2025

BUILDING THE RESILIENCE OF THE GREAT BARRIER REEF:

Key takeaways from the 2025 Reef Forum

REEF FORUM

5 YEARS GREAT BARRIER REEF MARINE PARK

Contents

The Great Barrier Reef Marine Park Authority acknowledges the expertise, wisdom, and enduring connections that have informed the guardianship of the Reef for millennia. We pay our respects to Traditional Owners as the first managers of this Land and Sea Country, and value their Traditional Knowledge which continues to inform the current management and stewardship of the Reef now, and for the future.

Artwork by Lawrence Gibson of Kuku Yalanji Country

The Welcome to Country by the Wulgurukaba Walkabouts set a unifying, respectful and open tone for the Forum, encouraging deeper, more collaborative engagement from the outset. *The 2025 Reef Forum: Strengthening resilience-based management of the Great Barrier Reef* was held on the lands of the Wulgurukaba and Bindal peoples.

Foreword

The Reef Authority convened the 2025 Reef Forum at a pivotal moment for the Great Barrier Reef. Following two consecutive mass coral bleaching events, the Forum brought together a diverse group of 56 participants representing Traditional Owners, community and industries, scientists, NGOs, recreational fishers, and all levels of government.

Our purpose was clear: to strengthen our shared understanding of the climate challenges ahead and to shape the evolution of resilience-based management across the Marine Park.

It is my pleasure to present this outcomes document which captures the discussions, insights and considerations shared by participants during the Forum. It summarises the breadth of perspectives expressed but does not make recommendations. Over two days the participants examined climate trajectories, reviewed emerging science and modelling, considered case studies, and worked through practical scenarios. They engaged deeply with the foundational concepts and tools that will guide our future work—refugia, connectivity, the resilient reefs network and new mapping capabilities. The Reef Authority designed the Forum to foster open collaboration, enabling frank and constructive discussion about the scale of change required in the face of accelerating climate pressures. Across all conversations one message stood out: business-as-usual approaches will not sustain the Reef under future climate conditions. Protecting this extraordinary system will demand more flexible, proactive and innovative management, supported by the courage to act despite persistent uncertainty. As the Reef Authority, we must be prepared to lean into risk, respond decisively to emerging pressures and communicate our decisions openly.

Participants also emphasised the need to grow climate literacy across the broader Reef community, recognising that informed communities are essential to the success of resilience-based management. Education and communication will be central to maintaining public trust and strengthening collective action. There was strong agreement that a coordinated, whole-of-system approach will be essential to sustaining the Reef in the decades ahead. This includes ensuring integration between catchment and Marine Park actions, recognising the critical role of local governments in delivering on-ground change.

The Forum reaffirmed resilience as our unifying goal—grounded in strong partnerships, Traditional Owner leadership and a whole-of-system understanding of the Reef's ecological, cultural, social and economic significance. Insights from the Forum will directly inform future management decisions, including ongoing collaboration with the Reef Restoration and Adaptation Program and the next iteration of the Reef 2050 Long-term Sustainability Plan. The Reef Authority remains steadfast in its mission to safeguard the Great Barrier Reef for future generations. The outcomes of this Forum provide a strengthened foundation for that work—informed by science, shaped by partnership and guided by a shared commitment to adaptive, informed and decisive management. I thank all participants for their leadership, candour and unwavering dedication to the Reef.

Josh Thomas
Chief Executive Officer

Setting the scene

Introduction

The Great Barrier Reef Marine Park Authority convened the *2025 Reef Forum: Strengthening resilience-based management of the Great Barrier Reef* in Townsville from 27 to 29 October 2025. The challenges facing the Great Barrier Reef (Reef) increasingly demand adaptive management and stronger collaboration, requiring us to work with partners to develop a shared understanding of why and how we must evolve our approach, building on strong foundations.

The Forum created a collaborative setting for partners with diverse perspectives to engage in deliberative discussions about the Reef's future. Over two days, participants exchanged ideas, explored climate scenarios, examined case studies, and reviewed scientific modelling to consider how Reef management must continue to evolve.

Participants were introduced to key concepts such as resilient reefs, refugia, and connectivity. As an exploratory process, participants then broke into seven tables to assess the impacts of different climate scenarios on sections of the Reef and design a management response timeline to strengthen resilience.

Resilience based management is 'using knowledge of current and future drivers influencing ecosystem function to prioritise, implement and adapt management actions to sustain ecosystems and human well-being.'[1]

This document outlines that process, synthesises the findings from the seven tables, and identifies opportunities to enhance Reef resilience. The Forum's outcomes will inform future program delivery, policy advice, and broader government frameworks, including the review of the Reef 2050 Long-term Sustainability Plan.

