



# Reef 2050 Plan

## INDEPENDENT EXPERT PANEL - MINUTES

**Date:** Tuesday, 15 November 2022, 10:00am – 5:00pm AEDT  
**Venue:** Queensland University of Technology, Brisbane and videoconference.

### ATTENDEES

#### Members

Prof Ian Chubb AC, Chair	Prof Helene Marsh AO
Dr Richard Brinkman	Dr Russell Reichelt AO
Prof Damien Burrows	Dr Stuart Whitten
Prof Terry Hughes	Prof Kerrie Wilson (apologies 2:45pm – 5:00pm)
Prof Catherine Lovelock	Doctor Mitchell Gibbs
Adj Assoc Prof Stephan Schnierer	Professor Matthew England
Doctor Rebecca Bartley (apologies 3:45pm – 5:00pm)	Professor Tiffany Morrison

### APOLOGIES

Ms Jane Waterhouse

#### Other attendees

Ms Paula Perrett	Assistant Secretary, Department of Climate Change, Energy, the Environment and Water
Ms Catharina van Moort	Director, Secretariat, Department of Climate Change, Energy, the Environment and Water
Mr Stephen Briggs	Assistant Director, Secretariat, Department of Climate Change, Energy, the Environment and Water
Mr Peter David	A/g Senior Policy Officer, Secretariat, Department of Climate Change, Energy, the Environment and Water
Elisa Nichols	Executive Director, Office of the Great Barrier Reef, Department of Environment and Science
Louise Smyth	Director, Office of the Great Barrier Reef, Department of Environment and Science
Dr David Wachenfeld	Chief Scientist, Great Barrier Reef Marine Park Authority
Dr Roger Shaw	Chair, Reef Water Quality Independent Science Panel
Ms Rebecca Gee	Principle Director, Department of Climate Change, Energy, the Environment and Water

Ms Caroline McLaughlin	National Coral Disease Coordinator, Florida Sea Grant, University of Florida
Ms Dana Wusinich-Mendez	Coral Reef Conservation Program, Atlantic and Caribbean Team Lead, National Oceanic & Atmospheric Administration
Dr David Bourne	Research Scientist, Australian Institute of Marine Science
Dr Peter Stoutjesdijk	Director, Marine and Aquatic Biosecurity, Department of Agriculture, Fisheries and Forestry
Prof Gretta Pecl	Director, Centre for Marine Socioecology, Institute for Marine and Antarctic Studies
Dr Mike Emslie	Senior Research Scientist, Australian Institute of Marine Science
Dr Michael Rasheed	Principal Research Scientist, Centre for Tropical Water and Aquatic Ecosystem Research, Associate Professor, James Cook University
Ms Maryann Quagliata	Branch Head, Environment Protection Reform, Department of Climate Change, Energy, the Environment and Water
Ms Nyssa Henry	Chief Scientific Officer, Office of the Great Barrier Reef, Department of Environment and Science
Dr Nick Marsh	Managing Director, Truii

<b>1. Acknowledgement of Country</b>
The Chair acknowledged the traditional custodians of the lands on which the meeting was held, and paid respects to their Elders past, present and emerging.
<b>2. Welcome to Members</b>
The Chair welcomed members and welcomed back the three reappointment Panel members. The Chair introduced and welcomed the four new Panel members to the meeting. The Chair outlined the main items of business on the agenda, which would include briefing and discussion on Stony Coral Tissue Loss Disease, an update from the Commonwealth and Queensland Governments, an update from the Independent Science Panel, a demonstration of the Reefonomics tool, an update on EPBC Act reform and briefing and discussion on reef biodiversity and threats from climate change in response to the letter sent to the IEP Chair from the Hon Tanya Plibersek, Minister for the Environment and Water.
<b>3. Conflict of Interest</b>
Panel members declared actual and perceived conflicts and the Chair outlined actions to manage potential conflicts in accordance with the Panel's protocol.

#### **4. Panel Business**

The Panel endorsed the minutes of Meeting 23, held on 29 July 2022, and noted they would be published on the Panel's page of the Department of Climate Change, Energy the Environment and Water website shortly after this meeting.

The Chair briefly discussed the Minister's letter which he received on 24 October 2022 and clarified that this is about looking at the way Reef policies and programs are funded and would be discussed in agenda item 10.

