have a view around what would constitute sustainable development and growth of the salmon industry in Tasmania? Do you have a view as to what would be the right size for the salmon industry and how we should go about determining that?

Mr McGLONE - That's always the \$64 000 question. I just point out for the record that *The Mercury* today, bless their socks, said -

A range of groups who are opposed to fish farming in Tasmania are going to be presenting to this committee.

We're not opposed to fish farming; we're not opposed to mining, forestry or farming. Our position always is that we're there to see that any industry is done in a way that protects a range of environmental values, particularly biodiversity. In particular with fish farms we have a range of other broader environmental matters that need protecting. Some of them fit into the area of social considerations, for example, with pollution and visual impact that is not necessarily causing defined harm to the environment but is causing harm to what the community is concerned about. A range of issues there need to be addressed and some of them you may or may not think all sit under the banner of sustainability.

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I think with all industries we have a struggle on our hands to manage sustainability when there is rapid growth. The legislation was brought in in 1995 clearly with a view to provide, let us say, an easier, or one might call it a fast-track, process for a very new infant industry to allow it to grow. I think we've gone well beyond that phase and legislation keeps making little steps, but we're not catching up to where the industry is at. Where you have very large changes, very large expansions like Storm Bay, we simply don't have the institutions and environmental regulations in place to assess, approve and manage them to the community's satisfaction.

In our submission we didn't focus on some of the issues that the EDO did around measuring the outcome and the impact of farm after it's approved. What we're focusing on is what you need to do to ensure that marine farms are of a scale and intensity and in locations that will have less impact. We are more focusing on the bigger picture changes to law that will hopefully avoid or mitigate impacts from happening.

I think that if we had a fair process through the Marine Farm Planning Review Panel, for example, a process that really gave the community true power, true input, to the process and capacity to review approvals, we are probably having a very robust argument through some form of tribunal about whether the approval for Storm Bay was legitimate.

The key issue is that I have not heard a single person who has railed against the Storm Bay proposals who have said they are absolutely against it, but they are absolutely gobsmacked at the scale. Not only the scale, but the fact that we have had very few fish farms in that area and then we are adding farms of this scale. It is extraordinary.

Mr VALENTINE - In relation to the planning side of it, you were talking about the fact that it needs to go through the planning processes we have at the moment. Can you talk us through how you see that operating structurally?

Mr McGLONE - There is an analogy to local government planning but it is not always exactly the same. Basically, what we see needing to happen is that if you consider a draft marine farm development plan to be something like a planning scheme change, we need to retain the current process of having a draft going out for public comment and comments coming into something equivalent to the panel. But several things need to happen that currently do not happen.

First, there must be requirements about public consultation. Currently the hearings are at the discretion of the panel and when the panel reviews public submissions and responds to them, currently there is no requirement that they actually document what they think of each submission and their response.

With the development of national park plans, for example, the Parks and Wildlife Service is required to do that sort of assessment and that assessment is reviewed by the Tasmanian Planning Commission. You can go a step further where the planning commission can not only determine whether the community concerns were properly identified and addressed, they may even be able to make recommendations to the minister of the day, as it can in other planning matters.

The other key issue that needs to change is that the ultimate approval by the minister needs to be subject to appeal. It is interesting that when industries like salmon farming respond and talk about how well they are regulated, I have never heard, and maybe I will hear shortly from one of the industry representatives, that they support the idea of appeal rights over major approvals.

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It is not only one thing missing, it is a fundamental thing that is missing in the system. If we had a local government development approval system that did not allow for appeals over discretionary developments, it would be an absolute breakdown in society. It is that fundamental - it is not only part of environmental assessments, it is a part of democracy. It is crucial.

If people did not have a right to raise concerns through their council and then potentially take appeal over local developments, it would be a fundamental breakage in democracy, but that is what we have in fish farming. There is no potential to appeal that approval of the development planning.

Ms FORREST - Following up from that, using the planning approach we currently have for land-based activities to marine farming, what do you think might be some barriers to actually apply? You talked about the benefits in having the appeal rights and other aspects of it, but in your view, how is it different or is it different, and if it is, how? In the past, have you actually raised this with the government - past and current - as a way forward and what was the response?

Mr McGLONE - I have been raising it since David Llewellyn was minister or maybe even before. One of the key things to emphasise is that with developments that get to the scale and potential impact of the sort of fish farms we are seeing in Storm Bay, if it were a mine, there is a referral agency, Mineral Resources, and the EPA which advise the council.

In the same way, what we need is a referral agency that is different from the panel, that is actually made up of key experts, contrasting with local government. We need an institution that is different from the panel, that has the trust of the community and can provide that expert input in the same way as the EPA does with mining

Ms FORREST - Shouldn't the panel be able to do that?

Mr McGLONE - As it is currently instituted, it has fundamentally failed and there are obvious flaws in its make-up and processes.

We basically think that to get trust back into the system, the community really wants to see it abolished and a discussion about what replaces it, a root and branch review.

Mr VALENTINE - Is that because of the make-up of the panel or the fact that the panel may be seen not to be structurally in the right place?

Mr McGLONE - It's interesting that the structure is missing some key elements. There are no community representatives on the panel and there are no conservation group representatives as there are on many similar committees. The operations of the committee, I think, have been laid bare by the two panellists who resigned, that the way it actually operates is able to happen in a way. I won't repeat their quotes, but it happens in a way that is quite inappropriate and delivers really bad, really flawed science.

I think it is absolutely critical. One of the key things that is missing, for example, is that there is no clear rule around how many people have to attend a panel meeting when it is making decisions, which is pretty amazing. There is no clear documentation of panel meetings. Most importantly, as we recommend, there needs to be a publicly available statement of reasons why they make certain recommendations; that has to be made public.

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These are fundamental things.

Mr VALENTINE - Like a commission.

Mr McGLONE - Yes, exactly. These are fundamental processes of environmental assessment that happen in many other areas. You wouldn't have an EPA decision about mining, for example, without it not just issuing a permit but providing an explanation of what the issue were and how they responded to it. The planning commission does a similar job with planning scheme reviews.

Ms FORREST - Back on the planning scheme: Hobart is a good example but it happens in all local government areas that proposals are put forward, often for a hotel or something like that, and the wheels start to grind. Then the council may, or when they do, approve the development, it is off to RMPAT almost automatically. There may be good reasons why it is appealed. Maybe it isn't a suitable development but there are processes at the front end where it is assessed by the planning officers and then the council sitting as a planning authority and through that process.

After many iterations, some of these developments never proceed and may be those ones shouldn't have done in the first place. It becomes this endless cycle of apply, appeal, apply, appeal. Looking back, I know at the time the amendment was made by the then minister, Bryan Green, that was part of the argument, that there needs to be a final point, that the buck stops with the minister and the minister gets their review at election time. I was here at the time when that went through.

Mr McGLONE - With one refusal he decides to change -

Ms FORREST - How do you ensure that industries can get on as long as they are meeting environmental and social and economic requirements? Obviously, it is for them to meet their own economic requirements. We have to look at the three legs of the stool, don't we?

Mr McGLONE - With planning appeals very few developments ever get taken to the planning appeals tribunal. They tend to be like you said - the more controversial - the larger, the taller - and one of the key issues that we are abundantly aware of is that you don't take planning appeals unless you have got a lot of money behind you.

The Rosny Hill Friends Network is lodging an appeal today, I happen to know, I am involved. They had to get more than \$30 000 in the bank before they could lodge. Their lawyers won't take them on until they can do that. That is a huge thing for a bunch of community people who have never done this before. The idea that people take planning appeals en masse or willy-nilly doesn't happen. There are instances where wealthy individuals can take planning appeals that may not appear to be very important and they happen to have a lot of money behind them but, hey, that is the system if you can afford it. The average community group is very shy of making planning appeals.

Storm Bay -why shouldn't it have been subject to the potential appeal to some form of tribunal? It is unprecedented on that scale for Tasmania. It should have been subject to review. One of the things I meant to say earlier about the benefit of appeals is that - and it is interesting; we have always viewed this as something we know, but I've talked to people who have worked in the EPA in government. They say it is when you have to go through an EPA approval process, is when you really sharpen your skills as an assessment office. That is what doesn't happen with the process at the moment.

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There is no legal oversight, no process where every single element of an assessment and approval can be looked at independently. That is what really lifts standards. I won't give you examples right now that I have been through recently with local councils that are not normally scrutinised. When you take them to appeal, they fall over on really basic documentation and assessment issues.

That is what is not happening in Tasmania. When there is the potential for an appeal, standards will rise inevitably.

Mr FINCH - I want to ask about the Marine Farming Planning Review Panel and the two resignations you have talked about today and noted in your submission. What has happened with those two now vacant positions because of the scientists who resigned?

Mr McGLONE - They have been filled.

There was gap for quite a number of months. Strangely enough, the membership got to a point where there were so few they could not function. The list of membership disappeared off the website of the department for quite a few weeks and then suddenly the minister made an announcement that a range of new positions had been filled. Those two, plus a few that had expired. As I understand it, it has a full membership.

Mr FINCH - Are they scientists?

Mr McGLONE - Yes, absolutely.

Mr FINCH - You made a call that maybe conservation groups and recreational fishers and perhaps community might be represented. Are you satisfied that the panel now has the required expertise to carry out its work?

Mr McGLONE - Not in those areas. Not community concerns or recreational concerns, absolutely not, no.

Mr FINCH - You think there still might be an opportunity to increase the size of the panel to accommodate those concerns?

Mr McGLONE - Absolutely. It would be made more effective if the legislation made it clear that addressing social and recreational issues was an important issue for the assessment process to look at. It is no use having community or conservation group members who raise issues that the law does not allow the panel to look at. You need to change the law. This is where we need fundamental changes to the very purpose of the panel.

Mr FINCH - In your submission you made a point of removing the minister's veto power - 'remove or substantially constrain the minister's powers to overturn decisions of the panel'. Yet you mentioned earlier that you were in support of an opportunity by Bryan Green, who was then the minister, to overturn a decision. Do I have my facts right there?

Mr McGLONE - No, not at all.

What I explained was that the Soldiers Point fish farm approval by the panel was recommended to the minister for refusal - this is going back 10 or 15 years. The minister did not have the authority

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to overturn that so he went to parliament and changed the law. The parliament gave him the authority to overturn that decision, which he did.

Mr FINCH - Thanks for that clarification. Just a question on your overview - you were talking about the concern about the excess of nitrogen: Could you explain to me the damage that comes from the nitrogen? What occurs in those circumstances?

Mr McGLONE - I am going to sketch this out and direct you to the person who can talk about it in great depth. The person who brought this issue to my attention, the scale of the locally output of nitrogen from the Storm Bay fish farms, is Christine Coughanowr, who has worked with the Derwent Estuary program for about 20 years. As I understand, her argument is that bioavailable nitrogen can easily be taken up, particularly by algae. Then when you get massive growth of algae, they need oxygen. So, they deplete the oxygen. Depending on how much of the nutrient might end up in the Derwent River, as opposed to Storm Bay, the changes in oxygen level can actually reactivate heavy metals that are currently sitting in sediments in the Derwent bonded to other substances which makes them less dangerous.

That is a very snapshot way of explaining it. The issues are incredibly grave. You will have a fundamental change to the environment when you have massive algae growth. You have the indirect impact of this potentially freeing up heavy metals in the Derwent in an area where we have a lot of opportunity for people to have contact with those metals.

CHAIR - In your submission, you reference the resignation of two members of the panel and certain assertions made by them on their resignation? Could you comment on what capacity we would have as members of the public or, indeed, as members of parliament, to assess the merits of the assertions that they made? In terms of the operations of the panel, the assertions around whether it had the correct information to make a decision and consideration given to a balance of things, are we, as external to that panel, able to make an assessment on whether those are genuine accurate assertions?

Mr McGLONE - Without getting personal, I will just talk to their expertise.

CHAIR - No, I don't want to evaluate their credibility in making the assertions.

Given the structure of the panel and its operating procedures, what is in the public domain and what isn't and those sorts of things? What is it required to document and/or make publicly available? Could we assess their assertions against what is available in the public domain around the mechanisms of the panel and the determinations of the panel?

Mr McGLONE - They raised quite a number of very fundamental problems. I think, for example, they said -

Natural values of Storm Bay have not been mapped and considered.

CHAIR - So how would we know whether that is true?

Mr McGLONE - For example, I went to a public event where an IMAS scientist said exactly that was the case.

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CHAIR - But without your hearsay evidence or someone else telling us anecdotally, how does the panel operate? What is it required to document? How are its decisions are required to be made? How would we know whether that was true or not? If the answer is that we wouldn't, potentially that highlights that is something for us to think about.

Mr McGLONE - Without having the legislation in front of me, one of the things that is clear is that a lot of the processes of the committee aren't established under law. The fact that they can go through a process that ends up with the sort of fundamental criticisms that these scientists have given says that they have no clear structure in law. They pointed out that no regulatory guidelines to define the standards the company must be held to.

I know these people and they are very eminent in their field. When they make an assessment, they are used to there being something that the law says must be provided to them at a minimum so that they can decide whether it meets those standards. These are fundamental things. I won't say forest practices, mining, or local government planning are perfect, but there are fundamental requirements in law in all of those industries.

CHAIR - In those circumstances, if these sorts of assertions are made, we could look at what was required, what was documented and what was available, and potentially assess whether they were true assertions?

Mr McGLONE - Yes, with local government issues you know there are requirements for assessments of certain impacts on natural values. There are certain requirements for how those assessments are undertaken. These scientists are saying there are no such guidelines for a fish farm of this scale.

Ms FORREST - I was looking at the section in the act regarding the panel. There are some guidelines there about how they conduct hearings and things like that, but it is discretionary whether they hold them.

Mr McGLONE - Yes.

CHAIR - Is there a public record afterwards?

Ms FORREST - It doesn't specifically say there has to be.

Mr McGLONE - My main concern is how they carry out their own meetings. They might have hearings where they listen to a bunch of people and then they go away and make the decision and there's no clear -

Ms FORREST - They provide a report to the minister in terms of a recommendation one way or another.

Mr McGLONE - Yes, but there are no clear requirements. There's not even a requirement for a quorum. For God's sake, I can't believe that. The issue of not documenting your reasons and making it public - I've probably said it too many times - but that's fundamental. How can you have a democratic process about a public resource where you don't explain your decision and make it public?

Ms FORREST - Do they do that to the minister?

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Mr McGLONE - If they do, we don't get it.

Ms FORREST - Isn't the question here then about the report to the minister and the requirement for the minister to provide that? From memory, the minister has to provide reasons to the parliament if they go against the advice of the panel.

Mr McGLONE - Sadly, they seldom do that.

Mr VALENTINE - The panel must perform its functions and exercise its powers in accordance with any directions given by the minister.

Mr McGLONE - Whether it's the minister or the panel having to make that available, it has to happen and we're recommending that the minister's power to veto is largely removed. We focused on the panel releasing its decision. I don't want to be emphatic but if there are reasons a minister might want to have some special overriding power, they need to be clearly articulated in law. The minister might have role in safeguarding human safety that didn't get assessed through the process. There are always reasons a minister might have to intervene, but at the moment the minister can ignore all recommendations.

CHAIR - To clarify, if the minister makes a decision contrary to the recommendation of the panel and is required to table reasons for that decision in parliament, there is still no appeal right in place for the community or others around that decision, even based on the reasons?

Mr McGLONE - That's right, and those reasons could be entirely flawed in our view and we have no recourse.

Ms FORREST - This comes back a little bit to the legislative framework under which decisions are made. One of the concerns we've heard from a number of individuals submitting to the committee has been the impact on their lives of noise and light, and you also mentioned the visual impact. There is visual impact associated with lots of development. Most developments have some sort of visual impact. As far as I can see, there is no requirement for a capacity to put conditions around noise and light, or is there, and why is hearing these complaints, in your view, about intrusion?

Mr McGLONE - I think noise and light is probably dealt with better than some; I'm pretty sure the EPA has a requirement to assess those. Whether that's satisfactory for people is a big issue, but the other social issues like visual impact and impact on boating, recreational fishing, surfing, you name it, are not within the framework of the panel to look at and that's -

Ms FORREST - No, but could the EPA impose curfews around the use of light and noise?