The Reef Authority recognises there are many people with expertise and knowledge who were unable to attend the Forum. We are committed to ongoing engagement with diverse communities and experts to develop the best approaches to managing the Reef into the Future.

Increasing pressures from climate change

The Forum followed two consecutive mass coral bleaching events during the summers of 2023–24 and 2024–25. These consecutive bleaching events highlighted the need for urgent, adaptive, science-based management in response to climate impacts[2].

During the 2024–25 summer, the Reef experienced a combination of stressors: above-average water temperatures, major flood plumes, and outbreaks of crown-of-thorns starfish (COTS). Marine heatwaves drove widespread bleaching in the Far Northern and Northern regions, while record rainfall in the Northern and Central regions caused flooding that led to both bleaching and coral mortality on some inshore reefs.

[1,2] https://www2.gbrmpa.gov.au/learn/reef-health/reef-snapshot

The 2024–25 mass coral bleaching event—the sixth since 2016—was less extensive than the 2023–24 event but marked only the second time the Reef has experienced consecutive widespread bleaching. These events formed part of the fourth and most extensive global coral bleaching event, which has affected reefs in more than 80 countries since 2023. Increasingly frequent and severe disturbances threaten ecosystem recovery and are contributing to a long-term outlook of decline *(Great Barrier Reef Outlook Report 2024)*.

Through sheer scale and incredible biodiversity, as well as 50 years of dedicated management, the Great Barrier Reef is still resilient. While the Reef retains higher coral cover than many reefs globally, climate-driven disturbances are occurring more frequently and compounding the effects of other key threats—including coastal development, land-based run-off and illegal fishing. The windows between impacts are decreasing, reducing the ecosystem's ability to recover from disturbances.

In response to these more frequent and cumulative impacts, the Reef Authority convened the Forum.

Working in partnership

Protecting the Reef is inherently a collective endeavour. No single group or sector can safeguard it alone—we must work in partnership. Long-term protection depends on coordinated action and partnerships. Many of the policy interventions required to sustain the Reef's ecological functions have social and economic implications, reinforcing the need for collaboration.

The Forum was designed to foster this collaboration by bringing together partners with diverse perspectives to engage in forward-looking conversations about the future of the Great Barrier Reef Marine Park. Its engagement objective was to build a shared understanding of climate trajectories, the Reef Authority's resilience-based management approaches, and opportunities to strengthen management under increasing climate pressure.

Please note

It is important to recognise that while the table exercises were put together using real Marine Park planning materials, supported by expert staff and informed by current modelling information, they remain hypothetical in nature and may not fully consider all dimensions of a region or given management approach. The write-ups following these exercises are not intended to present a definitive prescription for what the Reef Authority will do in a region, but they will be an important source of information as the agency considers how it adapts its management approach into the future under a changing climate.

Key themes and outcomes

Climate change demands urgent, adaptive action

Over the two days of activities, the Forum's discussions consistently reaffirmed that climate change remains the most significant long-term threat to the Reef. Rising temperatures, ocean acidification, storm impacts and repeated coral bleaching events underscore the need for urgent global mitigation coupled with focused local and regional action.

Participants noted that incremental or foundational approaches are no longer enough. The Marine Park's 50-year history shows the value of sustained conservation, but the challenge has shifted: climate impacts are escalating and are now projected to exceed the Reef's innate resilience. Although the management framework is comprehensive—illustrated clearly through the Reef mapping tool—participants highlighted that further action was required.

Lean into risk

The Forum discussions converged on a shared message: uncertainty cannot be a barrier to action. Participants strongly supported the Reef Authority taking a proactive approach to Reef management.

Improving community climate literacy emerged as a key priority. Participants emphasised the need for clearer communication and education about the scale of climate risk under different scenarios, and the rationale for management decisions taken in response. Discussions also identified the need to manage public policy and community expectations.

Reef resilience as the unifying goal

Forum deliberations recognised the importance of managing for resilience. Participants stressed that this approach must remain flexible, adaptive and collaborative, addressing ecological, cultural, social and economic dimensions of resilience.

Specifically, the Forum expected resilience-based management to recognise Traditional Owner Knowledge, anticipate future pressures based on the best-available science, leverage site stewardship opportunities to trial new approaches and communicate why additional protections and policy tools should be considered.

Priority actions identified

When prioritising its management activities, the Forum highlighted the importance of the following approaches.

