



Reef 2050 Plan

INDEPENDENT EXPERT PANEL - MINUTES

Date	Tuesday, 05 April 2016
Venue	Level 3, 288 Edward St, Brisbane, QLD
Opened	8:45am
Closed	5:00pm

ATTENDEES

Members

Prof Ian Chubb AC, Chair	Prof Terry Hughes
Assoc Prof Eval Abal	Prof Helene Marsh
Dr Andrew Ash	Dr Russell Reichelt
Prof Mike Bell	Dr Britta Schaffelke
Prof Damien Burrows	Adj Assoc Prof Stephan Schnierer
Prof Bill Dennison (<i>videoconference</i>)	Dr Roger Shaw
Prof Ove Hoegh-Guldberg	Prof Natalie Stoeckl (<i>videoconference</i>)

Other

The Hon Greg Hunt MP	Minister for the Environment (<i>9:00 - 9:40am, teleconference</i>)
Mr Patrick Suckling	Ambassador for the Environment (<i>9:00 - 10:30am</i>)
Ms Kylie Jonasson	First Assistant Secretary, Department of the Environment
Ms Rachel Parry	Assistant Secretary, Department of the Environment
Ms Celeste Powell	Director, Department of the Environment
Ms Ami McGrath	Director, Department of the Environment
Ms Angela Cameron	Assistant Director, Department of the Environment
Ms Stefanie Lowe	Secretariat, Department of the Environment
Ms Elisa Nichols	Executive Director, Queensland Office of the Great Barrier Reef
Ms Claire Andersen	Director, Queensland Office of the Great Barrier Reef
Ms Josh Gibson	A/g General Manager, Great Barrier Reef Marine Park Authority
Dr Roger Beeden	Director, Great Barrier Reef Marine Park Authority
Dr Will Howard	Assistant Director, Office of the Chief Scientist
Ms Jenny Riches	Principal Project Officer, Office of the Queensland Chief Scientist

APOLOGIES

Members

Dr Geoff Garrett AO
Dr Stefan Hajkowicz



DISCUSSION

1 Acknowledgement of Country

The Chair acknowledged the Turrbal and Yaggera Peoples as the traditional custodians of the area. He acknowledged their continuing culture and the contribution they make to the region and paid respects to Elders both past and present.

4 Recent coral bleaching event

The Chair welcomed members to the meeting. The Chair then welcomed Minister for the Environment, the Hon Greg Hunt MP, and Ambassador for the Environment, Patrick Suckling to the meeting.

The Minister requested the Panel provide advice on any suggestions for variations of the current assessments or actions, including any specific protective measures to prevent coral loss by other means, in particular crown-of-thorns starfish.

The Panel heard from relevant experts on the preliminary findings of the current coral bleaching event, starting with the south, then north, then an overview of the combined.

The Panel heard about the severity and geographical extent of bleaching including preliminary findings of coral surveys. The results of aerial surveys conducted in the north are being confirmed by dive teams from the Australian Institute of Marine Science and the Great Barrier Reef Marine Park Authority.

The Panel was briefed on the need to properly monitor and measure the current coral bleaching event, and that it is not over yet. The Reef will take time to recover, and this could be hampered by increasing extreme weather events. The accumulated effects on the Reef since 2012 include two cyclones and one mass bleaching event.

Minister Hunt thanked the Panel for the overview, and departed.

The Panel discussed at length the potential action in the short, medium and long term to combat the current coral bleaching event.

The Panel agreed that the Chair will provide preliminary advice in response to Minister Hunt's request, followed by more detailed advice in the coming weeks.

The preliminary advice included:

- The Reef is experiencing a serious event linked to increased water temperature, caused by climate change and supplemented by an El Nino event.
- It is too early to make definitive statements about the likely extent and longevity of impacts. It is highly likely that some coral will die, but the extent of that is not yet known. It is clear that there is a north-south gradient with more impact and warmer waters in the northern reaches.
- The impact of the current event may also be affecting other ecological communities in the Reef, for example seagrasses and mangroves. This has been less comprehensively monitored to date.
- Whilst some reefs, seagrasses and mangroves may recover as water temperature declines, efforts to address water quality and direct impacts must be combined with sustained global efforts to sharply reduce global greenhouse gas emissions to ensure long term health of the Reef.