Mr McGLONE - As I understand it, they can apply conditions around that at the moment. The role of the panel is really critical because its process comes first and it makes decisions about where a farm can potentially be leased and it's at that stage that a community, I think, most wants a say about whether it's legitimate to have a farm in this area of this scale, and it might suggest it can happen in other places. That's where you can better assess those impacts, and then if something gets missed - there's always some residual impact - it gets looked at through the EPA processes as well.

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Ms FORREST - As I understand it, and from what you have said, the panel can't say it is happy to recommend the expansion or the development of a salmon farm in this area, but would require a noise curfew - no noise after a certain time or between hours, and light at only certain levels and that sort of thing - but they don't have the power to do that, do they?

Mr McGLONE - Correct me if I'm wrong, but I think they can and I think they do, but it's not entirely satisfactory because in operating fish farms, you inevitably have to cause noise to get a boat to it and do all your work, pumping water or whatever, and that often happens early in the morning, whereas I am sure the EPA put some constraint on that work where it can't happen 24/7.

Ms FORREST - We would have to ask the EPA about that.

Mr McGLONE - There is no policy driver in Tasmania that deals with visual impacts and environmental assessments.

Ms FORREST - In terms of visual impacts, that is the other place I want to go. There are moves in some places and potentially here in Tasmania about submarine farms that are not sitting on the water. The fish are obviously in the water underneath the infrastructure, but the cage is below the surface, so it removes the visual impact but it doesn't remove the need to have a barrier around it. Would those advances -

Mr McGLONE - I've never heard of that but that clearly has some benefits. You would need to know the farm was there.

Ms FORREST - Yes, there would still need to be barriers around it.

Mr McGLONE - You wouldn't want to run into it in the middle of the night by accident so you would need to have flags, lights and whatever to identify it, but that's interesting. Some of the problems we see with fish farms are potentially addressed to some degree by technology. We haven't talked about seals.

Ms FORREST - I was about to get to them. You talked about the nets. On page 8 of your submission you say that while there are a number of variations of fish pen design, the key principle involved has an inner and outer net, the inner net stopping salmon from escaping and the outer net stopping seals from entering. We know that the proposed expansion is set for offshore areas which are much more dynamic sites and a number of the companies have worked to develop much stronger and more resilient pens that have those separations and better workplace safety for their workers. Out in the sea you don't want them falling off the edge of the pen when they're dealing with the fish. Does that remain such a concern with seals?

Mr McGLONE - I think it's going to be a concern anywhere, apart from on land. We don't know for sure, but seal populations are probably only growing so it's going to be a growing problem, but the technologies are there. They have been in existence in other countries for 15-plus years and Tassal has a good system with a single net that is incredibly strong and taut. The combination of netting systems and operational systems needs to work well.

I have a copy for each of you, but that picture says a lot - that hole probably had nothing to do with a seal. Nets develop holes, so even with the double nets, if you keep them really tight, they will still develop holes. The fish farm companies know that. If you look closely, there are a couple of salmon swimming past and a seal actually nabs the salmon and takes off. John Bryant, who took

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that photograph, has actually witnessed adult seals doing this being watched by pups, so the pups are learning that salmon are something to eat.

The technologies are developing. I cannot speak to the specifics, but some companies use robotic techniques to check their infrastructure, including holes in nets, so they're able to maintain the nets in a better state and reduce the potential for seals to get to salmon with fewer labour inputs. That is another issue, but there is less potential risk to the fish farm workers as well, because they don't have to get into the water.

The other thing that is a human risk factor that probably can't ever be removed entirely is that you need workers to be really quick onto making these repairs. You need workers who have strong processes around when they're moving fish not to release live fish and not throw dead fish out of the farm. Seals do not naturally grow up knowing salmon in that farm is food. They have no idea. They have to learn it over time, and whether that is watching mummy and daddy or whether it is an accidental process of swimming past the fish farm when there is an escape, they have to learn that. Over time, I think it is quite possible that we can have a generation of seals grow up never knowing fish farms are there as a food source, so you basically have very minimal potential for any loss of fish or threats to workers and minimal need for doing some of the horrendous things that currently happen to seals.

Mr VALENTINE - Do you really think that is possible? I would have thought that seals catch wild fish swimming past and grab them. Just because there is a net between them and the salmon, is it really likely to turn them off?

Mr McGLONE - Jon Bryan works for us part time and he could not be here today partly because of cutbacks in funding. We will not go into that. Seriously, he is a person who has vast experience, not just of responding to fish farm plans, but in particular understanding seals. He has done some work as a contractor advising fish farm managers on how to manage seals. He can talk to you about the behaviour that people sometimes view as threatening, and he knows from thousands of hours of diving that seals do a whole range of things that are just playful and not threatening. They are potentially threatening. Jon is available potentially at another time via the phone. He was not available today but he can talk with some expertise in that area.

CHAIR - To follow up on that with a couple of things. I could say - I think with quite a high degree of confidence - that the industry would be highly motivated to be addressing seal issues. I have no doubt - and we will hear about this in more detail, I suspect - the industry is already undertaking a whole range of processes to ameliorate this issue. Whether it is the double-netted pens or training for workers and all those things you have mentioned, I would say with a high degree of certainty many of them in some sense would be being implemented and looked at by industry.

In terms of a regulatory requirement or even just a visibility of what is being done, what is it that you are after in this area around seal management? You are making assertions about what should be done. I would say for certain that industry could list for us what it is doing. What is the actual mechanism or requirement or regulatory structure that you think is not there at the moment around seals that should be there?

Mr McGLONE - On the positive side, it was only a few years ago that euthanasia was quite common and a striking number of seals were being euthanased at the request of fish farm operators. It is never ruled out because there can be the potential for human life to be at risk and it is now thankfully very rare for euthanasia to happen as a result of a request from a fish farm operator.

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Relocations became very controversial. As we all know, there was a spike in numbers and that was largely removed as a management tool. What we have in place is a range of management tools which include what are called beanbag guns and corralling problem animals in pens before they can be relocated. Again, I don't think I need to be an expert to tell you that shooting at seals with even a non-lethal gun is not a very sustainable or humane way of managing a seal. People can misuse the guns. If they are firing at their eyes - and we have heard unsubstantiated claims that some fish farm workers do that - we could end up having injuries -

Ms FORREST - Unsubstantiated claims, Peter. Why do you make them?

Mr McGLONE - This is coming forward from a range of people. I am just saying this is what we hear. I am making it very clear that it is unsubstantiated.

CHAIR - I am mindful of time. I am going to cut to the chase with the core of my question which was, given these concerns that you are raising, given that there have already been changes in place and there would be measures being taken within industry to address this, what specific requirements or regulatory mechanisms are you looking for in this space there are not there now?

Mr McGLONE - Our submission makes a couple. There is the requirement over time to use the best practice pen systems and operate them as they are meant to be used. Every new fish farm should be required to use a form of best practice, whether that is double netting or whatever is deemed to be sufficient. The practices used with penning of multiple seals and using beanbag guns should be outlawed. There should not be any resort to measures like that. Euthanasia should not be allowed for any other reason except for someone who believes their life is under immediate threat and has no other potential recourse. There should not be any used of euthanasia simply as a management tool.

One last comment about behaviour of seals. It is absolutely the case that seals have to learn what their food is as they grow up. They do not go and poke around a fish farm and decide that salmon is something to eat. There is a lot of fish in the ocean and they only select certain fish to eat and that is based upon what they learn as they grow up. Jon can reinforce that strongly if you want to talk to him.

Mr FINCH - In the submission from the Tasmanian Conservation Trust, Peter, there are probably nine or so recommendations you have put in there. I am not sure if this is the major recommendation you have, but the major overhaul of legislation, particularly in relation to marine farming development plans, environmental licences and the management of seals. What sort of success or cut-through do you think you are going to have with this current government if you pursue those thoughts?

Mr McGLONE - I think it's a hard ask, but then again, some of what we are proposing isn't a fundamental threat to the industry. If you want to have better oversight through the planning commission or through rights of appeal, if you want to have better make-up of the panel and better, more transparent processes and requirements of assessment by the panel, none of that threatens the outcome of having a fish farm approved and ongoing expansion. I think it is quite possible to see fish farm expansion in Tasmania, including salmon, happen in quite an appropriate way, but we need all of those checks and balances in place.

Mr FINCH - In respect of the minister and the TCT, do you find that you've not so much an open door, but do you find you have access to the minister to be able to put forward your thoughts?

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Mr McGLONE - This minister is actually a breath of fresh air, quite frankly. He doesn't agree with a lot of what we say, but he is very, very adamant that he literally has an open door - he is willing to take phone calls. We've been focusing on other issues, I have to admit, other wild fishery issues that are probably even more urgent than this issue, but this minister is actually a big improvement and he is willing to listen to the most controversial ideas about fisheries management, for example.

Mr VALENTINE - Just interested in following up on your idea of environmental bonds. Do you want to expand on that for the record?

Mr McGLONE - That's one thing I didn't come here prepared to talk about. It is an idea that I probably should credit the Environmental Defenders Office with that is something that is done, for example, in mining operations where you've industrial operations, or whatever it is, of a scale and type that have the potential to cause serious environmental harm. A lot of industrial developments on land, mining and other industries are required to pay those sorts of bonds. If a fish farm started to cause - God forbid if there had have been - a more serious impact on Macquarie Harbour, there could be some repair done using that money. It is probably easier to imagine cleaning up marine litter or pens that get washed away rather than ecological damage, but there could be ecological restoration that happens following damage from a fish farm.

Mr VALENTINE - And this would operate through licence fees, like percentage of the licence goes to that?

Mr McGLONE - It's just like with any major industrial development you are required as a permit condition to pay a certain amount of money or give a bank guarantee prior to starting the use. There was a development I followed near Longford a bit over a year ago, the tyre recycling facility, which was quite a controversial thing. A major issue the developer had was the requirement to pay, I think, \$200 000 into the EPA's bank account before starting the use, which never happened. A very common tool of regulators.

Ms FORREST - Just in terms of the independence of the research and monitoring and that sort of thing which is done, do you have confidence in the research that comes out of IMAS and CSIRO?

Mr McGLONE - Given they are sitting behind me, I have a lot of confidence in them. I think that -

Ms FORREST - I would have asked this if they weren't there.

Mr McGLONE - Without naming him, I listened to a very interesting overview given by one of their scientists to a number of community groups about exactly this issue, and it gave us a really strong insight into how they view their science. My conclusion was that I believe - not putting words in their mouth - they could do their job a whole lot better if certain parts of the planning process and regulatory process were done differently. Christine Coughanowr has spoken to this abundantly and she is probably a better person to talk to about this: if you are going to rely on a process where a lot of the assessments happen after the commencement of the operation, you do it in a far more staged, deliberate and precautionary manner. Even the natural values identification and assessment are happening now and will happen as the developments proceed. With that sort of fundamental science about what you have in your environment that might be impacted, it would be far better to have the essentials done before you lodge an application.

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Ms FORREST - The question was more about whether you believe the work is independent. Someone has to fund research and unfortunately government doesn't fund all research.

Mr McGLONE - That is just one issue. I think the quality of the research is debatable.

Ms FORREST - Do you believe the research they do is done independently, because they are IMAS and they have to be funded from somewhere? They are funded from a range of sources and different research is funded by different organisations - sometimes industry and sometimes the government, all levels. What I get a little frustrated about at times is what I call expert assassination where the expert's views are picked to pieces because someone doesn't agree with their work or what they have said.

The question is: do you believe that the work IMAS does is independent? They might be answering a specific question which may not answer a whole heap of other questions because they haven't been asked those questions and the research question is x and they respond to x , but they deal with y and z because they're not in the question. Do you believe they operate independently in assessing the questions they are asked?

Mr Mc GLONE - I am not going to avoid answering, but if you ask me about *centrostephanus*, which is another issue that is very controversial, I have some serious doubts about whether they're doing it entirely objectively or are impacted by other considerations which are probably more to do with matters other than who funds the work.

With finfish farming assessment, I'm not really the best person to comment on where there funding comes from or whether they're independent, but I think the quality of the research is not necessarily our major concern; it is the fact that it is linked into a regulatory and planning framework in the wrong way. So much of it is happening after the event and it's going to depend on the companies being willing to learn as they do greater assessments and change, which is fraught with difficulty.

Ms FORREST - If the legislation changed to allow more of the front-end work, if you like, would you trust their work then?

Mr McGLONE - I would trust that their work would actually be implemented, and that's the bigger problem. I don't have any doubt about the quality of work; it is about whether, given the way the assessment and approval process is happening, it will actually be implemented. You can understand that a very big industrial-scale fish farm development that is already operating is going to resist changes that might restrict its operation or growth, whereas if you do all that in the assessment process, they know what they're getting.

I'm really not trying to avoid that. Whether they were in the room or not, I would give you a totally honest view, but I just don't know enough about that issue and currently I haven't heard anything to suggest they're not being independent. As I said, we have a very good, thorough overview from one of the IMAS scientists of the complete picture of what they have done, what they're going to do and what they're currently doing, and independence wasn't one of the problems, it was a case of what I said.

CHAIR - Thanks, Peter, I appreciate your time here today. Are there any brief closing remarks that you wanted to make in wrap-up?

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Mr McGLONE - Two quick things. I really don't know whether they're free to comment on this but a number of people are probably going to mention the Aquaculture Stewardship Council. We have only just last week met with the person who is carrying out a review of the operations of the Aquaculture Stewardship Council in relation to finfish farming particularly in parts of Tasmania, and that is something you might want to note. The other thing I feel somewhat concerned about is that we don't have members of the major political parties that are represented in the upper House on this panel and I think that's -

Ms FORREST - We haven't a Liberal we can use at the moment.

Mr McGLONE - They're not here today and I don't think they're on the committee at all, which I find a great disappointment. They are people who have electorates that happen to overlap areas where finfish farming has happened and is going to happen. It's probably not much use complaining to you, but I put on the record that a lot of people out there have expressed to me a disappointment that particularly the Labor Party, which is an opposition party, is not sitting here at least participating.

CHAIR - I will take that as a comment. Thank you very much for your time.

THE WITNESS WITHDREW.

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Professor CATRIONA MacLEOD, ASSOCIATE PROFESSOR, **Dr DONALD ROSS** AND **Professor JEREMY LYLE**, ASSOCIATE PROFESSOR, IMAS, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR - Thank you. By all means, begin your opening statement.

Prof. MacLEOD - Today I'm appearing as a senior researcher, head of the Ecology and Biodiversity Centre within IMAS and lead author of the IMAS submission to the Legislative Council Government Administration Committee Inquiry into Finfish Farming in Tasmania. My particular area of expertise is in benthic ecology. With me today are Dr Jeff Ross, who's an expert in salmon environmental interactions and nutrient dynamics, and is very well versed on Macquarie Harbour and Storm Bay, and Associate Professor Jeremy Lyle, who's an expert in wild fish ecology, so hopefully between us we can answer your questions.

Our submission identified the key IMAS research initiatives, past, present and proposed, that we feel are relevant to the issues identified in the terms of reference for this inquiry.

We have sought to provide comment where appropriate on the value of IMAS research to the application of the Marine Farm Planning Act and how IMAS research relates to development and expectations of the sustainable industry growth plan for the salmon industry.

In summary, the key points from our submission are as follows. With respect to the data collection and publication requirements outlined in the growth plan, IMAS has considerable experience in data collection and publication processes. We have previously contributed, and remain ready to contribute, to discussions in this space. Our data management policy is clear. We seek to make our research easily available on request so long as intellectual property and ethical expectations are met.

With respect to progress and the development of an industry-wide biosecurity plan, IMAS has played a key role in facilitating and reporting on the 2017 Global Salmon Conference in which biosecurity was a key topic for discussion. Following from this, in early 2018 the salmon industry in collaboration with the Tasmanian Government committed to develop an industry-wide biosecurity program.

Although IMAS has not formally been involved in this process, we remain willing to support any emerging salmonid industry research needs and have significant research capabilities in salmon health research, fish nutrition and performance, welfare and wildlife interaction issues.