A Resilience-based management and Marine Park zoning

The *Great Barrier Reef Marine Park Zoning Plan 2003* (Zoning Plan), supported by effective compliance, is foundational to reducing cumulative pressures and protecting sensitive habitats. This highlights the importance of the Australian and Queensland governments' Reef Joint Field Management Program (Field Management Program) which provides the on-water and on-island capability needed to uphold these protections. Working with partner agencies such as Queensland Boating and Fisheries Patrol and Queensland Police Service, it undertakes targeted patrols, surveillance and direct engagement with Reef users. The program strengthens resilience through habitat and species protection and rehabilitation, real-time threat mitigation, climate-impact response and critical Reef health monitoring. This operational presence is essential; without it, the protections designed to safeguard the Reef cannot be effectively implemented.

Recognising that marine national park zones (green zones) are more resilient than general use zones (blue zones) following disturbances, some participants saw the merit in review of the Zoning Plan to ensure high value refugia and connectivity reefs are appropriately protected. However, it was also recognised this would take time and so in the first instance the priority should be on interventions that deliver timely responses.

B Special Management Areas

The Forum saw merit in using Special Management Areas (SMA) to deliver timely, targeted additional protections for areas identified as having high resilience value. SMAs can overlay one or more zones, enabling tailored management rules for high-priority sites. They can be applied for variable time periods in single or multiple locations and described spatially through coordinates in the Regulations. Many participants noted the benefit of complementary SMA adoption by Queensland to ensure consistent, enforceable rules across jurisdictions.

What is an SMA?

Paragraph 4.2.1(1)(b) of the Great Barrier Reef Marine Park Zoning Plan 2003 contains regulation-making powers to designate a Special Management Area (SMA). Section 4.2.3 allows for an SMA designation to contain special management provisions. The objective of a SMA (set out in section 4.2.2) is to provide for restrictions on access to, or use of, specified areas of the Marine Park for conservation or management purposes, including, but not limited to, the following:

(a) conservation of species

(b) conservation of natural resources

(c) protection of cultural or heritage values

(d) appreciation by the public

(e) public safety

(f) emergency situations requiring immediate management action

(g) restricting access to, or use of, areas of the Marine Park adjoining areas to which access is restricted or prohibited under a law of Queensland or the Commonwealth.

SMAs, like most spatial protection tools, can change the way community and businesses are allowed to interact with relevant areas. SMAs therefore call for extensive public consultation and support through parliamentary processes.

C Crown-of-thorns starfish (COTS) Control Program

The Crown-of-thorns starfish Control Program was recognised as one of the most successful, cost-effective and targetable tools for safeguarding coral habitat. It is second only to Marine Park zoning in delivering Reef-scale conservation benefits. Multiple lines of evidence show that COTS control directly offsets coral losses from climate-driven disturbances, accelerates recovery on damaged reefs and protects natural adaptation of coral communities to climate pressures. A number of participants strongly supported strategic expansion of the program to protect coral cover and maintain natural adaptation processes.

D Communication

Forum participants consistently identified the critical need for enhanced communication and education. The goals being to enhance awareness of the extreme threat that climate change poses to the Reef and its values. Effective communication and education were also considered critical for gaining community support for management interventions to address current and anticipated cumulative impacts. Participants identified the need to manage public policy and community expectations of what is possible with local scale management actions.

Many participants were keen for the Reef Authority to proactively communicate what actions can be taken, especially in response to natural disasters and how the Reef Authority can and does use its powers under Part 5.4 of the Zoning Plan.

What is a part 5.4?
Part 5.4 of the Great Barrier Reef Marine Park Zoning Plan 2003, states that the Reef Authority may undertake, or authorise the undertaking of management activities to protect, conserve, or restore the environment, biodiversity, and heritage values of the Great Barrier Reef Marine Park. These management activities may be undertaken where the Reef Authority is satisfied that a proposed intervention or activity is likely to provide a significant benefit to the Marine Park, and where it has direct involvement in, or is satisfied it can be delivered safely and effectively. In the past it has been used to undertake physical removal of debris or pollutants following a marine incident, trial new reef interventions, rescue overturned corals following cyclones, and install management infrastructure, such as moorings and no anchoring areas to protect coral at vulnerable locations.

E Traditional Owner partnerships

Traditional Owner representatives emphasised that enduring resilience for the Reef is inseparable from the health of their people. Strengthening the capability, authority and long-term resourcing of Indigenous ranger programs was identified as a core system priority—not just for cultural outcomes, but for improving ecological monitoring, early detection, and on-ground response capacity.

Participants highlighted the need to streamline administrative requirements, remove barriers to contracting and procurement, and create more consistent pathways for genuine co-design and co-management with Traditional Owner groups. It was noted that promoting greater collaboration between Indigenous communities and other management bodies would facilitate the road to co-management.

