

Reef Advisory Committee – Advice on Responding to Mass Coral Bleaching of the Great Barrier Reef

Outcomes from Workshop: 19th May, 2017

In late 2016 the Great Barrier Reef Ministerial Forum requested advice on any further action required in response to the widespread coral bleaching of the Great Barrier Reef, and that this advice be informed by the Reef 2050 Independent Expert Panel (IEP) and the Reef 2050 Reef Advisory Committee (RAC). The RAC subsequently met in Brisbane on 19 May, 2017. Four members of the IEP joined the meeting to inform RAC of the outcomes of the 5 May 2017, IEP discussion about the coral bleaching and assist RAC to develop its advice. The following is a summary of the advice from the RAC.

Overarching conclusions

1. That global warming is the most significant pressure on the Great Barrier Reef and must be addressed. Global commitments under the Paris Agreement to limit temperature increases to less than 2°C in the short term and less than 1.5°C in the long term must be achieved, noting that 1.5°C will still put the Great Barrier Reef under significant stress. Extreme events due to global warming are already having a severe impact on the reef.
2. The Great Barrier Reef is a highly interconnected system of coral reefs, islands, seagrasses, mangroves, estuaries and freshwater wetlands, and the species that live in and move between these habitats. Efforts to support all elements of the system must continue and be accelerated.
3. The Reef 2050 Plan remains the right framework to address pressures facing the reef and to build the reef's resilience.
4. Efforts to address all pressures, particularly global warming and water quality, must be accelerated, with action at the global, national, regional and local level.
5. The Australian and Queensland governments should support regional scale investment to increase the capacity of local groups and individuals to engage and act locally. However, this investment should not be at the expense of action on systemic pressures such as global warming.

NOTE – The Queensland Resources Council does not support the RAC making statements regarding climate change, arguing that it is not within the RAC's remit to consider global and national climate change policy and that the RAC needs to be careful making statements about things it cannot control. Queensland Resources Council believes that the Reef 2050 Plan should continue to focus on actions to support coral resilience but should not deal with direct action to address climate change. Queensland Resources Council emphasised the importance of focusing on the positive outcomes that are already being delivered under the Reef 2050 Plan.

Global warming

The RAC agreed with the IEP's recommendation that Australia should show leadership on global warming, leading by example to encourage global action. The RAC noted that the 2015 International Society for Coral Reefs' Consensus Statement¹ concluded that to prevent global collapse of coral reef ecosystems and allow the survival of coral reefs, average global temperature increase should be limited to less than 2°C increase in the short term and less than 1.5°C in the long term. It noted also an earlier Great Barrier Reef Marine Park Authority's 2015 submission recommended limiting temperature increases to 1.2°C.

The RAC concluded that Australia needs urgently to increase efforts to reduce emissions to a level that will ensure protection of the Great Barrier Reef and should actively raise awareness of the implications of current commitments for the Great Barrier Reef and international reefs.

¹ <http://coralreefs.org/wp-content/uploads/2014/03/ISRS-Consensus-Statement-on-Coral-Bleaching-Climate-Change-FINAL-14Oct2015-HR.pdf>

The RAC suggested that:

- Local mitigation actions such as carbon sequestration in vegetation or ‘blue carbon’ should be investigated further, and supported with incentives, noting that these actions can have multiple benefits for the reef.
- The International Year of the Reef in 2018 is an opportunity for Australia to demonstrate leadership.

Some RAC members expressed strong views that the Australian and Queensland Government position on coal extraction is not consistent with its position on protecting the Great Barrier Reef, and argued specifically that the Carmichael mine development should not proceed.

NOTE – The Queensland Resources Council did not support this view, stating that there is no direct scientific link between coal mining of itself and climate change.

The Local Government Association of Queensland noted the importance to a number of its members of the economic stimulus provided by the potential mine to their local economies.

Members for CAREFISH and the Local Marine Advisory Committee noted that other economic activities reliant on the Great Barrier Reef, notably the tourism and the fishing industry, may be put in jeopardy if reliance on coal mining continues.

Reef 2050 Plan

The RAC agreed that the Reef 2050 Plan continues to provide the appropriate framework for addressing pressures on the Great Barrier Reef and that actions and priorities related to climate change should be clarified, enhanced or expanded. It recommended that the mid-term review of the Plan should have a greater emphasis on addressing and responding to global warming both directly, and in terms of how global warming could be expected to require modifications to other Reef 2050 actions.

Some members agreed with advice provided by the IEP, that it would seem unlikely that the Reef 2050 Plan could achieve its vision of decade on decade improvement of Outstanding Universal Value.

Other members did not support this view, noting that it is too early to make such a significant statement.

NOTE – Queensland Resources Council expressed the view that while the Reef 2050 Plan can support the need for government and global action to address climate change, this should not be translated to direct actions in the Plan. It suggested that a process/method that is endorsed by the RAC is needed in order that changes to Reef 2050 actions can be made in a consistent and transparent manner.

Water quality

The RAC agreed that action to improve water quality remains a high priority and that progress needs to be accelerated to protect coral, seagrass, estuaries and other wetland habitats, and reduce the drivers for crown-of-thorns starfish outbreaks, such as excess nutrients from land-based runoff. However, prioritisation for water quality improvement needs to adapt to the changing situation of the reef.