DISCUSSION

- Efforts to improve water quality to build reef resilience are highly important. Immediate additional efforts to reduce the direct impacts from other sources will also be valuable, for example an increase in control of crown-of-thorns starfish, linked with better and more strategic targeting, and research.
- Robust and essentially continuous monitoring of corals, mangroves and seagrasses is required to ascertain the full extent of impacts, noting that some will take time to appear. The Panel believes that government agencies (AIMS and GBRMPA in particular) should be additionally resourced to enable continuous monitoring on a large scale.
- Bleaching, coral die-off, floods, cyclones and crown-of-thorns starfish outbreaks should not be the trigger for more comprehensive monitoring, they should be events that are observed and studied as part of a continuous monitoring program. The Reef 2050 Integrated Monitoring and Reporting Program will be key in coordinating monitoring efforts.
- Continuous monitoring will also allow study of recovery. This will be particularly valuable where there is good water quality because much can be learned from that work. Monitoring should be coupled with research to help better understand the impacts of increased temperature on all affected ecological communities.
- Adequate resourcing for long term monitoring should be secured, therefore, to enable measurement of the impact of the evolving environment on the health of the eco-system, as well as the impact of the anticipated more frequent or more severe weather events.
- There is a need to continue to work with people on the ground, including Traditional Owners, tourism operators and citizen scientists, to consolidate information as it becomes available and ensure that data collection methods are comparable and robust. Partners will continue to be key to the successful delivery of commitments in the Reef 2050 Plan.

The Panel agreed that key experts should head the drafting of a short paper on coral bleaching which describes likely climate change impacts on the Great Barrier Reef.

Action 1: The Great Barrier Reef Marine Park Authority to provide the secretariat with information on current seagrass and mangrove monitoring programs for the Great Barrier Reef.

Action 2: Prof Chubb to provide preliminary advice to Minister Hunt on coral bleaching, to be followed by more substantial advice.

2 Secretariat Administration

The Secretariat outlined relevant housekeeping issues for the day.

The Panel agreed that meeting minutes will be made available online to the public, once endorsed, and that minutes should not refer to individual member views unless explicitly requested.

The Panel endorsed the minutes from the second meeting on 29 October 2015 with minor amendments.

The Panel agreed that, in addition to conflicts of interest raised during the member appointment process, members could raise new potential or perceived conflicts verbally during a meeting without requiring a paper form to be completed.

Action 3: Secretariat to review all previous minutes with a view to making them publically available.

DISCUSSION

3 Out of Session work

The Chair thanked Panel members for their participation in bilateral meetings so far, and noted that he will meet with remaining Panel members in the near future.

The Chair thanked members for their assistance in the out of session work in relation to the Reef Trust Phase 4 Investments and noted that the Panel will discuss at agenda item 9.

5 Presentation: Crown-of-thorns starfish

Dr Roger Beeden gave a presentation on the Great Barrier Reef Marine Park Authority's strategic approach to managing crown-of-thorns starfish outbreaks and the coral protection outcomes of the existing control program. The presentation detailed key threats to coral on the Reef: coral disease, cyclones, bleaching and crown-of-thorns starfish. The Reef 2050 Plan allows a holistic approach to strategic management of outbreaks of crown-of-thorns starfish.

The Marine Park Authority is currently managing crown-of-thorns starfish on 21 high tourism and ecological value Reefs around Cairns through the one shot injection culling method, which is working successfully. Success is measured by coral cover saved rather than the amount of crown-of-thorns starfish culled.

The Panel heard that action is needed on two fronts to address outbreaks of crown-of-thorns starfish. Targeted water quality work can reduce the amount and severity of outbreaks and targeted culling also works to reduce the severity of outbreaks.

The Panel discussed the need to build on crown-of-thorns starfish research from the National Environmental Science Programme, and to understand the cumulative impacts between crown-of-thorns starfish and climate change.

The Panel discussed the need to continue monitoring and research of crown-of-thorns starfish after the current outbreak is over, to increase our knowledge and to better prepare for the next outbreak.

The Panel thanked the Ambassador for the Environment, Mr Patrick Suckling, for his attendance at the morning session of the meeting.

6 Strategic Reef 2050 Science Implementation

The Panel discussed potential high priority topics to be considered at their upcoming workshop on 2 August. The Panel discussed the targets in the Reef 2050 Plan and noted that a comprehensive review of the Plan will occur in 2020.

The Panel agreed to the proposed approach to develop strategic advice through a Reef 2050 science implementation plan.