F Partnerships and Reef stewardship

Partnerships between Traditional Owners, all levels of government, industry, local communities, and researchers are central to the Reef Authority's resilience-based management approach.

Panel and table discussions highlighted the importance of increasing trust and consultation with recreational fishers to better manage fish populations, support sustainable practices and increase compliance with the Zoning Plan. The Reef stewardship work currently conducted by Traditional Owners and the tourism sector was highlighted throughout the Forum. Opportunities to broaden the application of site-scale interventions led by Traditional Owners, tourism operators and community groups was identified as an enabling action in the challenge scenarios presented to participants.

G Deploying novel interventions

The need for effective targeted management interventions, such as crown-of-thorns starfish control and site rehabilitation, to assist natural recovery has increased. The Reef Authority has developed prioritisation methods to ensure these interventions are deployed in areas that provide maximum benefits for the Reef. This includes new interventions being developed and trialled under the Reef Restoration and Adaptation Program such as techniques to rear and seed reefs with heat-tolerant corals.

Forum discussions highlighted that the capacity and willingness of Traditional Owner groups and partners to support deployment of novel interventions at high-value cultural, social and economic sites along the Reef has significantly increased in recent years.

An emergent theme at the Forum was the critical need for advanced disaster preparedness and well-coordinated responses to climate impacts including novel interventions.

Further developing capability for the deployment of emerging interventions was discussed and seen as necessary, as was the need to communicate the rationale and potential benefits of their use with affected Reef communities.

H Monitoring, modelling and decision support

A strong theme across the Forum was the essential role of science, data and transparency in decision-making. Participants consistently emphasised that the Reef Authority's monitoring and reporting functions underpin effective, defensible and adaptive Reef management. Monitoring data informs targeting and evaluating management actions, such as crown-of-thorns-starfish control. Long-term monitoring data, such as that provided through the inshore Marine Monitoring Program and the Australian Institute of Marine Science's Long-term Monitoring Program, are fundamental to validating models, benchmarking Reef condition and assessing the effectiveness of interventions such as crown-of-thorns-starfish control and zoning.

Information about the human aspects of the Reef is important to successful design, implementation and monitoring of management interventions. The CSIRO's Social and Economic Long-term Monitoring Program (SELTMP) is one source of valuable insights.

The Forum also underscored the substantial volume and value of Reef health data generated through:

- the Crown-of-thorns Starfish Control Program
- the Reef Joint Field Management Program, and
- the tourism industry, through the Tourism Reef Protection Initiative and High Standard Tourism Operators.

Transforming data into management impact

Resilience-based Reef management relies on integrated data programs that provide timely, trusted insights into Reef condition. Eye on the Reef, the Data Management System and the Reef Knowledge System (encompassing the Resilient Reef Network tool) underpin the Reef 2050 Integrated Monitoring and Reporting Program, enabling early detection of emerging issues, prioritised responses and evaluation of intervention effectiveness. Maintaining and evolving the Data Management System—the backbone connecting data sources to data users—is critical to ensuring these tools remain accurate, relevant and trusted. Several participants also supported making key analytical tools publicly available through the Reef Knowledge System to enhance transparency and community trust.

Decision support tools

Many participants supported expanding the suite of decision support tools to strengthen prioritisation and enable faster, more transparent management responses. Building on existing platforms used for crown-of-thorns starfish control and zoning compliance, such tools could support pre-authorised actions (for example Zoning Plan Part 5.4 actions following a cyclone), better coordinate immediate and longer-term resilience actions and provide a clear, documented pathway from monitoring data to decision-making and on-ground action.

Whole of system integration and the Reef 2050 Plan

The Great Barrier Reef and its communities are connected. The Reef is not only a bucket list destination but a vital source of livelihood, culture, and identity. It supports tens of thousands of jobs across a myriad of marine services as well as providing billions of dollars annually to the economy. But the true value of Australia's greatest natural wonder can't only be measured in dollars and cents—it lies in the extraordinary richness and biodiversity of its globally-renowned natural environment.

The health of this incredible ecosystem, of the spectacular flora and fauna and ultimately the Reef itself, starts with the care and commitment of our catchment communities. The Reef and its people sustain each other—when one thrives so does the other.

Forum discussions highlighted the complexity of the Reef system, not only in its ecological processes, but also in the social, cultural and economic factors that shape its future. Traditional Owners, along with other participants, underscored the importance of recognising the Great Barrier Reef as a protected marine park managed for the resilience of the whole system, its ecosystems, habitats, species and cultural values, as well as the processes that connect them.

Achieving this requires strong coordination across all levels of government, partners and Traditional Owners, supported by shared stewardship from industry, researchers, community and citizen scientists. Effective integration across these groups is essential to addressing cumulative pressures and supporting system-wide resilience.