The RAC made the following specific recommendations:

- The Wet Tropics and Burdekin Major Integrated Projects are progressing well and this model is expected to be proven as an effective approach. Local to regional-scale investment in outcomes (rather than specific milestones), delivered through local design and implementation should be the preferred model for delivery.
- Investment should be made to develop the capacity of local groups, including Traditional Owners, building on existing networks such as Local Marine Advisory Committees (LMACs), and Traditional

Use of Marine Resources Agreement groups (TUMRAs) as a mechanism for local implementation and to improve engagement with local communities

- Local engagement and implementation of Reef 2050 Plan actions need longer-term certainty of funding and improved business planning to support local capacity.
- Regional water quality improvement plans remain a useful tool for prioritising regional and local actions and on-going additional funding should be provided to ensure they are implemented effectively.
- Managing for extreme events should be given greater attention. Global warming will increase the intensity of extreme events such as flooding and cyclones, and greater capacity is needed to manage for these events rather than for averages. This includes improved climate forecasting, regional climate predictions, modelling scenarios under global warming projections, and translation of this information to enable improved land management at the property scale.
- Ecosystem repair in key catchments should be accelerated.

Some members also argued the need for strong action (including regulatory reform) to prevent further vegetation clearing, as a mechanism for improving water quality.

NOTE – AgForce does not support tightening of the current land clearing laws.

NOTE – Queensland Resources Council supports exploration of alternatives to legislative action and suggests the agricultural sector put forward proposals.

NOTE – Queensland Farmers Federation seeks an objective, evidence-based approach to vegetation management that takes into account social, environmental and economic factors.

Active interventions in the Great Barrier Reef World Heritage Area

The RAC agreed that active interventions in the Great Barrier Reef World Heritage Area are required and policy changes and investment should be made to support this. The current options only have a localised rather than Reef-wide benefit and new solutions will need to be developed. The RAC emphasised that these actions do not remove or replace the need to take urgent action on systemic pressures including global warming and water quality. The RAC recommended specifically that:

- Direct control of crown-of-thorns should continue to be a priority, along with control of other coral predators, such as the Drupella snail. Efforts need to be expanded and focused on protecting surviving corals, whilst continuing to reduce nutrient run-off to address the cause of outbreaks.
- Regional scale investment in outcomes (rather than specific milestones) delivered through local design and implementation is a good model to apply to active interventions in the marine environment.
- Local engagement should be better enabled, including promoting ‘voluntourism’ and empowering local communities and businesses to act. Restoration techniques should be trialled at local sites using LMACs and TUMRA groups and tourism operators.
- To enable effective local action and decision making, a toolbox for restoration should be developed.
- Start-up investment should be made in exploring the feasibility of innovative interventions to reduce or mitigate the pressures of global warming on coral reefs, such as cloud seeding, testing viability for repopulating reefs from biobanking, and cold water pumping, including monitoring and evaluation of risk, ecological outcomes and cost-effectiveness.

Fisheries management

The RAC considered that further action should be taken to reduce the pressures on the Reef from commercial and recreational fishing.

The following suggestions were discussed:

- Increased compliance and enforcement to reduce pressure from illegal fishing.
- Restock fish such as emperor species that may have a dual benefit for crown-of-thorns starfish control, and are key species for economic development.
- Implement a regulatory response to limit the harvest of herbivorous fish, which play an important direct role in maintaining reef health.
- Reintroduce observer programs to monitor take and impact of fisheries on key predator species such as reef sharks and rays. Based on results, consider a ban or further limiting the take of key predator species.

NOTE – The Queensland Seafood Industry Association (QSIA) did not support a regulatory response to the harvest of herbivorous fish, or actions to monitor or limit take of key predator species. QSIA expressed the view that commercial fishing is a well-regulated industry with minimal impacts to the reef compared to global warming and water quality and that further actions restricting the industry are not based on science but a philosophical anti-commercial fishing and anti-net fishing agenda and are unnecessary.

Marine Park Zoning

The RAC recognised that effective marine park zoning is an important tool to aid in the resilience and recovery of the reef. The RAC recommended that:

- Temporary special management area zoning should be considered for use in areas seriously affected by recent disturbances, such as coral bleaching and cyclones, to minimise other pressures during recovery, e.g. identifying dedicated anchorage areas, limiting fish takes.
- Further investment should be made in increasing compliance and enforcement of current zoning arrangements.
- Current dugong protection area locations and other protection measures should be evaluated to ensure their adequacy.

Policy

The RAC noted that the greater fragility of the reef increases the importance of being cautious in managing development and activity in reef catchments, which may have an impact on the reef. The RAC recommended that:

- Promoting development in Northern Australia may increase risk to the reef and there is the potential for policy conflict that needs to be addressed.
- Guidelines such as the GBRMPA, Queensland, and national water quality guidelines may need to be reviewed in the context of climate scenarios and the impact of extreme events.

Monitoring and evaluation

The RAC made the following recommendations in relation to monitoring and evaluation:

- Progress in developing the Reef Integrated Monitoring, Modelling and Reporting Program (RIMREP) needs to be accelerated, building on current monitoring activities.
- Indicators such as UV light, temperature and pH should be added into marine monitoring as part of the RIMREP.
- Comprehensive monitoring and evaluation of active interventions is critical to assess effectiveness and ecosystem outcomes.
- Include tracking greenhouse gas emissions concentrations in Outlook reporting.

NOTE – Tracking emissions in Outlook reporting was not supported by the Queensland Resources Council.

Research

The RAC noted that ongoing research and development is needed to support implementation of a number of actions. In particular, there is a need for additional research to determine what is required to retain functional reef ecosystems, including ways to step up efficacy of measures to improve water quality, control COTS and scale up proactive restoration of damaged marine ecosystems.