Action 4: Secretariat to circulate a template for ideas for the workshop, for Panel members to complete and return by 6 May.

7 Presentation: Sediment working group

Dr Roger Shaw gave a presentation on the informal sediment working group whose purpose is to better support alignment of research and investment programs and support adaptive management of these programs. The working group also provides a forum to have technical debates about how

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to address gully and stream bank erosion and will narrow the focus to larger gullies and streambank erosion in the next few meetings.

The Panel noted that the sediment working group will have, by the end of the year, expanded from gully and stream bank erosion, to also include contribution to sediment from urban areas.

The Panel discussed the economic and behavioural change challenges to restore gullies back to a healthy state. Known ways of decreasing sediment are to have additional ground cover, reducing grazing and reduced land clearing.

The Panel agreed that better coordination and synthesis of technical groups was needed, and that the sediment, pesticides, cane nutrient and behavioural change working groups should all report to the Panel at appropriate intervals. The working groups may report on emerging knowledge or consensus achieved on specific issues, and other needs to address the health of the Reef.

8 – 9 Gully Erosion impact, Reef Trust – Phase 4 Investment

The Chair addressed conflicts of interest raised by Panel members.

Ms Angela Cameron gave an overview of the process undertaken to develop the proposed Reef Trust Phase 4 projects. Best available science information and advice was used and sought from stakeholders to identify and design projects that will fill the current gaps, whilst aligning with proposed investments from the Queensland Great Barrier Reef Water Science Taskforce and the Queensland Government.

The first three projects address the Reef Trust outcomes on water quality and improving coastal habitats. The final project addresses the Reef Trust outcome on species protection.

In response to the Ministerial Forum request, the Panel discussed and identified opportunities for cost effective short, mid and long term priorities for on-ground actions to reduce the impacts of gully erosion. Discussion included:

- How to consider cost effectiveness and outcome effectiveness, and including outcomes for both. Once there is a better understanding of cost effectiveness from Reef Trust Phase 2 gully remediation projects, the Panel will be able to provide more informed advice on future actions.
- Targeting particular soil types that are prone to gully erosion. Soil mapping may help to suggest different effective actions that can be undertaken in different locations.
- Ensuring focus on preventative actions equally to remediation actions
- The potential of having formal evaluations at the start of projects to evaluate their effectiveness from the start.
- A research project that could undertake a financial economic analysis to understand the effectiveness of actions.
- The intricacies of high risk priority areas that need preventative and remediation actions versus the willingness of farmers to participate in those areas.
- Suggestions that the Reef Trust could investigate linkages and opportunities to engage with the growNORTH Cooperative Research Centre, to determine any value adding opportunities

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- The potential of a demonstration project on unproductive land to show results of remediation, this could be a collaboration between the Australian and Queensland governments.

The Panel heard about the first Reef Trust Phase 4 project which is aimed at remediation of gullies. The Reef Water Quality Protection Plan supports graziers to prevent gully erosion on properties, but a gap was identified in the remediation of gullies. Sediment erosion remains a threat. The Queensland Great Barrier Reef Water Science Taskforce will recommend two major projects in the Burdekin and Wet Tropics regions that will likely include erosion control activities, therefore the Reef Trust Phase 4 project will work closely with the Queensland Government to ensure investments are complementary. This project has been worked through with the Queensland Government and the sediment working group.

The Panel endorsed the Reef Trust Phase 4 proposed project *Addressing gully and stream bank erosion – reducing sediment loss in priority regions* with minor edits to data capture tools in order to make monitoring more consistent with other proposed projects.

The Panel noted that this project addresses the request of the Ministerial Forum for on-ground actions to reduce the impacts of gully erosion.

The Panel noted the delay in finalising the *Supporting Cane Farmer Trials of Enhanced Efficiency Fertilisers* project and that this project has now been better defined following more in-depth discussions, and guidance from the National Environmental Science Programme. This project will be a co-investment between the Australian and Queensland governments.

The Panel endorsed the Reef Trust Phase 4 proposed project *Supporting Cane Farmer Trials of Enhanced Efficiency Fertilisers* with requirement to clarify the partnership with the National Environmental Science Programme project 2.1.8 *Improved water quality outcomes from on-farm nitrogen management*.

The Panel noted the Behavioural Economics team (BETA) network established by the Department of the Prime Minister and Cabinet that the Australian and Queensland governments are participating in, along with other stakeholders, to identify and fill gaps in information about Reef related behavioural change.