The Reef 2050 Plan provides the central coordination framework, and the updated Plan, currently under revision, must communicate the sense of urgency and the need to focus on resilience. The concepts of resilience-based management and priorities identified during the Forum will strengthen the Plan's relevance and impact.

By providing a holistic view of activities in the catchment and the Marine Park, the revised Plan can enable a broader ecosystem-based approach and strengthen collaboration across all levels of government, industry, and community. This includes the significant efforts made by local governments within the Reef catchment to reduce land-based threats to the Reef. Local council representatives present at the Forum highlighted the significant impact that decisions and activities at all levels can have on Reef conditions. These include community and land use planning, development approval and conditioning, natural asset management, local sustainable development and community education. Empowering local government to act effectively at the ground level is an essential part of an integrated, system-wide approach.

Forum structure

Introduction

The Forum agenda was designed to ensure a cross-section of perspectives from invited participants who were supported to be informed and to help shape ideas, share knowledge and co-develop solutions to the challenges the Reef faces.

The participant survey evaluation and feedback suggest this objective was achieved.

Participants

A comprehensive stakeholder-mapping process ensured the Forum included a balanced, representative, and diverse cross-section of the Reef community.

Stakeholders were identified across the following sectors: Traditional Owners, tourism, science, non-government organisations, industry, recreational fishers and all levels government. Participants were selected for their experience, relevance to Forum themes, and capacity to contribute cross-disciplinary insights spanning cultural, scientific, policy, regulatory and community perspectives. Existing networks were used to ensure broad representation.

Table groups were intentionally curated to facilitate structured and inclusive discussions. Participants from varied sectors and perspectives could come together to seek a shared understanding and search for common ground and action.

Table 1 Forum participants by sector:

Traditional Owners	Federal Government	State Government	Local Government
• Gunggandji Aboriginal Corporation RNTBC^ (TUMRA)* • Jabalbina Yalanji Aboriginal Corporation (IPA)+ • Port Curtis Coral Coast Traditional Owner (IRAC)# • Woppaburra TUMRA Aboriginal Corporation (TUMRA) • Wulgurukaba Traditional Owner (IRAC)	• Department of Climate, Energy, Environment and Water • Great Barrier Reef Marine Park Authority Board	• Department of Environment, Tourism, Science and Innovation • Department of Premier and Cabinet • Department of Primary Industries • Office of the Great Barrier Reef • Queensland Parks and Wildlife Service • Tourism Events Queensland	• Cassowary Coast Regional Council • Townsville City Council • Mackay Regional Council
Community	**Science**	**NGOs**	**Industry**
• Far Away Fishing • Local Marine Advisory Committee members • Pacific Reef Fisheries • Queensland Recreational Fishing Network-Yeppoon	• Australian Institute of Marine Science • Central Queensland University • Commonwealth Scientific and Industrial Research Organisation • Independent Expert Panel members • James Cook University • Reef and Rainforest Research Centre • University of Queensland	• Great Barrier Reef Foundation • Reef Catchments • The Australian Marine Conservation Society • World Wildlife Fund for Nature	• Adrenalin Snorkel and Dive • Association of Marine Park Tourism Operators • Experience Co • GBR Biology • Lady Elliot Island Eco Resort • North Queensland Bulk Ports Corporation • Queensland Seafood Industry Association • Quicksilver Cruises • Tourism Reef Advisory Committee members

^Registered Native Title Bodies Corporate
*Traditional Use of Marine Resources Agreement
+Indigenous Protected Area
#Indigenous Reef Advisory Committee

Agenda

The Forum used a blended agenda with a transdisciplinary deliberative dialogue approach to balance expert input with interactive, cross-sector collaboration. It included presentations, panel discussions, digital polls, structured dialogue, challenge scenarios, and time for informal networking and rapport building. Discussions were supported by physical and digital stimulus material, creating a space that enabled participants to hear diverse perspectives, build shared understanding and explore solutions collaboratively rather than through a single-discipline lens.

Background presentations covered the current state of the Reef, Marine Park management milestones, resilience-based management approaches, the Reef Authority's management toolkit and examples of best practice. Panel discussions provided a platform for different perspectives, to share experiences and challenges before opening to Q&As. This process supported participants to develop a shared understanding of the past and the future challenges facing Reef communities and industries.

Participants then completed Reef management challenges using future climate and likely Reef impact scenarios to test regulatory options and explore response actions. Supported by physical (maps and management compendiums) and digital stimulus materials, these activities brought Traditional Owner knowledge, science, industry, government and community perspectives into a single conversation, enabled participants to explore solutions collectively and promoted a shared understanding of climate risks.