With respect to the preparation and approval process for marine farming development plans, IMAS research has been instrumental in determining the factors necessary to assess the suitability of proposed or modified marine farming sites and continues to play a key role through the Sustainable Marine Research Collaboration Agreement, commonly known as the SMRCA, with state government in undertaking zone assessments.

With respect to the allocation of leases, applications for and granting of leases, IMAS is not directly involved in allocation of leases or in the lease application process. However, we have on occasion been asked to provide advice on the information convened in the environmental impact statements to obtain additional data or to undertake targeted research on areas of uncertainty via the SMRCA, both as part of the development planning and the lease allocation processes.

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With respect to management of finfish farming operations and the prevention of environmental harm, IMAS research over the last 20 years has sought to improve understanding of the interactions between salmon farming and the environment. We have provided significant details of that research in our submission.

Our research has in large part been focused on identifying risks and providing risk-appropriate monitoring and management advice. Our research is often developed in response to evolving information, needs and concerns around monitoring and management practices. A key focus has been to ensure that monitoring and management practices remain fit for purpose and, where necessary, we have suggested improvements and sought to develop techniques to better assess and monitor interactions.

The baseline data and system understanding we have provided to date has informed management and monitoring strategies and has also helped frame the regulation. We believe that in seeking to develop farming in new areas the regulatory context needs to be open and responsive to concerns and prepared to be informed by the science as it evolves.

The IMAS research team will continue to support all parties to better understand the issues and find effective management solutions.

That is a summary of our submission and the statement we would like to make on the submission so far.

We would like to add some new additional information on recent IMAS outputs that we believe are relevant to the inquiry's term of reference. First, we have recently published a report outlining the results of a pilot project to develop and trial a spatial assessment decision support tool that brings together existing data with specialist mapping and spatial analysis approaches to enable different planning scenarios to be tested. We believe this tool will assist the decision-making process by better identifying potential marine users who may have conflicting values and help to clarify the nature of those interactions for both new developments and any modifications to existing ones.

We are also in the process of releasing the most recent Macquarie Harbour environmental assessment report, which we hope to have available on our website later this week.

These are our comments at the moment and we are very happy to answer any questions you might have.

CHAIR - Thank you. I think there will be a range of questions. I am going to start with a general one.

I am interested to hear the IMAS view on what is presented in the Sustainable Industry Growth Plan for the Salmon Industry and the intent from industry to grow to a \$2 billion industry by 2030, and the support expressed for that target by government in the plan. Are you able to comment on whether we have arrived at an assessment of what sustainable and appropriate growth might look like in this state for this industry that would have informed that industry target or the Government's support of it?

Prof. MacLEOD - I cannot comment in terms of the sustainable, economic or social context, but in terms of the environmental one, conversations have been had with various parties around where you can farm in Tasmania and how much farming there can be. We have been, to my

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knowledge, only involved in that in the sense of the general context around the environmental carrying capacity, as it were, what areas might be suitable and might be unsuitable.

My understanding is that as sites are explored, information on them is gathered. We have not been directly involved in exactly how the areas were derived within the sustainable growth plan, other than in general conversation. I am assuming that along the way they have taken on board our advice, but we are not specifically invited to comment on what regions, if that is the question you are asking.

CHAIR - It is not quite the question I am asking but it is an interesting question to be answering. In terms of the map that goes with the growth plan, with the red areas marked as 'no grow' and the green and blue areas that are existing and are currently under exploration and the potential for further growth, IMAS did not inform those areas and the allocation of those areas?

Prof. MacLEOD - To my knowledge, not specifically. We certainly would have had conversations around what some of the criteria might be that would allow you to decide what was and was not suitable, but we were not involved, to my knowledge, in actually defining those zones.

CHAIR - Defining those zones or not asked to comment?

Prof. MacLEOD - I will pass to Geoff in case he has anything extra.

Dr ROSS - No, that is correct.

CHAIR - Have you been asked to comment subsequent to those areas being put into the public domain as to their value or appropriateness?

Prof. MacLEOD - Not specifically, to my knowledge. We have been asked around specific things to provide additional information, hence the special assessment tool is focused on a key area within that plan area. We have then gone into looking at details, but not specifically, at the definition of those zones in the first place.

CHAIR - Back to the question I was trying to ask you. I will try to be more effective at asking it this time: does IMAS have a view on the appropriateness and the achievability of the \$2-billion industry by 2030 target for this state?

Prof. MacLEOD - Are you asking whether that is an appropriate aspiration goal for the industry?

CHAIR - Indeed.

Prof. MacLEOD - In terms of all those other areas I mentioned, it not being social or economic, I can't comment. In terms of the environmental, what we would have to say there is that it depends what you do, how you do it and where you do it. It is hard to say whether that is achievable. Depending on how you do it, I would say yes or no.

CHAIR - Without seeing detail of what that meant in terms of where, what manner of farm it is, how it is stocked, without those details, you can't comment?

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Prof. MacLEOD - The number instantly does not say, 'No, you can't do that' or 'Yes, you can'. We would have to say that in order to make a judgment on that, we would need more details about what you are planning to do and where you plan to do it.

CHAIR - That hasn't been shared with you by industry or government as both a proponent of that target and a supporter of that target?

Prof. MacLEOD - Not specifically, to my knowledge.

Dr ROSS - We know the industry is looking to move into and has already expanded into Storm Bay. Technology is advancing all the time. The aspiration, I assume, through investment in things like the Blue Economy CRC, is an aspirational goal. That aspirational goal would be contingent on the technologies and innovation developing with it so they can achieve it.

CHAIR - Presumably the science and the environmental impact of what that might be.

Ms FORREST - On the expansion plan, you would be aware that there is a proposal from Petuna to expand to the north-west tip. They are doing monitoring there at the moment. What role do you play in that? That is part of the expansion of the industry that would pick up some of that growth, if it is approved and built.

Prof. MacLEOD - Generally our role in any expansion plan would be where the Government comes to us and asks us for advice on, for instance, the environmental impact study or assessment that has been put forward. Or the community might come to us and say that they have some concerns and could we look at putting together a project proposal through a funding agency to do something to look into? Or if we were aware of something that really raised a concern for us particularly, then we might step and say, 'We have some concerns here and we would like to do some more work. We think some more work needs to be done'.

That particular proposal, we have been involved in conversations around research projects that are being developed and what might need to be looked at.

Dr ROSS - I think an example up there would be seagrass ecosystems are more widespread and there is more concern over that. We have certainly had discussions about the need to map, how you would monitor those ecosystems, and I guess probably more what things might be different on the north-west compared to the south-east that might need a different approach to monitoring.

Ms FORREST - On this point, it is my electorate, I know it very well. Mind you I do not know these seabeds very well, not being a person who likes to go there. I hear very conflicting reports from people who have spent a lot of time under the water there, who are not fishers, and those who use that area either recreationally or commercially in the fishery already. I engage with the company involved there which is looking at this proposal regularly as well. I hear very different accounts from both of them about the proposed areas in terms of the seabed and the seagrasses and that sort of thing. This makes it very difficult to know where the truth lies. What sort of role do you play in that?

Prof. MacLEOD - I think sometimes there are a lot of different views depending on how people interact with the environment, depending on their particular connection to it. Sometimes it is a case that that is an instance where you need somebody independent to come in and do the assessments so that the data is clear. Sometimes the information is there and you can drill down

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into it, but sometimes it genuinely needs that point of clarification, and often IMAS would either advocate for that or be asked to do that.

Dr ROSS - I think one of the ones we identified was a role in zone assessments. On the north-west coast I guess one of IMAS's roles is to help determine how that science should be done. How should the habitats be measured and collected so there is a clear and objective process for understanding what is under the lease.

Ms FORREST - The baseline monitoring as well as ongoing monitoring if it went ahead?

Prof. MacLEOD - Yes.

CHAIR - Let us clarify, Jeff. You said you have had discussions around what things need to be known about that area. Who were those discussions with?

Dr ROSS - DPIPWE. Through the SMRCA, so that is part of our arrangement through the SMRCA.

Mr VALENTINE - What is the SMRCA, for the record?

Prof. MacLEOD - The Sustainable Marine Research Collaboration Agreement.

Ms FORREST - Going to the wild fish if I might, on this point, because there is a significant wild fishery in that area and with a lot of nurseries, as I understand it. Again, not spending time in the water, I can neither confirm nor deny personal experience of that, but I am told by some people who live and work in the area.

Prof. LYLE - You are right. There are fisheries there. The seagrasses are a very important habitat as a nursery area. The research we have done there was done back in the 1990s so it is an area that we are not actively working on at the moment. There is a fishery for calamari there. We are looking at that particular fishery and the spawning grounds.

Ms FORREST - And shark nurseries too, I understand.

Prof. LYLE - There are shark nurseries up there, but again, it is an area we are not actively working on apart from some work previously in terms of seagrass beds and looking at some of the -

Ms FORREST - With the impact of climate change - and I think most of us agree it is a thing these days; there a still a few who question that but I am not one of them - that research was done a long time ago. Is that the sort of thing that needs to be done before further expansion should be considered?

Prof. LYLE - I would say absolutely, yes. There have been some changes as a result of climate change. We are seeing species that have been quite unusual in our waters in the past that are now becoming quite abundant. There are a couple of fisheries up in that area that are of recreational significance and also commercial significance.

Prof. MacLEOD - I think it's in everyone's interests that if we have any baseline data, it's contemporary so that we can actually be sure that any assessments we're making from that point forward that we're all apples with apples and we are all starting from the same point.

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Ms FORREST - Going back to the seagrass and the nursery issues and that sort of thing. You say the research that exists in this area is quite old.

Prof. LYLE - The habitat work that we did is quite old. There is some more recent research on a couple of fish species, not necessarily looking at the relationships with habitats and things like that.

Ms FORREST - I will come back with a couple of others.

Mr VALENTINE - You've heard or possibly read some of the concerns about the need for independent research, that we need to have independent research, not people who have interests et cetera. Can you explain to us the internal procedures that IMAS has in place to minimise the conflicts of interest that might exist when you are perhaps choosing who should do what research?

Prof. MacLEOD - It depends on the mechanism by which the research comes to us. On occasions we do consultancies - they are fairly rare, I have to add, in the environmental space because we're quite conscious that we like our information to be generally available in that space. I take on board Ruth's comment earlier on about our research being criticised. We take heart from the fact that we are often criticised by every avenue. It makes us feel that maybe we are a little bit independent if everybody can have a go.

Most of our research funding comes from the Sustainable Marine Research Collaboration Agreement -SMRCA - which is internal, but because that is a finite government pool of money, we look to leverage that wherever we can.

Mr VALENTINE - That's federal money and state, or state?

Prof. MacLEOD - The leveraging usually comes through federal money. The advantage in doing that is, first, you can get better bang for your buck so we get more money. When it's through external funding, you have more independence, not to say that the SMRCA doesn't do due diligence and internal review, but when we can leverage it through ARC, FRDC or some other external funding agency, there is an explicit requirement for our approaches and the project proposal in the first place to be reviewed and people can comment and criticise that and say -

Mr VALENTINE - Who reviews that?

Prof. MacLEOD - Depending on which agency you go to, it is a panel of experts usually who are not us - we have no part in determining who those people are. The FRDC will commission that independently.

Mr VALENTINE - It's at arm's length?

Prof. MacLEOD - Yes. It will then come back to us with an approval or without an approval. We then internally have a regular process by which we seek to report back on our research and we try to report back as much as possible to all the relevant stakeholders on the progress of the research as it goes through. Sometimes that is in a formal reporting format, so through the FRDC there is a requirement for reporting milestones they can use to verify and check on progress and what's happening.

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Also, we are aware this is something of considerable interest to the people involved so we try to engage with those people in the progress report as we go, partly so they understand the project and the research and can keep on top of it, but also, if we find ourselves in a situation where the results or the information we're gaining is of particular relevance in a timely nature, we can get that to them. We can make decisions about what we do with that, and that happens quite frequently. At the end of the process there is a review process again when the reports or the research publications are generated - that is, again, independently peer reviewed.

Mr VALENTINE - If it's a consultancy you're doing, what happens with the reporting there? Is that confined just to the people you're consulting for or does it go out for public consumption?

Prof. MacLEOD - Our general rule of thumb is that as a university we like to try to make our information peer reviewed and publicly available so if we can get a journal article out of any research we do, we will try to do that and that gets it into the public domain.

When I mentioned consultancy, they are pretty rare to be honest, and they are usually where there is a targeted little piece of information that is needed in an urgent fashion and therefore there's not the opportunity to go to a granting body and the timelines that that requires. They are pretty rare; I think it has been a number of years since we've done an active one. SMRCA can require us, through the state government, to act on something a bit faster, and that may be that state funding comes to us and usually it is in-kind stuff we do in that people will be allocated rather than a particular dollar. That is usually because there has been a broader decision that something is needed urgently. Jeff might be able to comment on that. I think for Macquarie Harbour, some of the early stuff on that was along those lines.

Dr ROSS - Macquarie Harbour was a challenging space to work in. I think one of the things with science is that we like to do the project, go through the process, get peer reviewed and then it gets published at the end of the funding, so at the end of three years. In Macquarie Harbour there was significant community appetite and particularly on the west coast they wanted to know what was going on. Through the university and the FRDC, we went through a process where I've written reports every three to six months and they go public. That is quite challenging as a scientist because our understanding changes, so every time I put out a report I'm exposing us to a little bit of risk, but I think everyone appreciated that the community needed to know and be kept abreast of what was going on. We have a steering committee and processes that make sure our independence is protected in terms of what we write that goes out to the public.

Mr FINCH - How long has the Sustainable Marine Research Collaboration Agreement been in place and what is the future for this particular program? Will this continue into the future? You are getting really good funding, \$10 million per annum, for it. How firm are you that it will continue into the future?

Prof. MacLEOD - The Sustainable Marine Research Collaboration Agreement was generated at the point at which IMAS became IMAS. Prior to that we were affiliated with the department through TAFI, or the Tasmanian Aquaculture and Fisheries Institute, as effectively the research arm of the state government. They used to be Fisheries labs many, many moons ago. When we joined with the university, there was a requirement for the state government to maintain that research capability and they felt it was better to do it in this collaboration agreement because they got better access to leveraging through the university processes, but they basically gave us a block grant of money to undertake fisheries research relevant to marine resources that would normally have gone through that in-house lab.

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In South Australia they still have an in-house research arm that sits under their state government. Now we are one step removed through the university which gives them better independence and better reach in the research they can do, but the commitment is there for that money going forward.

How long has it been in operation? I think it's as old as IMAS, so it has been in place about 10 to 12 years. It's negotiated on a five-year basis with the state government. I am pretty sure we have either just done it or are just coming up to renegotiation. It's a bit outside my area of expertise, but I can take that on notice.

Ms FORREST - It says here the strategic plan goes from 2017 to 2021.

Prof. MacLEOD - That's it, so we're midway. I'm happy to take the details of that on notice and get back to you. With that block grant there is an expectation that the state government will continue to need fisheries, aquaculture and marine resource research going forward. What that is is what's negotiated. In actual fact it is quite a dynamic process. We work with the state government every year to ask, 'Are there still your priorities? What would you like to see done?' Sometimes the priorities are bigger than the budget so we will definitely go looking for the leverage research money to try to cover that, if that makes sense.

Mr FINCH - It is comforting to me, and I am sure to the panel, that the collaboration will continue and the work will still be done by the university. If there's a cutback in that program, hypothetically would that mean research would be downgraded and opportunities removed for people to study and carry out research in this area? How does that circumstance work, or is it not considered?

Prof. MacLEOD - Theoretically that could happen, but again it would come down to the priorities for whatever bucket of money we have from the state government. It could happen in two ways. We could get a reduction in the quantum of income coming in or we could get a change in the priorities. Suddenly they might decide that climate change is the highest priority for the government in terms of research and in doing so, the money available for other areas of research would be diminished. We can compensate for that by trying to find that money through other avenues or we could just end up finding ourselves being able to do less. That is the reality.

Mr FINCH - Some clarification in respect of the way industry uses the information. Are you aware of how they access and use your information for the development of what they are trying to achieve and the expansion of the finfish farming industry?