The Panel noted the status of actions arising from previous meetings noting that there was a joint webinar held with the Reef Advisory Committee on 27 October 2022.

There was no members only session.

#### **5. Stony Coral Tissue Loss Disease**

Prof Terry Hughes briefed the Panel on anticipating black swan events on coral reefs, emphasising the need to have management plans in place already, including for future emergence of Stony Coral Tissue Loss Disease (SCTLD) and other future diseases on the Great Barrier Reef.

Ms Caroline McLaughlin and Ms Dana Wusinich-Mendez provided the Panel with some background information on the disease and briefed the Panel on the U.S. experience and response to the disease outbreak.

Dr Peter Stoutjesdijk briefed the Panel on the Department of Agriculture, Fisheries and Forestry (DAFF) functions in relation to the management of risks of introduction of exotic marine species through ballast water in, and biofouling on, vessels. Dr Stoutjesdijk also described both ballast water and biofouling regulatory settings, Ballast Water Management System requirements under the International Ballast Water Management Convention, associated standards, and the efficacy of those systems. The Panel was also provided with advice from DAFF on their understanding of the nature of vessel traffic coming directly to Australia after passing through the Panama Canal.

The Panel enquired about timeframes for implementing ballast water exchange prohibitions:

- Dr Stoutjesdijk noted that requirements to undertake ballast water exchange have been in place since 2000 for any vessel entering Australia. He informed the Panel that the responsibility falls upon other countries to enforce the installation of management systems for ships under their flags and that Australia only has about 0.15% of local fleet registered as Australian.
- Dr Stoutjesdijk noted there was little Australia could do up until 2024, when new regulations are enforced under the Convention, suggesting one approach could involve stepping up capabilities to enforce D2 standards as very few countries appear to be enforcing that standard at the moment.

- He flagged that the Department could come back to the Panel with a policy paper on the options under the Convention and regulations as there is provision for special requirements in certain areas where nations can acquire additional measures for treatment of ballast water. He cited the need for a better evidence base, focusing on what additional management could be applied that may cover SCTL D.

The Panel raised whether the disease was bacterial or viral, as effectiveness of amoxicillin suggests a bacterial element. They questioned whether there are molecular markers that can be pursued as identifiers.

The Panel discussed:

- Treatment options including UV light, noting a recent NOAA study (laboratory), casts doubt on effectiveness as a treatment.
- Uncertainties around the disease, agreeing that many uncertainties remain, including:
  - how the disease is transmitted (noting that it isn't certain that ballast water is the transmission method, but evidence is building);
  - which species may be susceptible to the disease;
  - effectiveness of current biosecurity controls (noting that electrical and chemical treatment options could be worth pursuing for ballast water);
  - cause of agency; and
  - why some species of coral are resistant and others susceptible.

Prof Hughes asked Ms McLaughlin and Ms Wusinich-Mendez, if they knew in 2014 what they know now, what would they have done differently. Ms McLaughlin stated that prevention is key, but it is important to understand that it may not be possible; Caribbean nations had some advance warning but once SCTL D arrived it was unable to be stopped. She highlighted that establishing surveillance and monitoring systems, prioritising species and areas for investigation (either because of their ecological value or risk pathway) were key to a response and that mitigation may be the realistic goal. Ms McLaughlin offered to circulate (via the secretariat) surveillance guidelines for Indo-Pacific and example response/management plans.

The Panel agreed that further research into the disease is needed, particularly the susceptibility of Pacific corals, highlighting that while *Acropora* species in Caribbean may be showing resistance to the disease, it might not be the case for Pacific species. The Panel noted that under the *NOAA Strategy for Stony Coral Tissue Loss Disease* US\$100,000 was allocated to conduct laboratory transmission experiments with Pacific corals to identify susceptibility of Pacific coral species to SCTL D. However, the Panel agreed more funding and research was required.