The full agenda is provided at Appendix A.

Participant evaluation and feedback

Participants were surveyed pre and post the Forum to assess their familiarity and understanding of, as well as their confidence in, the Reef Authority's management of the Great Barrier Reef Marine Park.

The responses, both pre and post forum, indicated that the attendees were familiar or very familiar with the Reef Authority's role. Survey results indicate attendance increased understanding of resilience-based management from 51% to 60% and confidence in Reef management increased from 51% to 83%. All attendees also indicated a strong intent to share or apply what they learned. The free text feedback was also positive as the following examples illustrate.

Participant pre and post survey report is available at Appendix B.

"A very good event and well worth attending."

"There was a diverse range of participants who brought valuable insights and expertise. I thought this was great."

"Thanks for trying a few different ways to organise the discussions e.g. scenario discussions."

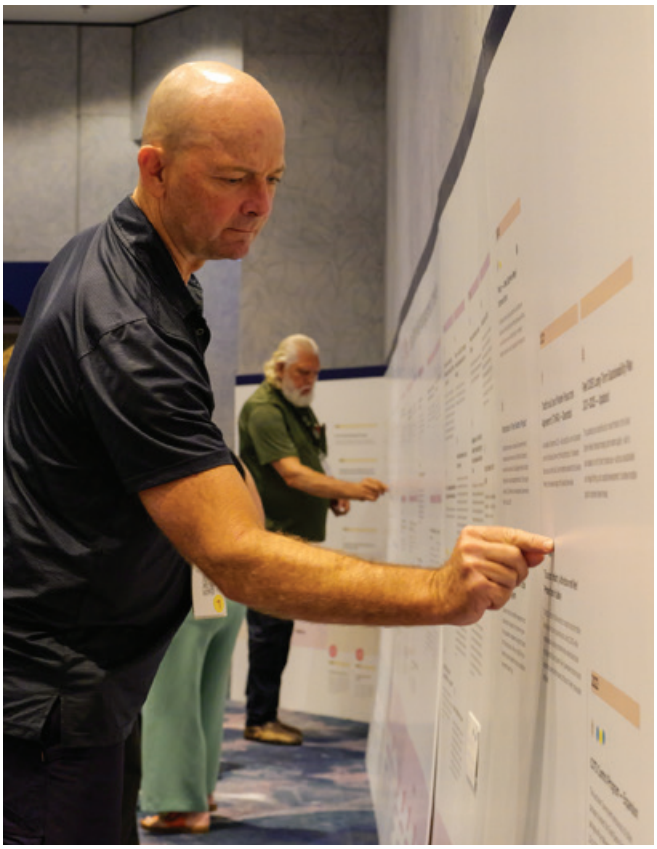
Recognising collective achievements

Introduction

A key ingredient to good public policy is knowing your history. The Reef Authority's work program has evolved over the past 50 years, but our driving purpose, outlined in the *Great Barrier Reef Marine Park Act 1975*, remains the same:

> *To provide for the long-term protection and conservation of the environment, biodiversity and heritage values of the Great Barrier Reef Region.*

The challenges climate change represents demands we adapt our approach and continually build on our past successes.



Timeline wall

Forum participants were encouraged to place three dots on the timeline to signify the actions they believed had the greatest impact. Measuring almost nine metres, the timeline wall, covering 50 years of management, provided an interactive session where participants had the opportunity to reflect on the continuity of effort, the adaptiveness of the Reef Authority's management, and the collective innovation required to protect the Reef.

This activity created an immediate visual snapshot of collective sentiment and highlighted which management actions have left the strongest legacy across the Reef Authority's history.

Participants placed the greatest value on actions that:

- Established governance foundations (*Great Barrier Reef Marine Park Act 1975*)
- Provided world-leading protection frameworks (Great Barrier Reef Marine Park Zoning Plan 2003)
- Improved environmental condition at scale (water quality plans)
- Enabled co-management with Traditional Owners (Traditional Use of Marine Resource Agreements - TUMRAs)
- Addressed long-term threats (crown-of-thorns starfish outbreaks, climate action plans)
- Strengthened stewardship and community involvement (Reef stewardship programs).

Key takeaways

- The timeline highlighted that the Reef's protection has been built on 50 years of continuous, adaptive management.
- Major milestones—zoning, crown-of-thorns starfish control, monitoring, stewardship, restoration—are interconnected elements of a long-term resilience strategy.
- Collaboration is not incidental; it is the defining ingredient of every major achievement.
- Future work must continue to balance evidence-based science, community expectations, Traditional Owner leadership and operational delivery.
- The Reef's story is one of momentum, innovation and shared responsibility, and the vision ahead is stronger when we reflect on the journey already travelled.