Prof. MacLEOD - There are a variety of ways that can happen. In some circumstances they are actually partners on a research project, in which case they would be equal to anybody else on that research project and whoever else is a partner on it in getting flow-back of information from the researchers. Whatever has been arranged in the project outline is the way in which we would disseminate. They are part of it. They may be privy to outcomes that are through an SMRCA project that the government will relate to them, or it could be as simple as they get the report at the same time as everybody else.

There is a variety of mechanisms. In many cases, like we have had with the community and government, they will request a meeting for us to brief them on what is going on. Where that is within the ethical boundaries of the project descriptions, we will seek to do that.

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Dr ROSS - One that Catriona could have mentioned was that when the industry started, a lot of the research she led was on the following regimes required under farms when the farm industry was new to Tasmania. That is a really good example of how research was used to inform how operators use their leases and how effectively they manage the sediments under their leases so they get good recovery. After all, it is important for their own operations.

Prof. MacLEOD - Sorry, I did not realise, I was thinking you were talking about the mechanisms by which you obtain the research. That was a very good example Jeff gave of the ones where I said before where sometimes, if in the research process we identify something that we think is important that they know, we will actively seek to create an opportunity to disseminate that, and that has happened many times. We have found something surprising to us and it is a really important thing people need to know for the management, whether it is regulatory management or industry management. We will seek an opportunity to transfer that information. That is our ethical duty. If we find something that has raised alarm bells, we need to make sure we transfer that knowledge to the people who can do something about it.

Mr FINCH - So the industry can feel confident that they have that ongoing link to the university to assist them with their plans and what they are looking to do in the future?

Prof. MacLEOD - I would hope so.

Dr. ROSS - Definitely. That is part of the role of the SMRCA.

Ms FORREST - What about the community? Do it have access to this information? The industry is one side, but what about the community, the EPA and everybody else on the other side?

Prof. MacLEOD - In terms of the research we do, again it all boils down to how the research contracts are structured and where the process is. Generally, as a rule, if we are doing something that is cross-cutting and collaborative across all of that, we would look to try to engage with as many people who have a vested interest in that information as possible. It is not unusual for community groups to ask to speak to us or ask us to speak to them about where our research is at and what we are doing, and we're very happy to do that. Jeff gave a very good example of the west coast communities. We were really conscious that there was a lot of information being passed around and we wanted them to have the opportunity to clarify with us what it is we do.

Dr ROSS - It is the SMRCA collaboration so the premise of what we do is to do research to underpin the development of sustainable industries.

CHAIR - I would like to drill down into some areas in your submission. You have highlighted some intersections with the sustainable industry growth plan and your work so I will talk a little bit about those. First off, in the biosecurity area, there are actions around developing industry-wide biosecurity program in the growth plan. Have you been involved in the development of that program and what is your understanding of where that is at?

Prof. MacLEOD - To my knowledge IMAS hasn't been actively involved in the development of the biosecurity plan other than our involvement in the salmon conference where we helped facilitate and convene a session specifically on biosecurity which raised a lot of issues and recommendations that went on to help the conversations around the biosecurity plan. To my knowledge, we may have been consulted but not formally engaged in that process.

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CHAIR - In terms of those recommendations that came out of that symposium, a lot of those, particularly for our inshore farming arrangements, seem to be focused around the need to separate companies, separate year classes and fallowing periods. In the sustainable industry growth plan and the review that was done, it talks about, basically, leaving it to the companies while they are planning to go offshore in the meantime to figure out how to better address biosecurity practice in those ways - separation of company, separation of year classes, fallowing periods - to come up with a plan for that. That seems to be what the review has suggested is going to happen. Have you been involved in conversations with industry around how they might better, amongst themselves it seems, progress that?

Prof. MacLEOD - To my knowledge, no that's not, but I am happy to take that on notice and go back and check with the biosecurity experts. But to my knowledge, no, we have not been involved in those conversations.

CHAIR - Okay. That seems to be an action under the plan. The way it is phrased, it is around action 3, analysis of existing marine farming development plan areas used for salmon farming particularly with the view to strengthening biosecurity. Then in the review update, it talks about the analysis by industry and the department, around progressing that, informed by, so I presume those principles you put forward there from that.

Prof. MacLEOD - I am aware that they have sought scientific input on that from international experts because there were a number of those at - I believe the industry has spoken to international experts. A number of those were engaged at the conference, specifically brought over for their expertise in that area. We do have researchers within IMAS who have some experience in this but whether they have actually had conversations, I am not sure - that is what I would like to check - but I am pretty certain we have not been formally involved in the process, not to my knowledge.

Dr ROSS - I just wanted to clarify totally everything Catriona has said, that we haven't formally been involved. The one area you could put under that conversation is the pilot project we developed for the south-east, and it is a pilot project, just to look at ways you can assist it. Some of the scenarios we have run are looking at using existing leases and how you may reconfigure them to optimise situations for year/class separation and company separation. So, yes, that has been part of the pilot project.

CHAIR - You are suggesting that given that an action under the plan that is progressing, it would appear it is analysis by industry and the department of those arrangements, you would be well placed to be informing those conversations about analysis?

Prof. MacLEOD - Yes, apologies.

CHAIR - I note you also say that you hope to collaborate with the government and industry to address some of the key research issues identified in the sustainable industry growth plan. Can you talk a little bit about the ones you see as being a particular priority area of research that you think are important around biosecurity which perhaps aren't being progressed at this time?

Prof. MacLEOD - Again, I apologise that the key experts from IMAS in that space are all interstate today but I would have to take that one on notice to actually pick up what are the key points they would recommend.

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Ms FORREST - On that, I notice on page 12 of your submission you have -

... IMAS has identified a number of other areas where it can provide targeted research to enhance the SMRCA objectives and further align with the Sustainable Industry Growth Plan by improving understanding of:

- environmental ecosystem changes in the coastal environment;
- temperate marine environments, their resources, and their roles in the global climate system;
- marine mammal interactions ...

I am not sure that is necessarily all related to biosecurity but these are areas you have identified as needing -

Prof. MacLEOD - They are certainly areas where we feel we have skills and expertise that would be valuable to the development of a growth plan. Environmental ecosystem changes in the coastal environment is an area we work quite strongly in, and a number of the initiatives going forward at the moment which we are specifically involved in do that. There is the Storm Bay project and the Blue Economy. CIC is specifically looking at that in terms related to the sustainable growth plan.

CHAIR - Can I ask a question around that? In answering a couple of those questions just now, it sounds like you are standing ready with expertise, research or appetite to do research that relates to matters outlined in the growth plan. Is there a formal understanding about IMAS's intersection with this growth plan and is there something that is documented or agreed upon between you and the department as to how IMAS feeds into this, what points of intersection there are and what your role is?

Prof. MacLEOD - There are some key project areas we are already engaged with and have initiated out of that.

CHAIR - I don't mean a list of things you are already involved with. Is there something documented about your relationship to this plan?

Prof. MacLEOD - It would be the Sustainable Marine Research Collaboration Agreement and how we establish our priorities in that. Again, there are regular conversations with government on that as to where their research support is needed and we look to prioritise that through the other commitments we have through the year, and the urgency of the need. We can be reasonably responsive rapidly to certain things and other things are planned out. Yes, there is a plan that aligns with their needs to that that comes through the SMRCA. Did you want to add to that?

Dr ROSS - I think in terms of those priorities each year there are things like - and these get identified in that priority setting process - that understanding the interactions in more offshore environments is something that we're addressing with government, with industry involvement through external projects. How do those interactions change as they move offshore? There is a clear link to the plan. It may not be this is linked to the plan, but things like making sure we can get our reports out and communicate our data and information, site assessments, we were talking before about zone assessments and how we can improve those. Those things get set as priorities

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each year under the SMRCA and I think most of them would be clearly linked to the salmon growth plan.

Prof. MacLEOD - The other one I should point out that probably does link to that is a process within IMAS called the Research Advisory Groups. IMAS generates the conversations around that. One of the topic areas for that is finfish aquaculture and we invite other research organisations, government representation, industry representation and community interests representation to participate in that and tell us what they think might be priority areas. Then a summary document is provided to FRDC and the state government as potential priority areas under that finfish aquaculture. There is a recreational fisheries one and there is a shellfish one, and that provides some structure to us to align research direction with needs. Assisting in the growth plan needs would come through that too.

Ms FORREST - I want to follow up on a couple of things you raised in your opening comments if I could. You mentioned about the regulations that you would need to be open and responsive and in terms of how things are changing. Can you elaborate a bit more on that as to what changes you believe are needed to the regulations, either the act or the regulations, to enable that to really be most effective?

Prof. MacLEOD - I suspect in some ways it will be a case-by-case basis as to what is the research and how does it - sometimes, perhaps, clarification of how the research that we undertake will translate into management action. Our ability to look at, for instance, environmental interactions and provide advice on triggers; we can do that, but it would be interesting to get more clarification about how that might be translated into management response mechanisms.

Ms FORREST - The regs at the moment don't really give that openness, if you like, and responsiveness - is that what you are saying? We need legislative change?

Prof. MacLEOD - I think it's very much in the governance side of things that deals with how the science is used and translated into management action. Being able to inform, or even in framing the research and how we can frame it most effectively back to whether it is industry, government or the community, it is always useful to know how they can use it. Sometimes I have found that it may already be there but the clarity around what that mechanism is may not be there. We had a research project a few years back called Your Marine Values, and one of the most powerful end points out of that was clarification for the community as to where the mechanisms to address the values or concerns they had. Where those mechanisms were was really important and where the science, research and monitoring fitted in to that framework.

CHAIR - Might an example of that be that currently with an environmental licence issued by the EPA director or board there isn't a set of criteria against which that is issued and justified? In terms of the act, it is at the discretion of the EPA. Is it that sort of mechanism you are talking about within the regulator structure under the act or within the powers of the entities in that there are criteria or particular specified data requirements or whatever that that then gives that interface mechanism between what you are providing with the science and what the community then can understand becomes of that when it is translated into a management control within the operations?

Prof. MacLEOD - Yes, I think that could be an example.

CHAIR - Can you think of other examples where at the moment there might be a gap within the regulatory mechanism that feeds through so that from an external perspective the community

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can say, 'I know that the science is going to be there, there and there, and I can look to that point in the process'? It is a rambling question, I apologise.

Dr ROSS - In terms of local-scale impacts and so on, as in where the particulates go when they land on the sediments, I think the management controls and regulations are really clearly well defined for that in terms of compliance zones around leases because its attribution means it is very easy to track. I think one of the challenges for everyone, not just industry and government, and as a scientist, when we get into a broader ecosystem where there are cumulative impacts from all sorts of other factors that influence these systems is understanding how to respond to changes in the broader ecosystem. That is a challenge for everyone and something we are certainly trying to address from a science perspective because industry wants certainty as well, as do other industries. When we get out into these big multiuse systems, that is a challenge that needs to be addressed.

CHAIR - In terms of that sort of scenario, at the time leases and licences are granted, would that be things like a biomass limit or a nitrogen cap and the fact that we don't have those as requirements within the system currently? Again, there is some discretion there about whether they are applied and how visible they are publicly and what is the rationale for those caps or limits. Is that the sort of mechanism you would prefer to see there to help with that translation between science and industry and community?

Prof. MacLEOD -As Jeff said, when it's the local skill stuff and it's really clear, the mechanisms and the interactions are very well defined. We have a really good understanding of, 'This much goes in, that is the effect you see and this is what you don't want to see and that's what you should do'. When it gets to the broader system the collective interactions of all the other things in the system can be really hard to relate back to, 'This is the lever you need to pull in the salmon farm cage to initiate an effect on that', because of the other interactions. The bottom line is it does not matter, the carrying capacity of the system will be what it is. From the scientist's point of view we can talk about the interactions and where we might see negative flow-ons or positive flow-ons from these interactions, but trying to then have a really meaningful conversation about what you do about it on the other side.

CHAIR - I guess that takes us back to even earlier in the process, and again it has been highlighted to us a potential gap and a problematic gap, in that there is not a requirement for a certain suite of baseline data in science to be presented at the very earliest opportunity in the marine farm development plan approval process that again is assessed in a consistent and open way that's justifiable, which then would flow through to all those other conversations about limits and caps and management controls. Everything would flow from having originally had that assessment of that environment and an agreed suite of baseline data. Is that your understanding?

Prof. MacLEOD - I totally agree that the baseline data is really important to have, but the other thing we have to be mindful of is that sometimes it's not always a static change from a system here to a system there, other things can be changing along with it. Your baseline is really important because it gives you the context for everything you're doing. It tells you how that environment looks as a receiving environment, but you have to be mindful that everything else can change along with it, so it is a complicated issue.

Dr ROSS - My understanding is that there are fairly clear requirements of the information that needs to be collected -environmental information, social information, baseline assessment, owner assessments and EISs.

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CHAIR - That is something they're looking into because our understanding from other submissions is that if we, as members of the public, wanted to find that information, it's not readily available and it's not required to be there in a specified way that becomes accountable to public processes in the early stages. It may be that in some instances it is provided but it's not required to be provided, so the option is that it might not be in other instances. That's something for us to consider.

Ms FORREST - Going on from that, the spatial assessment development tool you have been working on, it appears that sort of mechanism wasn't around to determine the areas around the state that the Government decided would be no-grow zones. Can you tell me more about how this has been established, what it will do and how it will be used? This is something that has been raised by environmental groups and others in the community concerned about making sure that the areas designated for marine farming are suitable sites.

Prof. MacLEOD - I will make a quick point and pass on to Jeff because he knows it intimately in detail. One of the things to remember with the spatial assessment tool is that it's actually the data that underpins the tool and a lot of that would have been available to the Government. The Government was quite supportive of this project going forward. The aim was to have a process by which you can more easily pool together that information, compare it, evaluate it, judge it and have a much more independent decision. To clarify, some of the data would have been available.

CHAIR - Where in the process would that tool be used?

Prof. MacLEOD - It's a pilot at the moment, but I will let Jeff talk to that.

Dr ROSS - I think that's a question moving forward because it was a pilot project simply to test looking at an area where there is a lot of data available, so we deliberately chose a data-rich area.

Prof. MacLEOD - It's in the lower Huon - the D'Entrecasteaux Channel.

Dr ROSS - Yes. The next step now is to understand what role that tool could play in the planning process.

Ms FORREST - In terms of how it fits with the growth plan, there have been areas identified in Storm Bay and at the north-west tip and potentially off the coast of King Island. Has or will that tool be used to assess those sites?

Dr ROSS - That's a question for the Government.

Prof. MacLEOD - One of the benefits of the tool is that it will help you identify where there is maybe redundancy in some of the data, or if there's more emphasis on particular interactions, it might help you ask if it was a really good decision or did we get it right there, did we not - and hopefully going forward help you better inform those decisions.

CHAIR - Obviously you can't comment on where it will be used because it's not your decision but in terms of where it would most appropriately be used is at that early-stage process when approval is first being sought. Is that the most appropriate moment to use that?

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Ms FORREST - It should be used around the north-west tip and King Island, for example, that haven't got a salmon farm yet.

Dr ROSS - A lot of EIS information is used in making decisions about where to go and where to site leases. I think the pilot, I guess, formalises that process in a mapping process and putting it all in the one spot, so it's easier to access the data. It's easy to visualise. So, it's formalising part of the process that I suspect already happens.

Prof. MacLEOD - If the pilot looks very promising, the data we got out of it looks really useful, I would actually suggest that there are lots of occasions that you might use this. You might use it in advance to see whether we have the right stakeholders and the right interest groups here. You might use what we're thinking as a scenario tool to evaluate different options. You might use it after you have made a decision. I think once you've got something like this, you'd probably revisit it a number of times.

CHAIR - So the pilot has been undertaken and the tool is now with the Government?

Dr ROSS - Yes, it will be a publicly available report within a day, I suspect.

Prof. MacLEOD - I can pretty much say that you're going to get it.

Mr VALENTINE - When you were going through explaining certain things, you talked about community interest representation. Some of the submissions we are receiving are saying that measurements are being done, but they're being done in the wrong place. How do you access the community's interest in this? For instance, one of the sites says they're getting lots of mats of filamentous algae. There might be claims that it might be coming from the fish farming industry. Others might say that they have just put in a whole heap of blueberries and it's the run-off from that that's causing this.