## 6. Update from Government

Ms Gee provided the Panel with an update on the recent Commonwealth investment \$204 million over five years to accelerate actions to protect, manage and restore the Great Barrier Reef. The Panel enquired about:

- The level support in Department money for RIMReP monitoring and modelling and about fisheries and by-catch initiative.
  - The Panel would be provided with details out-of-session.
- Consultation and if the Panel was being effectively used.
  - Ms Gee indicated that the Alluvium review, opined that Government was not using expert panels properly (i.e. not coming to them with a range of solutions for input), and that Government should be seeking advice on whether funding is focused on the right mix of activities and whether it is achieving the agreed outcomes in Reef 2050 Plan.
- The Panel again requested access to the Alluvium Reef Trust Water Quality Evaluation and Prioritisation.
  - The Panel was informed they would receive it out-of-session and have opportunity to provide feedback.
  - The Chair noted that following discussion with Ms Perrett, there would likely be a meeting early in new year (March) regarding advice on funding and investment.

Ms Smyth provided the Panel with an update on Queensland Government initiatives noting that the Queensland Government made a number of commitments as part of the 2022 State Budget that contribute to Reef 2050 Plan outcomes including \$325 million for climate change and resource recovery initiatives and \$262.5 million for land acquisitions and capital works to increase Queensland's protected area estate. She informed the Panel of the launch of the Queensland Energy and Jobs Plan including new renewable energy targets of 70% by 2032 and 80% by 2035, and the launch of the Hydrogen Industry Development Workforce Roadmap 2022-2032.

The Panel asked several questions including:

- whether Queensland has allocated any money for better engagement with Reef Traditional Owners in its fisheries strategy;
- for a distinction between Natural Capital Fund and Land Restoration Fund; and
- how the focus can shift from the money invested to a focus on outcomes achieved.

The Panel noted that:

- some actions work against progress on the Reef, such as land clearing and exporting more coal despite transitioning the energy grid;
- there is a problem with historical views and shifting baselines. We are in a restoration world with on land-practices, but we are not there yet with reef-practices. There appears to be a disconnect between land assessments and what is driving reef outcomes.
- there is a need to support more than just shovel ready projects, it is limiting and people just aren't that well prepared with projects ready to go.

The Panel requested to be briefed on land clearing in 2023 by Prof Hugh Possingham, who is chairing Native Vegetation Scientific Expert Panel.

Due to travel delays making Ms Perret unavailable earlier in the day, at the end of the meeting Ms Perret provided the Panel with an update on the Reactive Monitoring Mission, noting that the Australian and Queensland Governments had reviewed a draft report and are awaiting the final report from the World Heritage Centre. She noted that no revised date had been set for the 2022 meeting and the Governments are awaiting advice as to the process for meetings in 2023.

## **7. Update from the Independent Science Panel**

Dr Shaw provided an update on the three meetings of the Reef Water Quality Independent Science Panel (ISP) held between July 2022 November 2022. Dr Shaw informed the Panel of his plans to retire.

The Panel discussed the points raised in item 8 in the ISP report of the ISP strategic session on emerging discussion topics.

The Panel noted the update and sought further information on:

- the cane economics report status; and
- the ISP strategic session on emerging discussion topics.

The Chair noted there needs to be more thinking about the future and impact on biodiversity. Rapid change is occurring, in contrast of slow change that happened in the past, there is a need to be much more systematic on how change is monitored.

The Chair agreed to raise the emerging issues points from ISP in the context of the workshop to be planned for March, Dr Shaw will provide the Chair with an updated list following the ISP's December meeting.

The Chair thanked Dr Shaw for his sterling and long service as Chair of the ISP.

## 8. Reefonomics – demonstration of tool

Ms Henry provided the Panel with a brief background on the Reefonomics tool for water quality investment planning across the Great Barrier Reef catchments and introduced Dr Marsh who provided the Panel with a demonstration of the tool, highlighting how it could be used and the various levels of detail it could provide.

The Panel sought further information on the sophistication of co-benefits and how they could be or are implemented in the tool.

The Panel provided feedback to Ms Henry and Dr Marsh:

- the developers should clearly clarify how it should be used, ensuring understanding of what it does and does not do;
- there needs to be clear explanations on the use of confidence ;
- if the tool was made public, education and training programs would be critically important to ensure it is used correctly; and
- suggested using data from other sources such as the commonwealth review of streambank gully projects.

## 9. Update on EPBC Act reform

Ms Quagliata updated the Panel on the Australian Government's response to the Samuel Review, including:

- national environmental standards: consultation processes and the development of a national environmental standard for Matters of National Environmental Significance (MNES);
- progress towards establishing a national Environment Protection Agency;
- improving national environmental data and information and its use to support decision making; and
- other reforms being considered as part of the government response to the Samuel Review.

