

**RRAT Committee: Inquiry into the identification of leading practices in ensuring evidence-based regulation of farm practices that impact water quality outcomes in the Great Barrier Reef**

**Written questions on notice, 28 August 2020**

**Senator Rennick**

**Dr Geoff Garrett**

1. Would you agree that however good the individual technical science parts might be on the GBR system, if there are key gaps in the science that has been considered, then is it necessary that questions are asked of conclusions reached to date?
2. Do you agree with the maxim “the biology follows the sediments” and that the nature of the seabed is a fundamental control on the nature of habitats in the GBR coastal and marine system? If not, provide clear evidence why this would not be an appropriate view.
3. Do you agree that the GBR coastal and marine habitats are generally naturally ephemeral in nature, on timescales of decades? What published body of evidence do you use for your answer?
4. Do you agree that such basic understanding of habitat dynamics is a prerequisite for designing research planning, policy and regulations effectively? If not, please explain why.
5. Please detail your understanding of the ability of past and ongoing GBR research and monitoring to identify the stage of ‘recovery’ of each of these habitats in the GBR, including for:
  - a) Fringing and estuarine mangroves,
  - b) Inner-shelf seagrass beds
  - c) The inter-reef middle-shelf seabed communities
  - d) Inner-shelf turbid-zone coral reefs, and
  - e) All monitored coral reefs.
6. Can you detail, with clear examples, how this understanding of different stages of ‘recovery’ is considered in your organisation’s:
  - Interpretation of monitoring or other survey data already collected,
  - Design of new research to undertake.
7. In you or your organisation’s view, where is the above knowledge regarding ephemeral habitats explained, shown and used in the following reports
  - f) Outlook Report 2019,
  - g) Consensus Statement 2017
  - h) Reefplan 2050.
8. Clarify which specific sections in each of the above 3 documents describe the nature of sediment transport on the seabed during cyclones and the implications for benthic habitats.
9. For each of the 3 reports above, detail your view of how the concept of ephemeral habitats has influenced the report’s conclusions and recommendations? Provide clear examples.
10. In you evidence you described the potential deleterious effects of riverine sediment entering the GBR lagoon. Please detail the specific evidence you and your organisation are aware of for specific coral reefs that have been negatively impacted by such sediment. This question does not refer to things associated with sediments, just the sediment particles themselves.
11. If you have identified an impact in the question above, describe on what specific basis might you assess whether this ‘impact’ is ‘significant’?
12. Please describe in detail the process of scrutiny of the individual papers and reports reviewed by the panel? What criteria were used to assess:

- Their individual credibility?
  - Their applicability?
  - Their relationships with other documents?
- 13.** Has your organisation performed a SWOT analysis for the GBR water quality issue? If so, please provide the result, with date and list of contributors. What weaknesses did the analysis identify in past and the present material?
- 14.** The inquiry has received scrutiny from Dr Larcombe (submission 46) of the above 3 key documents (Outlook Report 2019, Consensus Statement 2017, Reefplan 2050). Have you considered this evidence? In this light, has the existing process of document production successfully delivered documents that meet all the needs of policymakers? Please explain your answer, including reference where appropriate to applicable state and federal codes of conduct and similar documents.
- 15.** Which of the present Taskforce members are currently **completely** independent of any government or government-related funding related to issues of water quality in the GBR system? (Funding to perform a role specific to the Water Quality Taskforce can be disregarded).

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**1. Professor Ian Chubb**

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- b) Do you agree with the maxim “the biology follows the sediments” and that the nature of the seabed is a fundamental control on the nature of habitats in the GBR coastal and marine system? If not, provide clear evidence why this would not be an appropriate view.
- c) Do you agree that the GBR coastal and marine habitats are generally naturally ephemeral in nature, on timescales of decades? What published body of evidence do you use for your answer?
- d) Do you agree that such basic understanding of habitat dynamics is a prerequisite for designing research planning, policy and regulations effectively? If not, please explain why.
- e) Please detail your understanding of the ability of past and ongoing GBR research and monitoring to identify the stage of ‘recovery’ of each of these habitats in the GBR, including for:
  - Fringing and estuarine mangroves,
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- f) Can you detail, with clear examples, how this understanding of different stages of ‘recovery’ is considered in your organisation’s:
  - Interpretation of monitoring or other survey data already collected,
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- g) In you or your organisation’s view, where is the above knowledge regarding ephemeral habitats explained, shown and used in the following reports
  - Outlook Report 2019,
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  - Reefplan 2050.
- h) Clarify which specific sections in each of the above 3 documents describe the nature of sediment transport on the seabed during cyclones and the implications for benthic habitats.
- i) For each of the 3 reports above, detail your view of how the concept of ephemeral habitats has influenced the report’s conclusions and recommendations? Provide clear examples.

We provide the following comment to questions on notice.

We accepted the invitation to attend the Senate Committee because, at first, we believed it to be a genuine attempt to understand better the extraordinary and interrelated complexity of the Great Barrier Reef ecosystem.

Given the disturbing nature and tone of the hearings in Brisbane in July, we should have anticipated the discouragement we now feel. We should have sensed that when some Senators don't want to know about the seriousness of an issue, they tune out anything that is inconsistent with their fixed views and preconceived ideas. And no matter how much evidence they are given, or its rigour, nothing changes if it doesn't fit what they want to believe.

We therefore choose not to engage further with what appears, to us, to be a politically motivated charade.

The issue of advice from the IEP that referred to the tactic that tobacco companies and the lead- in- petrol lobby used to sow doubt and delay action was raised in Canberra. It was said, in response, that they had successfully reversed the onus of proof: they said we will take lead out of petrol, for example, if it can be shown unequivocally that it causes harm. Normally it would be expected that a chemical or an additive would have to be shown to be safe before it was used. It is, in our view, fair to argue that we see a similar approach to GBR water quality: "we will not change practices until it can be shown that it is damaging, essentially unequivocally and unanimously, because a strong and broad consensus is not acceptable".

As we shared at the Hearing, such an approach flies directly in the face of both the spirit and detail of the Precautionary Principle defined so clearly in the 1975 Great Barrier Reef Marine Park Act. We would indeed urge Senators to reflect seriously on their elected responsibilities under that Act.

Thus, we believe there is enough evidence to show that poor quality of water in the barrier reef ecosystem is damaging and should be improved if the reef has a chance to recover from the biggest shock of all - ocean heatwaves caused by global warming.

We thank you for the opportunity to volunteer our time to attend the Committee hearing.

Yours sincerely,

Ian Chubb  
Canberra

Geoff Garrett  
Canberra

Ove Hoegh-Guldberg  
Brisbane