How do you access that sort of concern that is in the community and make sure that the measurements that you might be doing as a research organisation are indeed the right measurements to be looking at?

Prof. MacLEOD - First, I agree totally with you, and, second, that is an ongoing process. One of the things we found with the research we do - with the salmon environmental interactions, it started off many moons ago. Everybody was worried about what was happening underneath the cages, so we took that on board and now, as Jeff says, we are pretty confident we understand the environmental impacts directly beneath the cages, what that looks like in the process of deterioration and recovery and what we can do to manage that.

Once we felt we were comfortable with that, we started to look at the pelagic and the water column interactions and now -

Mr VALENTINE - The hydrology of where it goes?

Prof. MacLEOD - Yes, we've moved out to things like reef interactions and broader ecosystem interactions. It is an evolving feast. In the Your Marine Values Project, which was an explicit concern we looked at, trying to work out how we could show people how what we measure as scientists in the environment relates to what they're concerned about. In some cases, you can do that quite easily and, in some cases, not so much. When we measure things like nutrient levels in

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the water column, we, as scientists, have an understanding of what that might mean for the status of that water column and what condition it's in. We can probably start to infer from that with certain of the modelling that we're doing, something we're involved with partnering with CSIRO on, as to what those nutrient levels might mean to changes in phytoplankton communities. The next step is to look at how it interacts with fish communities. Hopefully down the track, we'll be able to tell people that this is how this relates to flathead.

Mr VALENTINE - What mechanism is used to actually capture the community interest?

Prof. MacLEOD - Again, it depends on what the issue is and what the process is. Individual community members can raise concerns and we pick that up. There is the RAG processes -

Mr VALENTINE - But how do they raise their concerns? Do they ring IMAS?

Prof. MacLEOD - We've had that.

There is the mechanism by where things, like the submissions, come to government around a proposal or whatever. This process will raise a whole range of issues from the community that will come back. There will be discussions around their significance. The recommendations from here will come back to us. We will look at them and whether there is a way we can get a research team. Is that our area of expertise? There is a whole range of areas.

Mr VALENTINE - It's not just through government?

Prof. MacLEOD - No. Even down to our engagement with the community as researchers. As a research institution, we have a place in the community and we will pick it up that way. Sometimes we will be advocating for the community's interest into those conversations through SMRCA projects just as much as anybody else.

CHAIR - The Broadscale Environmental Monitoring Program - BEMP - has come up in a range of submissions. I am going to put to you a couple of things from another submission and test them with you.

The submission I am looking at is from Christine Coughanowr. It discusses the fact that sampling sites do not typically include sheltered or poorly flushed bays where impacts are likely to occur and monitoring of filamentous algae is not routinely collected. Is that an accurate statement in relation to the benefits of BEMP monitoring?

Prof. MacLEOD - Is that the generalised BEMP? There are a number of them now.

CHAIR - It touches back to Rob's question about how you choose to monitor and observations from communities about changes that they are seeing alongside apparently healthy water.

Dr ROSS - It goes to the question of what Rob was talking about before. I think that we very deliberately try to choose to make sure that we have monitoring sites in sensitive locations when it comes to water quality. The BEMP in the Channel in Huon was informed by modelling and there were sites very deliberately put in some of those bays where we might expect elevated nutrient limits.

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I think with each time the BEMP has been rolled out it has changed and developed and adapted. I think it is fair to say that when it comes to community concerns about seagrass and filamentous algae in sheltered bays that that has not been addressed so much in BEMP licence conditions. But certainly in Storm Bay there is an active effort now to include seagrass and filamentous algae. It is a fair point.

CHAIR - Following on from that, and again it refers back to that same submission. The statements made in that same submission that the new Storm Bay BEMP should provide a better model, which I think is what you are saying. But the contract for this is yet to be signed and the design has not been made publicly available yet. Is that correct?

Dr ROSS - I can say that the contract has been signed. IMAS is undertaking the BEMP through research grant between three to five years.

CHAIR - It is a three-to-five year project to develop and put that model in place, yet we already have fairly significant expansion into that space.

Dr ROSS - I should add then that IMAS through various projects - I might get the dates wrong so correct me on this - back to 2009 has had a Storm Bay project collecting data since then, so before expansion. It continued for five or six years, monthly monitoring data, and that was for a variety of reasons. It was to look at comparing a data set that was collected by CSIRO in the 1980s to see whether climate change has changed. Aquaculture were also interested in that program because they knew that they might be going out there so they invested in it as well. Then the EPA continued it for a period. Then we started the formal BEMP program. Just because the BEMP program is starting now does not mean that there has not been a long time series of data.

CHAIR - Although the full suite of things that will be measured and monitored there as not necessarily been measured and monitored there since 2009.

Dr ROSS - The research program on inshore reefs is a really good example. There has been a research program that Catriona and I have been involved in. One of the things we said to industry and government - I think it was probably five years ago - was that all this monitoring was developed based on the Channel in Huon and in a certain environment.

We want to make sure that that is robust so we want to go back and have a look in the Channel in Huon and revisit those sites. We also want to have a look in more exposed locations when technology changes and bigger cages. We are just finishing up a project looking at whether current monitoring protocols are fit for purpose.

The other thing is as we have moved to the open coast, other stakeholders there have concerns. Rocky reefs in the early days of the expansion were not considered a sensitive habitat nor was it considered one that needed to be monitored. That has changed. Other industries are concerned about reef habitats and the ecosystem so the monitoring of reefs -

CHAIR - Would it be fair to characterise then, because we heard earlier from the EDO, their statement around the fact that when marine farm development plans were considered for Storm Bay, there was an incomplete baseline data available because it was using data from monitoring that had been there since 2009, as you describe it, but that did not cover a range of things relevant to that?

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Dr ROSS - It would be fair to say that not everything had been covered and it was incomplete. The point was that there was a reasonable amount of science and one can only assume that when the industry's aspiration of 80 000 tonnes was considered, that full absence of data on everything contributed to the decision to make it 30 000-40 000 tonnes in the first instance.

CHAIR - Would it have been something that IMAS would have flagged with the Government and the industry at the time? That the data available was incomplete, as you have characterised it now, in terms of making decisions around approval of the plan and then further environmental licences are not likely to flow from that?

Prof. MacLEOD - We certainly raised the issue that you needed more to understand this system. As you work on the data, you understand it. I hate the term when everybody says scientists only ever answer a question to ask another one, but it is a little bit like that. You get an understanding of the interactions and the processes that allow you to say, 'well actually, we would be able to better answer that question if we knew this a little bit more'.

CHAIR - Would there have been a point in time that to your understanding or that you might have been involved with as IMAS, prior to the approval of the expansion into Storm Bay, where that question would have been overtly asked among key stakeholders? Do we have enough information in order to make this decision about the approval and a yes or no answer arrived at? 'Yes, we do, off we go, we will continue with it' or 'No, we do not. We will do more before we take that first step'? Was there ever that moment that you were aware of or involved in?

Prof. MacLEOD - There were moments where they were saying, as Jeff said, go forward. There was the option to allow expansion but to build the monitoring and management strategies concurrently with that. There are a couple of reasons that might not be a bad thing.

To monitor for the effects of aquaculture and really be able to ascertain what those effects are and where the triggers might be, you cannot do it in the absence of aquaculture. Absence of aquaculture gives us the baseline as to what the system is now. You need some level of farming activity because it is quite a different environment to the Huon and Channel to Macquarie Harbour. We would all be very loathe to second-guess exactly what the interactions might be. You do need some level of input in order to do that.

The plan was to put together a comprehensive monitoring program, as Jeff says, for three or five years. Our rule is to comment back on that as to how effective that monitoring program is for the interactions and risk and then advise how that monitoring program should be refined going forward.

CHAIR - You said, without the industry already being there, all you have got is the baseline. Surely the baseline is a fairly fundamentally important thing to have, quite clearly.

Prof. MacLEOD - Absolutely.

CHAIR - At that time, the assertion would be that there was not a complete baseline available for the different aspects and factors involved in that environment. Would that be a fair comment? Before the approval process kicked off, at the outset to be considered within an approval process?

Prof. MacLEOD - There was definitely the view that we needed to collect more information and that would be framed as part of the monitoring.

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CHAIR - I am mindful we have taken you well past the time. I apologise to the committee and thank you very much for your time here with us. Is there anything you want to say in terms of a brief sum up?

Prof. MacLEOD - No. The big one for us is we are looking forward to seeing what the outcomes of the committee and the recommendations and how we can help and move things forward.

CHAIR - Thank you very much and thank you for your time.

THE WITNESSES WITHDREW.

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Mr PAUL DAVIS, Mr ALEX MATYSEK AND Ms MARGARET WALLACE, BRUNY SUSTAINABLE AQUACULTURE, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR - Thank you very much for coming in. There are a few things I am going to run through to make sure you are aware of them before we begin. This will be sworn evidence we are taking today. All evidence taken in these hearings is protected by parliamentary privilege. I would remind you that any comments you make outside of the hearings will not necessarily be afforded that same privilege.

There is a copy of the information for witnesses there. If you would like to refer to anything in relation to your evidence today. The evidence you are presenting is being recorded by Hansard and will be available on the committee website once it is ready. It is also being broadcast today so just be aware of that. If anything comes up that you feel needs to be heard in camera, you can make a request and we will consider that request. So please make that at the appropriate time.

Finally, in terms of proceedings, you will have an opportunity to make an open statement if you would like to do so, and then we will ask you questions after that. We will focus that around the matters outlined in the terms of reference for the committee and the things you have mentioned and talked about in your submission. Is that nice and clear for everybody?

Would you like to begin by making an opening statement for us?

Mr DAVIS - Chair, if it is in order, two of us would like to make statements.

Ms WALLACE - I will read it if I can.

CHAIR - You are perfectly fine to do that. No problem at all.

Ms WALLACE - Here is a marketing message. It appeared on my packet of salmon:

At Huon our promise to you is simple. We won't every compromise on quality. Our products represent over 30 years of farming experience and intricate knowledge of the beautiful Huon region and its waterways. At the same time, we've raised our family and mastered our craft developing world-leading welfare practices. These are some of the reasons why not all salmon is Huon.

Great message and until recently still bore some relationship to the reality. Compare this with the reality we're contemplating here today. An almost doubling of Tasmania's total current finfish production through new increases in the number of pens in our waters. Pens up to the size of 4584 square metres in a zoned envelope of 973 hectares of our waters covering a leasable area of 530 hectares spreading out into Storm Bay and along the scenic eastern coastline of Bruny Island with huge trawlers and water traffic on an industrial scale servicing them. No sign of any reduction in the Channel operations.

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If there is to be any integrity to the product description I read or reality to Tasmania's claim to be a clean, green source of quality food, our finfish must be produced in a way that transparently preserves a pristine environment.

Industry representatives argue the merit of expanding their farming operations into Storm Bay and along the east coast of Bruny Island as a strategic solution to the pollution and environmental damage their farms and operations have caused in the D'Entrecasteaux Channel. They say that in these new coastal sites the open seas and strong water movement will carry effluent safely away.

I understand this argument has a superficial appeal and on the face of it seems quite compelling. But it is no more than a sleight of hand if the majority of the waters of the Channel remain open to further expansion of finfish farming as indicated on current plans. And, while we still await the hard science to prove industry claims that there will be no degradation and pollution from the enormously expanded new areas of finfish farming on Bruny's eastern coastline.

In fact, it is likely that the result will be to extend and expand, not only their farming activities but the pollution and damage we now experience on the shores of Bruny Island. This is not just expansion this is revolutionary change. We must protect the special values of the unique coastlines and waterways that Tasmanians have been fishing and enjoying for tens of thousands of years. It is the parliament's responsibility to ensure this happens. Thank you.

Mr DAVIS - If I may, Madam Chair, just as introductory comment, point out that we are formed by three community groups that represent the whole of Bruny and there has been substantial canvassing amongst all memberships to ensure that what we presented was reflective of all the concerns.

Amongst those concerns there is one that we feel bears particular emphasis. In here we make comment that Bruny is impacted by all the negative aspects of finfish aquaculture, but receives virtually zero in terms of alleged benefits, which is something to reflect on in itself. However, when looking at Bruny, really we are looking at a microcosm of Tasmania. It is our view that we are lacking a rigorous economic assessment of what is in the best interests of the Tasmanian public with respect to the use of a public resource.

This is not a minor thing because we see it in exactly the same context as what can only be described as the tragic fiasco of mismanagement by succeeding governments of one of Tasmania's biggest resources, the forestry industry. The core of that problem, we believe, is that there has never been a link between the true economic value of that public resource and the cost to the users of it. There has also not been due consideration of the fact that all public resources are to some degree shared resources, and certainly in the case of the maritime environment around Tasmania, and particularly Bruny, they are shared by many different people, including substantial other competing industries.

The lack of a link between the economic value and the competing value to other users of public resources leads to distortions of resource use in a state and to a destructive approach to the use of the resource. In forestry we saw a situation where rather than adding value, the focus was on maximisation of volume and trying to compete with Third World countries for a bulk low-cost commodity. We have instanced in our submission what one of the world's largest salmon producers does with respect to their industry and the quite staggering amounts of money that, in this case,

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Norway generates from that industry for the public, with part of that going to government resources and a large share of it going to the municipalities where the industry is located.

There are many other aspects related to the salmon industry, and we touch on them here and wiser heads than ours touch on them in detail relating to the technical issues, the real risks and so on. We find it a little frightening, to be honest, that there is a history in Tasmania over many, many years that one of the core responsibilities of governments, which is the husbanding of community resources for the best interests of all in current and future generations, is consistently avoided. Therefore we would like to add to this submission by formally asking that the committee considers recommending a rigorous and broad-reaching economic evaluation of the industry and the best way for it to develop within the context that we, along with, we think, most Tasmanians, support very much the idea of a growing, sustainable and strongly branded Tasmanian aquaculture industry. Thank you.

CHAIR - Thank you very much for those opening statements. One of the things I am interested to hear you talk about a little bit more to flesh out for us is around the assertion you make around Bruny Island being in receipt of few of the benefits of the industry that exists near it and being impacted by environmental or other impacts. Can you talk about that a little bit more for us so we understand, and also in relation to the membership of your groups, the people you are here representing today?

Mr DAVIS - The groups represented here include the Bruny Island Community Association, which represents primarily full-time residents of Bruny of all backgrounds; the Friends of North Bruny, which is more representative of the north of Bruny; and the Bruny Island Environmental Network, which again represents people from all over Bruny. Environmental awareness is very strong on the island. With the respect to the assertion we made regarding not receiving benefits, when we sat down and really discussed the sorts of issues that may be worthwhile looking into; we discussed the benefits that Bruny is receiving and, quite frankly, we could not find any. There is virtually no employment of locals, there is no supply as far as we could work out of services to the industry from Bruny and Bruny residents, so we were unable to find any benefits that were occurring,

CHAIR - One of the claims the industry makes around its value to local regional communities are things like local employment and contribution to local economies and other businesses that feed into their industry. Are you saying that there are no such benefits to be seen on Bruny Island?

Mr DAVIS - That is our genuine belief. We may be in error to some extent.

CHAIR - Are the businesses on Bruny Island members of your groups or do you represent them to some extent?

Ms WALLACE - Yes, the community association would have quite a number of small business operators. In the Bruny Island Community Association, which I represent on Bruny sustainable aquaculture, there is quite a number of small business operators and small businesses. Our meetings are open to all Bruny Island residents and there are three levels, then there are members and committee members. We have a newsletter that advertises for all the Bruny services and businesses, and a lot of them are family ones, so there is a constant stream of communication between the community association through meetings and also through the newsletter which is monthly.

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Mr MATYSEK - Madam Chair, it underwrites what Paul and Margaret have said in the context that there hasn't been comprehensive community consultation by the industry on Bruny except for a couple of meetings that were held in a public sense to advise the community of what is happening on the east coast of Bruny - for example, my meeting Frances Bender in Alonnah last year indicating what is going to happen on the east coast.