Managing for resilience

Introduction

The Great Barrier Reef remains resilient, but not invincible. Climate driven disturbances are compounding the effects of other key threats including coastal development, land-based runoff, and illegal fishing. The Reef of the future will differ from today's Reef, yet its vast scale still provides some natural buffering against climate change.

Since the first global coral bleaching event in 1998, mitigation and targeted management has made a difference, with the Reef Authority and its partners developing forecasting, monitoring and response tools to enhance Reef recovery and protect its condition.

Resilience-based management

Resilience-based management adds a prognostic focus to spatial management planning to anticipate and address the mounting issue of climate change driven cumulative impacts. The approach seeks to amplify two key aspects of resilience; the resistance (tolerance) and recovery capacity of Reef ecosystems and the communities that depend on them.

Resilience-based management focuses on the application of four interrelated measures to protected area design:

1. Representation and replication of key habitats and bioregions to spread the risk of cumulative impacts across a network of protection
2. identification and protection of connectivity corridors, patterns of water flow driven larval replenishment
3. identification of refugia from current and future disturbances, i.e. places that are most likely to persist in the future, and sustain and aid recovery of adjacent reefs
4. effective compliance ensures Reef users follow the rules that protect the network that spans these elements.

Forum participants were provided with an overview of the degree to which these principles have already been applied to Reef management. For example, the Zoning Plan, that delivered representation and replication based protection of the entire Marine Park and the crown-of-thorns starfish control program that is targeted based on our understanding of connectivity and refugia. In each case the incremental application of knowledge has enabled increasingly sophisticated, targeted and effective management interventions that continue to strengthen the resilience of the Reef.

Forum participants were introduced to two of the online tools the Reef Authority has developed to address this emerging need to identify the resilience potential of reefs, guide localised actions to protect refugia and connectivity, and better target how we manage the Great Barrier Reef Marine Park.

Reef Mapping Tool

The Reef Mapping Tool is an interactive spatial platform displaying information available to the Reef Authority, including current management, Reef use, compliance and crown-of-thorns starfish control effort, areas of significance, ecological monitoring and modelling data from across the Great Barrier Reef Marine Park. Participants could zoom into part of the Reef to view zoning, benthic and bathymetric data, areas covered by Traditional Owner agreements, monitoring efforts, compliance actions, crown-of-thorns starfish control, stewardship initiatives and more.

The Reef Mapping Tool highlights the multi-layered and integrated nature of Reef management, prompting discussion about whether tools are applied effectively, where gaps remain, and how emerging challenges might require adaptation.

Resilient Reef Network

The Resilient Reef Network tool supports the Reef Authority by assessing the resilience potential of individual reefs, i.e. their likely capacity to withstand and recover from disturbances. Each reef receives a resilience potential score based on its exposure to disturbances and its likely capacity to recover. The tool integrates 20 years of data related to three threats: cyclones (modelled on wave exposure), coral bleaching (based on heat stress), and crown-of-thorns starfish outbreaks. Using these datasets, reefs are classified into four categories based on disturbance history and their potential for recovery. These categories are visually displayed in the tool, enabling the Reef Authority to quickly identify reefs that may require targeted interventions. Facilitators used this online tool, and the Reef Mapping Tool supplemented by large, printed maps to support table decisions during the scenario challenges, strengthening engagement across the participants.

> ”I learnt a lot about GBRMPA [Reef Authority] management tools. The resilience network tool is excellent.”

A key feature of the Forum was the inclusion of interactive elements, giving participants the opportunity to share their perspectives and engage with the Reef Mapping Tool, management tool cards, program factsheets, management timeline and other resources.


Management Tool Card

Great Barrier Reef Marine Park Zoning Plan 2003 - (Amendment)

What does it do?

What's involved in implementing?

How is it currently used?


REEF JOINT FIELD MANAGEMENT PROGRAM


20 REEF 25 FORUM

27-29 October
Townsville

Marine Park management tools

To support a well-informed discussion of the management options available participants were provided with background briefing on the statutory and non-statutory tools used to manage the Great Barrier Reef.

> **Appendix C** summarises the Reef Authority's suite of management options including each tool's purpose, implementation requirements, current application, and indicative timelines for implementation.

Modelling the impacts of climate change on the Reef

Modelling the impacts of climate change on the Reef highlights the importance of global mitigation action coupled with well-targeted local scale actions that strengthen ecosystem resilience.

University of Queensland researchers have developed ReefMod, which simulates the effects of climate change and other pressures on key groups of species and ecological processes, including herbivory, crown-of-thorns starfish predation, larval connectivity and recovery, at Reef-wide, regional, reef and sub-reef scales.