The Panel noted the update and sought further information on:

- the application of national environmental standards to fisheries operators and whether sign-off from Minister is required for renewal of licences;
- conservation plans; and

- about standards for each MNES, including World Heritage Areas and the Reef, and how would these work.

The Panel provided feedback to Ms Quagliata noting the failure of EPBC act to enshrine consideration of Indigenous Knowledge in decision-making as well as regarding Indigenous cultural heritage. The Panel voiced that the problem is not that Traditional Owners need a more powerful voice, but that decision makers aren't listening and engagement with Indigenous communities is not always genuine and causes a lot of problems.

## **10. Reef biodiversity and threats from climate change**

The Chair opened the session by discussing the letter he received from the Minister and asking the Panel to consider what an approach to responding could involve.

The Panel received presentations from:

- Dr Wachenfeld, who provided an introduction and touched on the 2019 Outlook Report;
- Prof Hughes on corals;
- Dr Emslie on fish;
- Prof Lovelock on mangroves and saltmarshes;
- Dr Rasheed on seagrass;
- Prof Marsh on key species; and
- Prof Pecl on species distribution and range shifts.

The Panel discussed several points, including:

- Serious climate adaptation planning:
  - there is a large gap in this space as it more generally has not been looked at;
  - the challenge is that historically this has only been looked at in five-year blocks, because looking further into the future is very hard;
  - what is needed is to determine what management looks like at 1.5° in the early 2030's and then 1.7°, 1.9°, 2.1°, etc. An option could be developing a scaffolding on plausible climate scenarios that could identify what we would have to do to reach best case (net zero by 2050) contrasted with worst case and then step out what we could do across a spectrum of outcomes;
    - climate scenarios would form a good foundation to develop this architecture (for GBR & adjacent catchments) for presenting sensible adaptation planning; and



- the real issue is the vast scale of changes that will happen in the long term, we should be aiming to reduce key uncertainties in key species and key physical processes, such as in ocean upwelling, as this may underpin conservation plans for next 50 years.
  - Traditional Owners are seriously thinking about it, with a time horizon that we are not. They are saying it is happening and asking why serious adaptation planning is not happening.
- Socioeconomics should be considered in the approach:
  - the Panel should give advice on social issues as well (Traditional Owners, industry, communities), not just the science as you cannot separate them; and
  - noting that the Ministers letter did not mention human value and human impacts but, it would be good to have coverage for the types of impacts that are likely to be seen from changes in the Reef.
- Autonomous adaption (actions stakeholder groups are already undertaking) has been looked at and at least half the stakeholders were potentially countervailing to what planned adaptation plans were aiming for.
- The value of counterfactuals in presenting advice to government, the importance of communicating the need to prioritise/target new or uncommitted money in a systematic way, and that the Panel should not shy away from extending the boundaries of the Minister's letter:
  - we were asking different questions and in a different context in the run up to the Reef 2050 Plan. It has since changed and there is concern that we are spending money where there is already money; and
  - the need to talk about adaptation in a way we have not before because the need for adaptation is going to continue.
- Farmers may be open to re-purposing areas of land for blue carbon projects and the associated income stream could be enough to buy them out, noting:
  - the low-lying cane land has already been mapped; and
  - farmers and grazers are likely more open to meaningful engagement when they are not blamed for the problem.
- Australia should take a leadership position in mitigation and adaptation and the most effective measures for the Reef may be for the Minister to attend climate change Conference of Parties and push for more ambitious mitigation/reduction efforts than any previous Australian Government.

- The chair noted that is about providing solutions, not just finding problems he wanted the group to develop ideas, particularly on re-prioritising funding.
- Ms Perrett commented that resources are available for the Panel to commission work and that re-prioritising uncommitted funding and extending the parameters of the Minister's letter is certainly within the realm of what the Minister would appreciate advice on.

## **11. Panel Business**

The Panel noted that a communique would be finalised out of session and released on the Department's [website](#).

The Panel noted proposed timing for Panel meetings in 2023 with the next meeting proposed for March. The Panel noted that the secretariat would identify a range of dates out of session and liaise with the Chair and members before selecting final dates.

The meeting closed at 5.00pm.