The majority of the work that has occurred on Bruny in the context of discerning what benefits there may be or what problems there will be from the expansion of the industry have been driven by the community which has been listening and trying to educate people about the size, scope and impact this proposed expansion will have. We have been trying to build links with other community groups to support our efforts in this vein. We have been working with industry regulators, academics, community and government to try to indicate what a plan based on community consultation, independent science and a transparent representation might look like. We certainly welcome this opportunity to embrace the fourth element of our objectives and that is maintaining pressure on the Government through submissions so we can look towards a sustainable and properly regulated industry.

CHAIR - Alex, perhaps you could speak a little bit for us about the membership of your group and who comprises that so we have a clear understanding?

Mr MATYSEK - My group is north Bruny-centric and I am the junior member of this alliance because I am north Bruny as opposed to all of Bruny; however, we are probably at the epicentre of the industry's expansion in that the Bruny group is surrounded by water, we are centred on Dennes Point, the northernmost point of Bruny, and we suffer the majority of the problems the industry can deliver for the community's benefits. That is largely associated with the industry's massive traffic and noise and light pollution that we have to suffer as foreshore communities, and I remind you that all Bruny's communities are foreshore communities and therefore can suffer from the issues that come with massive industrialisation, especially in our waterways.

Mr FINCH - Paul, you mentioned that an economic evaluation should be done. Do you have any understanding in your own mind or have you thought about what might be the return now at this present time to the industry and perhaps to government?

Mr DAVIS - Unfortunately, I wouldn't consider myself qualified to make that -

Mr FINCH - Surely, people down there would be exaggerating though, Paul. If I can get some idea of what people are talking about. When you say 'an economic evaluation' and 'more should be put back into the community', I am just trying to drill down to get some understanding of your or Bruny Island residents' estimation of what this industry might be worth.

Mr DAVIS - At the moment we are aware that to the state as a whole, the Government accrues very little in fees, directly anyway, and that's probably balanced out. From the point view of employment, certainly Bruny is not getting employment and figures we've seen and included as one of our appendixes - from the Australia Institute - suggest that employment levels are relatively low and are reducing because of automation.

There is obviously a return to the economy from general employment and taxation to a degree although that's more limited at state level. The alternative approach as seen by Norway is really

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quite staggering. They put the licences out for tender, no doubt with a minimum price, but the price is set by the industry and that returns hundreds of millions of dollars, both to communities and governments.

Our sense of it in the community, the community's view, is we're not getting anything out of this and we need to keep in mind that there are competing industries. That's quite sensitive on Bruny. The tourism industry is growing very strongly. The food industry and other aquaculture industries consider themselves potentially at risk because of the lack of science. So it's not a happy spot, if that's appropriate.

Ms FORREST - Following on that point, I don't know Bruny Island very well so I'm not aware of sporting organisations or other organisations on the island that can directly benefit from financial assistance. There may be, but the cynic in me would say that the companies operating in your area, say, every little footy club or every little school hall is given financial assistance to build change rooms for the kids or whatever, then that would be okay.

Mr DAVIS - I think some of that may have been done but that goes very much against what we believe needs to be done, which is a structured, proper, academically solid evaluation of what the best use of the resource is and how it can be shared.

I'm sorry; I'm possibly not quite addressing what you say.

Ms FORREST - I am saying that in Norway they have a different arrangement. I don't fully understand that system either. But as I understand from reading about it, even the company which may have done the work in assessing the site and proposing that finfishing could be established doesn't actually get the tender.

I can imagine a mining company doing all the drilling - \$500 000 a drill hole - I am not sure what it is these days but I know it's not cheap, probably not quite that much. It doesn't take a lot to soak up a billion dollars pretty quickly and then saying, 'Thanks for doing that, but we are going to give this mine lease to that company over there'. There are arguments for and against that model. Picking it up from Norway and bringing it over here and dropping in down in Tassie may not be the best option. I understand what you are saying, but are you asking for an assessment of the economic return to the state as a whole, not only to Bruny?

Mr DAVIS - Yes, and into future generations and an examination which may lead us to find the right model for Tasmania.

Ms FORREST - There has been some work done on this. You may be disputing it but if you wouldn't mind commenting on that. There have been many claims made that this is the economic return to the state.

CHAIR - It is different to the economic value of the resource.

Ms FORREST - Two different things.

CHAIR - You are asking; not what is the economic value of the industry, you are asking about the economic value of the resource.

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Mr DAVIS - Yes.

Ms WALLACE - Which is a public resource.

Mr DAVIS - A shared public resource.

Ms WALLACE - The community issue. I hope I can be helpful. I can see there are three relevant levels where it matters. Bruny Islanders. We represent almost all of them, one way or another, through our organisations. A demonstration of how much they care is that this organisation has been set up specially as a peak body to deal with this issue. That is how much they care about it. You will find there are nine individual submissions from people on Bruny, some of them quite compelling, talking about the impact of industry operations is having on them. So that's Bruny.

This example might illustrate to you why we have minimal benefit from it and a lot of downsides. Huon is one of the largest operators around the island and they are certainly going to have the leases out into Storm Bay and along the East Coast.

They operate out of the Huon so I am quite sure there is quite a good deal of employment over there and that money gets spent and flows back to that region. They never land, they go around the island. They service their fish pens, they have their trawler, they wash them and put them back and do whatever they do. They drag them from here to there, all night long. There are no limits to the hours they can operate and make noises and so forth that people suffer. That is why we are saying it does not benefit Bruny. They are not operating out of Bruny and not located on Bruny.

The other level is the whole of Tasmania. That is the main concern. According to the submission, over five years, \$308 billion-worth of fish was sold but only \$64 million in tax was paid to the state and \$9.3 billion in subsidies, so you can deduct that from it. We are saying it does not reflect the value of the resource they are using.

CHAIR - Noted. I note that we will probably discuss this in more detail with other people who come to us and in examining other submissions.

I am not sure if you are aware of it, is that as part of the sustainable industry growth plan for the salmon industry, on page 22, a commitment there that says -

[The Government] will also commission new economic research to quantify better the full impact of the industry on the state's economy.

So that is there in the growth plan. But it isn't mention in the one-year review which was done in 2018. I wondered if that is something you are aware of or have had interactions with the Government about the intention to do that. It sounds similar to what you are suggesting should happen.

Mr DAVIS - It certainly does and no, we have not.

Ms FORREST - That is the impact on the economy, not the social impact.

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CHAIR - It says 'the full impact of the industry on the state's economy' which is probably part of what you are suggesting. I am just noting correlations and where we can follow up on some lines of questioning.

Mr VALENTINE - Can you outline what interaction you have had with the salmon farming companies, in terms of going to them with your concerns and issues and the responses you may have received and how some of that is going?

Mr MATYSEK - As part of our listening and building links, we certainly have met with Huon Aquaculture and Frances Bender on two or three occasions. The substance in that instance was to listen to Frances' plans for Storm Bay and the other substantive matter was to deal with Frances through our sister organisation, the Tasmanian Alliance for Marine Protection, whose committee I serve, and that issue was on trying to instil into that company the need for them to look at marine debris in a serious way, which had at that time many, many flaws. I am pleased to say that MAST has picked up on that and instituted a new program as a consequence of those deliberations.

I have met with the PR firm behind Petuna with one of my colleagues at TAMP. I have met with Tassal on a number of occasions to detail such issues as those that relate to marine debris, which has been a significant focus for community safety. We have also met with them in that context to define, if we can, to somehow create a traffic management program into the D'Entrecasteaux, where boats that are quite large now come through at 12 knots-plus leaving bow waves. In one instance one of my financial members complained that the bow wave bowled over a couple of little kids who were in very quiet waters on a beach edge at Dennes Point, and thank God he was there to pick them up because the parents were looking elsewhere. The bow wave causes a problem. Within the context of this group, I am seeking to have what I would term speed humps put into the narrows of the D'Entrecasteaux Channel so that vessels are forced to come down to eight knots, for example.

Mr VALENTINE - How does that work?

Mr MATYSEK - It means you have to go through the gap between Dennes Point and Tinderbox, for example, at eight knots instead of 12 knots-plus.

CHAIR - Not literally speed humps, Rob.

Mr VALENTINE - No, I'm just trying to figure out exactly what he meant.

Mr MATYSEK - Sorry, I like to draw pictures. Our meetings have been productive with them. The most recent foray with Tassal has been for us to consider that company's sponsorship of a new program they are introducing on Bruny Island through the community groups and through council looking at collections of microplastics, as opposed to the collection program the industry supports, which is macroplastics, or large pieces of rope and so forth, which they do on a regular basis on weather shores. Certainly there is an issue with microplastics as well. The last conversation I had with their consulting officer was that she would take it up to the board and look at the microplastics issue.

We have had good correspondence that has been initiated by us. It hasn't been initiated by the company. We have had two minor meetings that have been initiated by the companies and the majority of the other meetings have been initiated by the community.

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Ms WALLACE - You will find amongst the submissions at least two from Bruny residents, one in the north and one right down at the bottom at Lunawanna. Six nautical miles from their waterfront property is Tassal's massive farm - almost their largest. They describe the changes and what has happened to their life and what their experience is like. It's a perfect example. I have read that and I have read an example of Huon's response to some people in the north who are now looking at fish farms instead of their lovely view and have the activity going most of the time as well.

The response from Huon and Tassal, both of which I've seen, was to say they are operating within the regulations and the operating conditions that exist and basically to suck it up because, you know, they're not in breach of anything. I think that really highlights the fact that there have now been incremental changes to the regulations and operating conditions but the systematic thing was done a long time ago when the industry was far smaller and there were far fewer fish pens in the water, so permissible levels of pollution, nutrients, activity and what have you has expanded so significantly that it probably deserves a review. When you have a dozen fish pens in a massive amount of water perhaps it is permissible, but when you have the volume we are experiencing now, perhaps those regulations are not suited to the current operation.

Mr MATYSEK - Mr Valentine, if I can just add to what Margaret has said, if you look at submission 52 from Gerard Castles: Mr Castles is at Killora opposite Shepherd's Lease and he has made an excellent submission in the context of the issues they have had with noise and like, and it is noise in large part that offends so many people in the Channel district alone. Submission 37 from Ian Locke details a lot of evidentiary data in terms of speed and noise and the like.

Mr VALENTINE - Mr Castles has been communicating with Tassal over this and haven't they reached an agreement?

Mr MATYSEK - Indeed, they have arrangements so they are told when they are going to be doing their venturation or their harvesting so that the residents can stay away from Killora. He has had a good result with Tassal in that regard.

Mr VALENTINE - As you can appreciate, we are an inquiry so we have to operate off facts and it is important that we have those facts. I mention that because I have turned to the second-last paragraph on page 6 of your submission where you say there is a lack of transparency across the marine farming development plans as they have been principally driven by and written by the industry without appropriate oversight. We need to understand where that information is coming from that in fact the industry has been writing it. If it is hearsay, we need to know that. I am not standing in judgment here; I just need to know the factual information.

Mr MATYSEK - I can answer that, Mr Valentine. The only comment I have is that if you look at the Marine Farm Planning Review Panel hearings last year and look at the EISs that were brought forward, the common verbiage in some of that is quite extraordinary, so there has either been some government assistance or the three proponents for their leases are working in concert, which I cannot imagine. The EISs had a very common set of verbiage in the context of their opening paragraphs that led us to believe that there had to be some interaction between the industry and government that was quite extraordinary because they were, ad verbatim, the same.

CHAIR - We can look into this more with some others who present to us who are specifically in this area. My understanding would be that when a marine farming development plan is put

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forward with an EIS as part of it, that is presented by the industry for consideration by the panel in the first instance. That seems to be a fairly straightforward arrangement in place at the moment. Is that what you are referencing here when you talk about a lack of transparency?

Mr MATYSEK - The industry is without appropriate oversight and direction being taken by the EPA to set nutrient limits, areas available to farm et cetera. I guess the industry has set its aspirations for Storm Bay and I guess there has been - if I can suggest to you - a discussion at EPA level that has brought that aspiration back down from 80 000 tonnes to 40 000 tonnes and then down to 30 000 tonnes with the hindsight of Macquarie Harbour in their gun sights. It is our view that all of that has occurred without community involvement, without us having any opportunity to have any say as to what should be or could be a load for Storm Bay. To that end, we say there is not adequate transparency on the topic of looking at these lease allocations.

CHAIR - Have your groups or combined groups been involved at that approval stage making submissions to the panel when the marine farming development plans have been coming through?

Mr MATYSEK - Yes, we have.

CHAIR - Could you describe the process you experienced as community groups involved in that?

Ms WALLACE - It would not have been this particular body. Alex represents us.

Mr MATYSEK - I was a party that submitted to the three hearings towards the three EISs held in 2018. At that time we took on board the benefits of a consultant to assist us with providing a professional representation - a representation that, if I may remind you, I circulated to all councillors in our drive towards seeking an inquiry into what's happening in Storm Bay. So, the detail of our entire submissions before each and every councillor because I circulated that in 2018.

Mr DAVIS - If I may comment, there is also in those comments there - it reflects in part our concern at the reduction in the scientific element of the consideration via the committee due to the loss of members of the review committee from resignations and not being replaced.

CHAIR - Our understanding is now that they have been replaced. We are yet to confirm that but that's been put to us today.

We are interested to hear about your experience involved in that approval process because it's something other groups have been talking to us about as well and have suggested changes or amendments to that process that might be appropriate. From your experience in being involved in that process, would you like to reflect on what you would see as ways that process could be improved or better meet the outcomes you want to see?

Mr MATYSEK - Thank you, Madam Chair. We got very little feedback from that process in the context of our presentation, as would be the common complaint amongst many who did present to that committee's hearing. One of the better submissions I read was from Christine Coughanowr, the then 17-year chair of the Derwent Estuary Program, whose entire submission was not even responded to and it held, I thought, one of the most significant issues that may be coming before the Government in years to come. That was her acute warning of the effects of the nitrification of Storm Bay on the saline wedge that underlies the Derwent River and its potential to release mercury

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from the benthic floor in the higher reaches of the Derwent, thereby affecting community. It is something she would no doubt have touched upon her submission, which is before you; Christine's submission, I think, is number 67. In that context, we've had some significant opportunities but unfortunately no benefit.

Mr FINCH - In your presentation, point (5), there was a production model - near-shore versus offshore and/or on land. The reference to that - can you give me a little bit of a feel of the history of the establishment of the fish farms at North Bruny? I know you have a reference to it being too close inshore. Can you give me some information about that and your feelings about that? Also I am interested in, when they were established, whether there was a consultation process with the residents of North Bruny or Bruny Island per se?

Mr MATYSEK - Thank you, Mr Finch. I wasn't the chair of the Friends of North Bruny at that time so I can't really comment to you on that, and I will have to refer you to industry or to government to determine some of the facts around that. What I can say is that of those leases near us, such as Shepherds and North West Bay, one of the North West Bay leases is in such shallow water that the lease has had to be abandoned due to eutrophication, which means the sediment is so badly afflicted that they cannot grow fish there any longer.

The other issue is that the leases on the outside of Bruny went ahead without us having any opportunity to have any input in a significant sense because they were a right, being perhaps one of the earliest lease devolvments, to the lease that is off Trumpeter Bay. In fact, in earlier days of its recognition it didn't even have boundaries. It was just off Trumpeter Bay so there was no defined area. Of course, it has now devolved down to four, 50-hectare leases or four, 75-hectare leases at Trumpeter Bay and a new 200-hectare lease east of Yellow Bluff.

In our context, we would like to have some community oversight into how these leases are managed. For example, how the North West Bay lease might be rehabilitated and at whose cost? Is it at the taxpayers' cost? Is it at the industry's cost? And is there any science that proves how long that process might take? Will it ever be rehabilitated?

This is a reasonable set of complaints that I have heard from community groups at Margate and at Kettering about the foreshore changes in terms of the benthic floor and how it has become impassable for people because of the slime and green algae messes which are there due to the high nitrification levels in those bays.

There is a whole raft of complaints that people have in the context of the Channel and North West Bay. Where we are opposite Dennes Point is just one microcosm of it.

Mr FINCH - I suppose you feel disenfranchised in respect of the consultation process or having the opportunity to have your say on what is going on?