The Panel heard of the successes of the Reef Trust Phase 2 project *Reef Trust tender – Burdekin* and that the Australian Government has increased the budget, as cost effective applications exceeded expectations.

The Reef Trust Phase 4 project *Reducing nitrogen loss from the Wet Tropics and Burdekin via repeated reverse auctions* will use a similar delivery model to previous reverse auctions, and that this project could be expanded to include the banana industry.

The Panel discussed different methods of monitoring to ensure compliance with the project. The Australia Government confirmed that participants are not able to claim funding under multiple Reef Trust projects for the same activity.

The Panel endorsed the Reef Trust Phase 4 proposed project *Reducing nitrogen loss from the Wet Tropics and Burdekin via repeated reverse auctions*.

Dr Roger Beeden spoke to the fourth Reef Trust Phase 4 project, *Improving the management of crown-of-thorns starfish*, which will focus on maintaining efforts to protect high value tourism reefs from the current crown-of-thorns starfish outbreak.

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The Panel clarified the outputs of the project, and the strategic management that will be used to ensure priority reefs are targeted first.

The Panel discussed the relationship between Reef Trust projects and National Environmental Science Programme projects, some of which have been designed to fill knowledge gaps surrounding crown-of-thorns starfish.

The Panel endorsed the Reef Trust Phase 4 proposed project *Improving the management of crown-of-thorns starfish*.

The Panel noted the consultation approach and how consultation has informed project design.

The Panel agreed that crown-of-thorns starfish projects are a good opportunity for co-investment. With this next phase of investment, it is a good opportunity to showcase the co-investment that the tourism industry is contributing to crown-of-thorns starfish management. A crown-of-thorns starfish project is outlined in the *Partnerships for the Reef* document seeking additional co-investment. However crown-of-thorns starfish are a long term issue and it was suggested that the Joint Field Management Program review should look at long term strategic funding for crown-of-thorns starfish management.

10 Reef 2050 Offsets, cumulative impacts and net benefits

The Panel noted the update on the development of the draft cumulative impact, net benefit and offset policy documents.

The Panel members agreed to identify if they would like to be directly engaged in out of session discussions to progress specific aspects of policy development.

11 Emerging Scientific matters

The Panel discussed a proposal for a science policy synthesis process for the Reef. The proposal included funding and an annual workshop to be held in order to discuss needs and future actions around outcomes for the Reef.

The Panel noted that they do not have the authority to recommend budget. The Panel discussed the pros and cons of large synthesis workshops, and the outcomes that they can provide when an objective and audience is clearly defined.

The Panel noted that a workshop between members of the Reef 2050 Plan scientific and advisory bodies may be compromise solution, rather than adding another body to the governance structure.

Action 5: Prof Bill Dennison to send details on workshop group dynamics to Panel members.

12 Reef 2050 Policy Guideline for decision makers

The Panel noted the updated policy guideline and agreed to provide individual feedback, if required, on how it may be improved.

13 Reef 2050 Plan – Annual Report

The Panel noted the development of the Reef 2050 Plan Annual Report.

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14 Reef 2050 Plan – Investment Framework

The Panel noted progress on development of the Reef 2050 Plan investment framework.

15 Update from Committees

The Panel noted progress of the Reef Water Quality Protection Plan Independent Science Panel working group.

The Panel noted the update on the Reef 2050 Advisory Committee, due to meet on 14 April.

The Panel noted progress in developing the Reef 2050 Integrated Monitoring and Reporting Program, through the steering group and three working groups.

The Panel noted the progress of the Queensland Great Barrier Reef Water Science Taskforce, in particular the development of the recommendations which will be presented to the Queensland Government in May 2016.

16 Other Business

Presentation: Eye on the Reef program

Dr Roger Beeden gave a presentation on the existing citizen science and participatory monitoring programs operating in the Great Barrier Reef Marine Park and how these can help achieve the outcomes of the Reef 2050 Plan.

The Panel discussed the role citizen science, including the Eye on the Reef application, which enables any person to report information about Reef health, marine animals and incidents. The Great Barrier Reef Marine Park Authority uses this data as part of its management of the Reef.

Communiqué

The Panel drafted a communiqué and agreed to its release on the Department of the Environment website.

Next meeting

The Panel was reminded that the next meeting will be a workshop held on 2 August, with an evening event with the members of the Reef 2050 Advisory Committee to be held on the evening of 2 August.