Ms WALLACE - Can I add another concern? It has just been recently demonstrated that the eastern coast of Tasmania is virtually a hotspot for warming of the waters, two to three degrees over the last decade they say. I think if you combine that with unknown quantities of nutrient and unknown effects going into the waters around Storm Bay, you could be looking at conditions for a perfect environmental storm, at worst.

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Mr FINCH - In the submission there was a concern about the impact on tourism. Can I just get some idea of how you feel that the development of these farms would impact on the tourism element that Bruny Island, of course, has a great result in?

Ms WALLACE - I can certainly speak to that. There are many accommodation places now on Bruny with the visitor numbers. The tourism industry is supporting a lot of households and a lot of jobs. The coastline is the attraction; that is what it is, the beautiful beaches and the beautiful waters and massive contraptions aren't really part of the scenery that people come to enjoy. Likewise, the impact on individuals and then there is Pennicott Wilderness tours down the coastline. There are other commercial enterprises where people are taken by water, down the Channel or around Bruny's coastlines, and people are building their businesses out of that.

That is one level of it and of course there are now buoys in the water down the south-east coastline. Huon Aquaculture has buoys there measuring the water flows. That is where Pennicott scenic tours go. It is really threatening and crazy stuff. People are really quite alarmed, I would have to say very alarmed.

CHAIR - Are you in a position to speak on behalf of some of the tourism operators on the island or is that not something you are in a position to speak about?

Ms WALLACE - I would have thought they would be speaking for themselves by now. I think there is not sufficient awareness. I wasn't until I became involved as the representative on Bruny sustainable aquaculture. I took over someone's else role late last year. I was not aware of the facts; I wasn't aware of what was planned. You just know it in the generic sense if you hear something in the news or read it in the newspaper. I don't think there is a clear awareness. You just don't know until it happens, and suddenly: how did that happen? For individuals, if I can just say this, last night having read some of the submissions with individual households describing what they are experiencing - and you can imagine if that was an accommodation place that you were using to make an income -

I woke in the middle of the night and it was beautifully calm, totally peaceful. All I could hear was two frogs. I imagined what it must be like to be Kim Murray down at Lunawanna, near the huge city of fish farms, with the lights and the throbbing and all sorts of level of noises - as the automatic feeders go, they make other noises on top. From the whole of the daylight and darkness they find it really hard to sleep.

If you think about that, it's not just personal experiences, but also the impact on those people and the value of their property.

Ms FORREST - I am trying to sum it up in many respects. The predominant concern here is the impact on the liveability of Bruny Island for the people who live there as well as people who visit there as tourists because that impacts people who live there as well. You talked about an example where a person on Bruny Island had negotiated with Tassal to make some changes -

Mr MATYSEK - To their operational motors.

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Ms FORREST - Yes. Is that the approach that you predominantly want to see, a more considered approach to noise and light pollution in terms of the impact on your lifestyle, and would that satisfy the concerns of the majority of your members, or is it broader than that?

Mr MATYSEK - It would certainly satisfy a large part of our members' issues with noise and marine traffic problems, wave actions and the like, but it won't satisfy the nitrification of Storm Bay, the nitrification that is currently there in terms of the channel, which stands at 2250 tonnes of pure nitrogen delivered per annum. In Storm Bay, it is set at 2350 tonnes for the 30 000-tonne benchmark and is growing towards 40 000 and 80 000 tonnes aspirational production. That nitrification will not satisfy anyone and certainly not the residents who see the greening of these shores within eyes of their ecology in the terms of the littoral zones and the problems -

Mr VALENTINE - What zones?

Mr MATYSEK - It's a geology term - littoral. These changes are inexorable with higher levels of nitrification.

CHAIR - Any final comments you would like to make on that?

Mr DAVIS - Yes, thank you. In essence and partly responding to the last question, the critical thing from our point of view is that there has not been a holistic approach to this question.

Ms FORREST - Of expansion?

Mr DAVIS - Of expansion, of competing uses for that resource, of a fair return to the community, both at community and state level from the use of that resource, and of ensuring through scientific studies and economic analyses that this resource is being protected for future generations. We have come together as amateurs quite rapidly because of concerns in the community and we have done our best with this submission. We certainly are not experts but we can see the need for stepping back, looking back at the technical risks, looking at the total picture for communities and the state - that is what we would like to see, so that processes are set up in the future that address all these issues, not only the pin-pricking ones but the longer term slower ones as well.

Mr VALENTINE - So to clarify, you're saying it is not just about the expansion, it is about the operation of the industry per se?

Mr DAVIS - Indeed.

Mr VALENTINE - Can you clarify that?

Mr DAVIS - We have no reason to believe that the operation of the industry is sustainable in any sense at the moment because the underlying work has not been done. That alone is cause for concern and that feeds into our comments about the lack of transparency and the apparent process of approval.

CHAIR - To clarify, you're not saying it necessarily isn't, you're saying it is not available to you or the community to make that assessment, based on what is available.

Mr DAVIS - Not available and, to our understanding, the fundamental work has not been done.

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CHAIR - I am going to wrap this up there. Thank you very much for your time in putting in a submission and making a time to come today. It was a trek to come up, I know, and we appreciate very much hearing from you directly. On behalf of the people you represent too, so thank you.

THE WITNESSES WITHDREW.

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Mr PETER GEORGE AND Mr GLENN SANDERS, NEIGHBOURS OF FISH FARMING, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR - We apologise for the delay in starting at your appointed time. We will make sure you still get the right amount of time. Welcome. Today we are taking sworn evidence from you. All evidence taken in this hearing is protected by parliamentary privilege but I remind you that comments you make outside this hearing will not necessarily be afforded that privilege. Information is available there for you as a witness if you would like it, and the evidence you give is going to be recorded in *Hansard*. That will be available when it is ready through the committee website. We are also being broadcast today. If there is anything you would like to give to us as evidence in camera, we can consider that request. Please make the request at the relevant time.

Would you like to make some opening remarks, Peter?

Mr GEORGE - As briefly as I can. My name is Peter George and I have been living near Cygnet for seven years. I have spent most of my working life as a reporter and correspondent with newspapers and the ABC, very often in foreign places where people do terrible things to each other as well as the environment. I did my best all those years to stay neutral, not to get involved and to observe and simply tell the story. I have never been an activist or an environmentalist or politically involved and frankly when I came to Tasmania that is what I intended to remain - uninvolved.

I ate salmon when I came here. I had Tassal shares and I thought that fish farming helped balance our demand for fish protein against depletion of wild stocks at little cost to our waterways. I live on the water, but I don't live near any leases and I don't live near any pens and I don't live near any shore facilities run by the industry. To my dismay I find it impossible not to get involved in questioning the actions of what we call the fish farms, although they are in fact sophisticated production lines, not really very close to what we would normally consider farming, much more close to a factory industry.

I have learned that if land-based factories or farms or industrial processors were to allow their pollution or their waste to be emitted into the air or to be built as slagheaps or to be allowed to operate in public spaces where they damage the vegetation and trees and so on, there would be an outcry. The unfortunate thing about this industry is that it mostly happens below the surface so people don't see it. It doesn't affect most people. When most people buy farmed fish, they think they are buying an excellent product that is at least of neutral impact on our environment.

The impact of the industry - and this probably goes to the heart of what we at Neighbours of Fish Farming are concerned about - is basically hidden behind a wall of government and industrial secrecy. I can't stay neutral with this. I can't accept practices that are not only damaging and secretive but also, worst of all, as the Neighbours of Fish Farming think, unnecessary. It doesn't have to be like this. The industry and the regulators could do better and they should do better. When the industry does do better and the secrecy and lack of transparency are removed, I plan to start eating farmed salmon again. Thank you.

Mr SANDERS - My background is a bit more prosaic than Peter's. I have spent a lot of time as a freelance consultant in what is called document management. I am trained as a historian, librarian and records manager. When I got involved in NOFF it was, as Peter said, because I had moved to Tasmania five and a half years ago and had become concerned, after talking to new friends at the local sailing club and the local University of the Third Age group which I am involved in, at

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the amount of disquiet and concern about what you could summarise as a lack of true community involvement and industry and government transparency.

I am not a scientist 0 I can't analyse water columns and water quality and all that sort of stuff - but what I can do is look at what I spent most of my career doing. I have worked in the federal government and in private enterprise, and more than half my work is as what you would call a business analyst working with the IT industry to show them how to develop software that actually does what people want it to do. In other words, it has to be able to communicate with people. My research background in document management means I am good at finding information, so I sat down and spent a few days looking at how government and the three large fish farm organisations communicate with people, essentially through their websites.

I am not very happy with what I found because the other thing I have done quite a lot of is help government and big private companies buy computer systems. I could summarise my view of the five websites I looked at as simply smokescreens. I was happy to be able to help NOFF. I have only been in NOFF for a little while. One of my fates is that with every organisation I join, I end up on the committee somehow or other, so here I am. I feel pretty strongly about this. It is a matter of impressions and beliefs. It is hard to pin down facts, but I have spoken to so many people who have said to me that it is carrying on from the forestry industry, the save the Franklin campaign, all that sort of thing. It is the same again. Tasmania is still doing it, only they're now doing it in the fish farming industry.

Mr GEORGE - Madam Chair, we have a precis of our submission if it is of use to you.

CHAIR - You are welcome to share that with us.

Mr FINCH - We have a precis as well.

CHAIR - You are welcome to leave it with us. Thank you for those opening statements. One of the things I was going to ask you was who did the website analysis you talk about in your submission but that question has been answered - it was you and Glenn. I think that is quite interesting. What I have just heard you say, and you can confirm for me whether this is correct, is it is not necessarily that information is not there or information does not exist, but it is not being presented in a way that is open and readily accessible to the public. Is that the assertion you are making?

Mr SANDERS - That is largely it, but I wouldn't say that the information is there. What I am saying is that if someone with my background, experience and skills can't find it, effectively it's not there.

CHAIR - One of the things I am interested in around this is that there are commitments at different times and ideas from different quarters of a central repository for information that is independently held and makes data open and available. Is that something your group supports as a way forward for the industry?

Mr SANDERS - Yes, certainly, although it doesn't have to be centralised as long as it's standardised.

CHAIR - Can you talk a little more about that?

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Mr SANDERS - There are some examples in our submission where, for example, in measuring the amount of antibiotics used, one of the three companies has no rapport whatsoever so that means it is not standardised. The two big ones, Tassal and Huon, both measure it in totally different and incompatible ways, so for someone like me, as a nonscientific member of the public, you can get onto the website and get the figures, but how can you compare when one is measured in inches and the other one is measured in atmospheric pollution? They're totally different measures and that makes it really hard to compare and get the information you need as a member of the public to see what is going on.

CHAIR - I imagine that the suggestion to centralise a repository partly is in relation to the fact that that would bring with it standardisation, potentially. That would be a straightforward way to bring a standardised way of presenting information in one spot, rather than -

Ms FORREST - As long as the measures are the same.

Mr SANDERS - Exactly.

CHAIR - If data has to be provided to a central, independently administered spot, they have to provide it in the standard way that will be presented in that central spot.

Mr SANDERS - Through spreadsheets you can load data in to your database without having to do a lot of manipulation to it. As I said, it doesn't have to be centralised, although centralising it would impose necessary standardisation. It is also not just a matter of the numerical data, it is that you get things like two of the industry websites talk about benthic, which is a scientific term - I had to look it up, I had no idea what it meant - while Huon talks about sea floor health. That is a much more user-friendly term. If at least the terminology is the same as well as the quantification, then you have a communications tool, whether it be from one single source or from three or five, that the community can look at and say, 'Yes, okay, this is what they're doing.' They may not like it but at least they can see what is going on.

Mr GEORGE - It is a geographic thing too.

Mr SANDERS - Yes. The other one I picked up was that it is very hard to compare the lease boundaries as defined by DPIPWE versus the names of the areas used by the various organisations. You sit there with Google maps in one hand and five websites in the other and you still can't figure it out.

Mr VALENTINE - So we need common datasets.

Mr SANDERS - Absolutely.

CHAIR - In undertaking this exercise of looking at and analysing the information that is available and presented across the websites, has your group given thought to a list of what information you believe should be made available in the public domain in this standardised and/or centralised way?

Mr SANDERS - No, we haven't, because that is not our role. We don't have industry or local businesses in NOFF, we are all individuals. It is not our role to say that. Our role is to say there should be some standards. It is very expensive to develop your own standards so if there are existing

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standards out there - for example, through the International Standards Organisation, or ISC - you pick those up and use them and that is a lot cheaper way of doing it than I have been involved in.

CHAIR - And to your knowledge, that is not something that occurs at this present time? There is not a set of standards that is being used around data-sharing and public reporting?

Mr GEORGE - No, quite the opposite. The problem is that the information you can access is limited and is spread across, as Glenn says, a whole lot of different bases. To try to work your way through these things and through the bureaucratic websites is a nightmare. Fortunately, I think Glenn quite enjoys doing that, but most members of the community can't do it.

Ms FORREST - There is a new website that he might like to look at, the one released a few days ago on the DPIPWE website. A bit of homework for you.

Mr GEORGE - Okay, we'll do that for homework. It's not, nor is it just for, members of the community -

CHAIR - It actually has characteristics similar to what they are talking about here as to being problematic.

Mr GEORGE - I was going to say it is not just members of the community either. It should be an important resource and an important tool for anybody who wants to investigate what is happening on the broadscale with fish farming, which means that it should be available to scientists, independent scientists, company scientists, scientists of the CSIRO. These things should all be available. When it comes to a list of what should be available, the truth of the matter is that it should be everything. My view is that unless you can actually prove a commercial-in-confidence necessity, it needs to be there for public and bureaucratic scrutiny and, probably most importantly, for monitoring and enforcement.

Ms FORREST - For most of us, including you two on the other side of the table, if all this information were put up there even in the standardised form, there is very little we would be able to interpret and understand fully. I guess that's not the point. What you are saying is people with the expertise in those various areas can. This is the other side of the coin.

Is there a risk that putting out all this technical information will cause a whole heap of angst for people who don't understand the science? We see these things happen all the time. I was watching the news the other night and there is a link between blue-green algae blooms and motor neurone disease. They made it really clear on the news that it is not a causal link, but that there is a link that needs further investigation. Once that is out there now, the wolves start running.

Mr GEORGE - I'm sorry, but where do you draw the line?

The truth of the matter is that information is power. It gives the community power, it gives scientists powers, it gives you people power to investigate. There will be conspiracy theories. Frances Bender from Huon Aquaculture has said on a number of occasions that some people are never satisfied. That is true. Some people will never be satisfied.

Some people will never be satisfied probably whilst there is a fish farm in the water, but that is an extreme. My response to her is that companies will never be satisfied with their profits. Shareholders will never be satisfied with their dividends. Companies will never be satisfied with

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the regulations imposed upon them. Of course, there are extremes, but in the middle you have a swathe of people, those who will take an intelligent interest in matters like this, who will be able to assess it for themselves, or turn to authoritative sources.

I know a lot of people criticise climate scientists from the ANU and from the CSIRO and so on, but on the other hand I believe that most people believe that the ANU, most of our universities and their marine biologists and climate scientists, and the CSIRO are actually formidably independent organisations. They need the information as much as we do. We need to be able to turn to them for that sort of information. We can't do it. As Glenn pointed out: one, it's not really readily available; and, two, most of it isn't there anyway.

Ms FORREST - Or it is not comparable.

Mr GEORGE - It is not comparable, not readily available, not readily accessible, and a lot of it isn't there.

Mr SANDERS - My other point is a lot of people are providing information. There are organisations collecting it - DPIPWE and EPA and so on -

Ms FORREST - And the industry; they are also collecting a lot.

Mr SANDERS - If they are sensible, they are doing it because they are using that data to manage their statutory obligations. That information can be presented in a way that allows you to drill down.

Yes, I don't understand all of the detailed scientific stuff, but I would like to know what they are doing about fish kills or seals or whatever. If I'm a scientist and I want some information, I should be able to go click, click, click and drill down further and maybe get taken to a totally different website at the university or CSIRO where I can get access to the raw data. Maybe I would have to ask or pay, but as a member of the public or community member with concerns about the value of my property, the value of local businesses or the impact on the tourism industry, the visual pollution of it - all that sort of stuff - I should be able to see that top level of information. It is a pyramid structure.

Ms FORREST - In your view, whose responsibility is it to manage this? There was talk after the Blue Economy Conference held in Kenya in 2018 that this data portal was to be housed within IMAS. We have been informed more recently that it is now operational in DPIPWE in the form it's in. That is not a question for you as to why that happened; that is a question for others.

But in your view, what should be the overarching body? That is, the collector and repository of all this information, including the very technical information, as well as how you deal with seals. Some of that is technical but a lot of it is more practical. What should it be?

Mr GEORGE - We addressed this in our submission. We are talking about an \$800 million to \$900 million industry. In our submission, we suggest what we would call an 'industry ombudsman'. It simply needs to be a statutory authority that takes responsibility for one of Tasmania's largest industries; not only one of Tasmania's largest industries, but probably the one industry now that is a growing industry with an impact on public spaces, in this case the public waterway.

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First of all, you need to reassess all leases currently in operation to make sure they actually meet twenty-first century standards, not twentieth century standards. All future leases need to be assessed in advance by an independent authority using independent and reliable scientific sources.

The way to answer your question specifically, councillor, is to have one body that can be seen to be independent, to oversee the whole question of leases and expansion, one that can oversee and monitor those farms as they operate on basically on a day-to-day, week-to-week basis, and also that is able to enforce regulations, monitor any breaches and issue fines where necessary. If there is one organisation and one place, it will allow the majority of the community to look at that organisation and say, 'Here is an organisation that actually has a comprehensive understanding of what is happening. It is not split between a whole lot of different organisations'. That statutory authority, or the ombudsman as we call them, should report openly, publicly, to parliament on a biannual basis.

Ms FORREST - To me, an ombudsman is a position to deal with complaints or concerns about anything.

Mr GEORGE -It is not good terminology. I acknowledge in hindsight that we could have come up with a better description.

Ms FORREST - Let me ask you a couple of questions: who, in your view, should be responsible for collecting and maintaining all the data?

We have had other submissions about and discussed in earlier hearings today the most effective regulatory model. There have been some suggestions that our usual planning scheme model for land uses could be adopted to include marine farming.

Then, in the ordinary scheme of things, you have someone to whom appeals or complaints can go to. Who is the regulator of the data? It's currently the EPA, an independent statutory body. At the moment, there are limited appeals. Where do you go when you believe there is a problem?

We are talking about three different bodies. I am interested in who you think should be in charge of each?

Mr GEORGE - I have not given that sufficient consideration. My consideration has been that you need to bring it under one umbrella. Glenn may well have thought of this. He has a more bureaucratic background than I.

Mr SANDERS - There are probably three or four different ways you could organise it. Who does what would need to be worked out. Say, if the Government right now said it would take up the suggestion and do it right now. Then we sit down and talk through exactly who does what. Clearly, the fish farming companies collect and provide the base information. The EPA and the regulators involved in setting up the leases and so on also collect and provide information. I would see a number of different organisations doing that. It then goes to each website - some of it is on Huon's website and also on the DPIPWE website, or the EPA website or the IMAS website. I don't see the need for the Government to do all of it if there -

Ms FORREST - Who should hold the data? Who should be the repository for putting the data all together if you get a standardised system of data collection with standard measures for every aspect that is being recorded?

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Mr SANDERS - At the moment, we see our suggested ombudsman's office as being the statutory body that would be responsible at the very least for coordinating that in terms of saying it might be a distributor dataset, but it should be standardised so they provide that control at the top level, the quality control. They may well maintain the database themselves; that would be a matter of figuring the most cost-effective way to do it.

One of the main reasons we use the term 'ombudsman' - and you are quite right, it has a connotation of an organisation that you could complain to - is the other point we made in our submission is that at the moment there is no clear single point of contact for when something is going wrong. I have spoken to so many people who say. 'Look there is a lot of noise. Who do I report the noise to? I tried the Huon council and they said it was not them. Who do I go to next?' Our submission points out the confusion, for example, on the DPIPWE website as to exactly how you report noise.

CHAIR - I pretended I was going to and found the same thing.

Mr SANDERS - I am also a recreational boatie so it's also a matter, for example, at the moment - and maybe it is in the process of being changed - of floating marine debris. There doesn't appear to be anybody counting how often that is reported through marine radio channel 16, the emergency channel, or through MAST or whatever. Nobody seems to be counting so how on earth can you manage it?

Mr GEORGE - Nor is anyone counting the debris or assessing the debris washed up on beaches, for instance.

Ms FORREST - That is bigger than the fish farms - the debris on the beaches. I walk on beaches where there are no fish farms within a bull's roar of them and there are plenty of big pieces washed up.

Mr GEORGE - Of course, but that doesn't justify debris from fish farms just because someone else is doing it.

Ms FORREST - Yes, it is a big issue.

Mr SANDERS - Largely because of that, we thought there really should be somewhere - one single point - where you can get on the phone and say, 'Hey I've got a problem' and not only report it, but actually get feedback. There are no guarantees on any of the sites I found about any feedback whatsoever. We worked from there saying, 'Okay we are proposing a single organisation, a single point of contact for that aspect of it. Why not also make that the single point of contact for setting up the standards and making sure the data is collected and presented in a way that suits various target audiences and is standardised so that you can find stuff?'

Ms FORREST - Accessible through one portal - I understood when this was talked about before that expansion plan that the data portal was supposed to do this.

CHAIR - In the sustainable industry growth plan, it was posited as being something IMAS might do but by the time of the first-year review, it had switched to DPIPWE. Here is the interesting thing, I guess, to think of it in terms of where it could fit in the current arrangements. Currently we have a planning authority, which is actually the department with a minister with decision-making

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power. We have a regulation and enforcement authority, the EPA, which does a lot of the checking, monitoring and enforcement activities. Then we have data that sits everywhere.

It appears that the Government has decided to put the data portal with DPIPWE which is more of a regulatory authority rather than with the EPA. In terms of its independent entity, do you think that might be somewhere people might more readily think to go as a central point or a key point? Would you see that if we didn't create something new, the EPA could provide much of what you are saying would be valuable to have?

Mr SANDERS - One of the reasons that NOFF exists is because it's a matter of perceptions and beliefs - our community doesn't believe and doesn't trust; they don't trust government; they don't trust the industry. It's really rather sad and as a relative newcomer to Tasmania, and I was told I'm not a local until I've been here 40 years so I'll never make that -

Mr VALENTINE - It's only 30.

Mr SANDERS - It's 30 plus a dog and a ute you have to have.

Our community, when you mention DPIPWE, says, 'Don't trust them'. You say, 'But look you can go to the Huon website; you can go to the Petuna website' - 'Oh no, don't trust them. They've all got irons in the fire'. It's irons in the fire as far as the industry goes. It's perceptions of past performance as far as government goes.

CHAIR - Are you putting the EPA into that same category of government?

Mr SANDERS - The EPA could be made more visibly independent. I haven't spoken to a lot of people about this aspect of it, but people I have spoken to have said that the EPA is really a part of DPIPWE.

CHAIR - They are technically; they come under the minister.

Mr SANDERS - It has to be seen to be transparent.

Mr VALENTINE - A lot of trust needs rebuilding.

Mr FINCH - With what you're talking about, Glenn, in respect of your observations, have you approached the Government or an agency to let them know your thoughts on how things might be made better?

Mr SANDERS - It's essentially our submission.

Mr FINCH - In here?

Mr SANDERS - Yes. We tried really hard in developing this submission, particularly my part of it. These are some simple, clear and obvious things you can do. Some of them right now; some of them might take a little bit longer, but there are a whole lot of suggestions in there about improving the way the websites work right now. A lot of those could be done very quickly.

Mr FINCH - Thank you, and it's there for the Government to read.

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Mr SANDERS - Indeed, and once we're clear of all this parliamentary privilege stuff I am hoping we can take my part of the submission and we will send it to the various owners of the five websites and say, 'Look, here's some ideas, have a think about it'.

Mr FINCH - Thank you. My other question is: - is the Neighbours of Fish Farming just a group of people from around Cygnet?

Mr GEORGE - It's primarily Cygnet, a bit of the Channel - mostly on the land-based side of the Channel rather than the Bruny side and down to Dover.

Mr FINCH - Thank you. Do you do any comparisons or do you have any discussions with people in other areas who are affected?

Mr GEORGE - About two years ago - and you will hear from them tomorrow - unfortunately, I am stuck with that as co-chair as well, the Tasmanian Alliance and Marine Protection was brought together because all the small community groups feel that their voice is not heard individually and not attended to so the Alliance was started about a year and a half or two years ago in an effort to bring together a whole bunch of different groups.

What is interesting is that it has brought together people who would often not be seen in the same room together, which would be environmentalists, professional fishermen, recreational fishermen, business people, sailors and community groups. We now try to operate as a collective and we believe we have started to find a bit more voice and we are starting to be heard a little more.

Mr FINCH - During your report, it's unfortunate that you highlight widespread community distrust and lack of confidence in transparency in both government and the industry. Do you think to any extent that they both have been caught off guard by the rapid expansion of the industry and they're trying to adjust to this new state of play with expansion?

Mr GEORGE - Do you mean members of the community?

Mr FINCH - No. Industry and the Government have been caught off guard and they've yet to play catch-up with the new dynamics?

Mr GEORGE - I don't think the industry is caught off guard at all. I think it laid its plans a long time in advance for a very rapid expansion. I think the problem is that they're expanding too rapidly. Certainly, too rapidly for government to keep up with them and too rapidly for the community to be comfortable with. We run small stalls occasionally at markets and so on, and I am frankly amazed at the number of people who say, 'No, I don't want to take your leaflet, I don't want to hear from you, I will never eat the stuff, thank you all the same'. I would say for every person who takes a leaflet and wants to have a talk about it, quite seriously there are 20 people who say, 'No, I won't read the stuff, thanks; I know all about it'. I think the industry needs to take that onboard because community confidence, Brand Tasmania, and consumer confidence is actually under threat. I don't think the industry recognises that. I think the industry is bound up within itself, as is natural, and does not recognise that it is not extremists or people who've got a barrow to push and it is certainly not just people who have a pen stuck outside their house. It is actually people, thinking consumers, who are starting to question what this industry is doing and what its cost is - not what its profits are, but what its cost to the community and the state is.

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Mr VALENTINE - I am interested in the membership that you have. Do you have people who are also involved in tourism? I notice on page 12 near the bottom of your submission that you say

The Visitor Economy Strategy puts a more important and sustainable state asset (tourism) in clear conflict with any further expansion of the salmon farming business in coastal waters and rivers.

Do you have any people in tourism who belong to your group and have they expressed concerns to you of the sorts of impacts they are seeing?

Mr GEORGE - I can speak to the membership. Yes, we do have members who own bed & breakfasts but as we are very much a community organisation that doesn't have membership from businesses and so on - we are only talking about individuals. I have had conversations where people express a general sense of concern that tourism is going to suffer as a result of fish farm expansion and their operations and noise. I know someone who runs a bed and breakfast who says that people can get up in their B&B house at night to go to the toilet and they don't need to turn the lights on because the Huon Aquaculture boat is out there with its very bright lights. You're welcome to come down and take a look.

I have not had specific conversations about how it is impacting people's business and how it is going to impact the overall tourism, but it seems quite obvious that if Brand Tasmania is damaged as being a clean, green, beautiful state because of the aquaculture industry, obviously tourism will be impacted.

Mr VALENTINE - So noise is the main component of complaints?

Mr GEORGE - Noise and light is the main component of complaint for anyone who lives, as you heard from the Bruny Island people, near the fish farms. When I say 'near,' I talk about within 4 to 5 kilometres. As you would all know, the noise of a generator or an outboard motor carries very, very far across the water, as does light. Go down to Eggs and Bacon Bay or Randall's Bay and you will see there is plenty of light at night-time. It means that when you sit outside having a barbecue, as I do with friends, on a nice quiet night, what you hear is the very deep thrum of generators and lights in the sky which, as I said, light up a house even at night-time.

Mr VALENTINE - Have you had any conversations with the operators of those sorts of vessels?

Mr GEORGE - We talked to Huon Aquaculture a year or two back and there was an attempt and, to some extent, a successful attempt, to try to refocus those lights so they wouldn't be so intrusive. We have had a talk to them. As I understand it, I don't think it was necessarily the result of our approach to Huon Aquaculture, but I understand they have replaced their two-stroke motors from the tinnies to four-stroke, which are quieter, and they have told their workers that they shouldn't be taking off at a large rate of knots at 3 o'clock in the morning. It has ameliorated the issue to some extent but it has by no means overcome it. I know a couple of people I would not want to put before you as witnesses who have been driven so close to what I would consider insanity by the noise, for instance, of pens being towed past their house at night-time. They tow the pens at one knot so that thrumming, deep noise - which is below the level at which they would break regulations because the decibels are not that high - has driven this particular person really to the point of insanity, so much so that I think they will eventually have to move. They moved to the

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Huon River because they wanted peace and tranquillity, and they found an industrial zone, a factory zone, right outside.

Mr SANDERS - Imposed on them after they had moved?

Mr GEORGE - Yes, this was imposed on them after they moved. This came to their front door. It wasn't a matter of moving to an industrial zone that was already in operation.

Mr VALENTINE - You want a moratorium, you are calling for that?

Mr GEORGE - Yes.

Mr VALENTINE - Your recommendation mentions the creation of an aquaculture ombudsman and we've been through that. You also recommend moving farms offshore or onto land, but no more than 10 years to get rid of pens from waterways and rivers. Is that a realistic target in your mind?

Mr GEORGE - Well, it is realistic.

Mr VALENTINE - If indeed you were going down that line?

Mr GEORGE - If you were going to go down that line. I have here, if you are interested, a very recent UPI report which quotes the company Atlantic Sapphire, which is run by one of the largest Danish salmon producers in the world. It begins its production on land in Miami, of all places - or close to Miami, Florida, which is not what you call cold water - ashore and is expecting to deliver product to approximately one-third of the entire North American market by 2025. We are not talking about people who are just throwing money around or who are taking a bet. Land-based salmon farming is coming. Rather than what we have in Tasmania now, which is twentieth century industrial technology, it is time that the Government and the scientists started looking very seriously at twenty-first century technology where a land-based farm where all potential pollutants, issues and impacts on the environment can be monitored properly, assessed and dealt with. Land-based aquaculture is coming, whether this industry likes it or not. My suggestion is that they get their spurs on and do it within the next 10 years before they lose all international credibility.

Mr VALENTINE - Some would say that going to a land base means they will just leave the state because they will go closer to the markets.

Mr GEORGE - But why would they? Are you going to build a land-based facility, which is huge, next to Sydney where the land prices are enormous, or are you going to do it in Tasmania where you still have a good brand representation around the world, not just in Australia, for its produce, and where there is good labour available and the land is cheap? You're not going to build it just outside Melbourne or Sydney. You couldn't afford the land for a start.

CHAIR - Thank you so much for your time. Would you like to make any concluding remarks and perhaps pick up on anything we haven't covered with you today or things you would like to leave us with?

Mr GEORGE - May I just quickly say that I think the World Wide Fund for Nature's submission is excellent. It is very professional and very comprehensive. It has been very carefully

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thought out. WWF has actually operated with this industry and, in fact, for a short amount of time, although I think they were embarrassed by it, they allowed their brand to be used by Tassal. If we hadn't made a submission, or if we had made a submission and had the time, the authority and the ability and the research, I would be proud of what WWF has done. It basically takes into account all the things we believe.

The only other thing to say is that if members of the committee would like to see for themselves what is happening, particularly in the less energetic areas where fish farms are, for instance, in the Huon Estuary, we will make boats and dive gear available, we will make dive masters available, and we will negotiate with the companies to allow you to take a look in, around and underneath some of the pens operating in the less energetic areas. *The Project* on Channel 10 went down and had a look at the Storm Bay lease, but that is relatively deep water, but that is an offer which we can set up if you wish.

CHAIR - Thank you for that offer. We will discuss that as a committee and come back to you. We very much appreciate your time, thank you. It sounds like we will see you again, will we, Peter?

Mr GEORGE - No, I thought you would only get bored hearing from me twice, so we agreed that somebody else would come and bend your ears. Thank you for your time.

THE WITNESSES WITHDREW.