ReefMod provides high resolution insights into the likely future of the Reef's coral communities based on scenarios developed by the Integovernmental Panel on Climate Change (IPCC)[3]: +1.4°C, +1.8°C, +2.7°C, +3.6°C, +4.4°C. ReefMod projections were generated from thousands of simulated disturbance events known to alter coral reef condition. The modelling work for ReefMod was conducted as part of the Reef Restoration and Adaptation Program which is developing large-scale coral rehabilitation options to aid Reef recovery in the coming decades.

This modelling was presented at the Forum

The ReefMod outputs highlight the stark difference in future Reef condition between low and high emissions scenarios. Under all scenarios, average coral cover is projected to decline sharply until 2050. However, under the +1.4°C and +1.8°C scenarios—aligned with the global emission targets—coral cover is expected to recover in the second half of the century. Under the +2.7°C scenario, consistent with the current global emissions trajectory, coral condition continues to decline throughout the century, with increasing likelihood that cumulative impacts will outpace the Reef's natural resilience. The +3.6°C, +4.4°C scenarios, while now less likely due to recent global mitigation progress, project increasingly severe ecological decline.

[3] The IPCC, or Intergovernmental Panel on Climate Change, is the United Nations body that assesses the science related to climate change.

IPCC scenarios are plausible future pathways describing different socioeconomic and emissions trajectories to understand potential climate change impacts.

Climate scenarios and Reef management challenge

Introduction

Two table-based exercises facilitated deliberative dialogue between participants as they explored management responses.

1 Challenge 1

> The first, shorter exercise asked each table to focus on one reef and consider what tools could be applied in response to one event—a cyclone or thermal warming. This first exercise was designed to introduce participants to Marine Park management tools in a simple context—one reef and one climate impact. Each example had occurred at that location, so participants were engaging with a real-world example. Reef Authority facilitators were also able to answer questions and explained what had happened. This allowed participants to reflect on how tools have been applied in the past and prepared them for Challenge 2. This involved applying the tools at a regional scale in response to a future climate scenario.

2 Challenge 2

The second challenge was significantly more complicated. The Great Barrier Reef Marine Park was divided into seven sections, and each table was allocated a section and asked to consider management actions in response to one of three climate scenarios.

The three scenarios were:

1. *Warming reaches 1.3˚C by 2035, stabilising by 2100.*
2. *Warming reaches 1.5˚C by 2035, reaching 1.8˚C by 2100.*
3. *Warming reaches 2˚C by 2035, reaching 2.7˚C by 2100.*

Scenarios detailed at Appendix D.

The challenge was introduced late on the first day, and the tables completed the exercise and reported back on the second day.

Introducing the challenge on the first day rather than the second was intentional. We recognised that placing this future-focused exercise early would stimulate deeper reflection and extend the conversation beyond the structured workshop hours, carrying naturally into informal interactions such as the evening dinner.

Coming back the second day with fresh energy also shifted the dynamic in the room. The additional reflection window allowed more considered perspectives to emerge.

All tables initially took time to understand their section of Reef, its values, human uses and past impacts. They discussed the climate and impact scenarios and then explored management tools and examined the implications of their use: environmental, cultural, social and economic.

Challenge 2 table outcomes

The climate scenarios exercises required each table to identify key refugia and connectivity reefs within their region to strengthen resilience and assess whether existing protections were adequate. Through scenario-based questions, participants identified opportunities to enhance protections for priority locations.

> The responses provided are the participants considered views, not recommendations.
>
> Partnerships, communication, education, monitoring and research were the most used management tool across all tables and all scenarios, regarded as critical enablers of all other management actions.

There were some notable similarities in the approaches tables took to the challenge, depending on the climate scenario:

Climate scenario #1

Warming reaches 1.3˚C by 2035, stabilising by 2100, was only considered for Section 6—Mackay to Shoalwater to Swains (Table 6). This scenario reflected the past 10 years of climate impacts. The table chose to focus their initial efforts in the first two years on a Special Management Area to protect refugia, supported by targeted compliance, communication and Reef stewardship programs. Additionally, this period was seen as a time to initiate pathways towards additional interventions and adaptation activities in later years and, if learnings from the new SMAs supported it, potential amendment to the Zoning Plan.

Climate scenario #2

Warming reaches 1.5˚C by 2035, 1.8˚C by 2100. Tables 2, 3 and 5 had this scenario and all three tables prioritised communication and education, monitoring and research, partnerships, and Reef stewardship in the first two years and chose to develop Special Management Areas to protect refugia and fish spawning sites.

Climate scenario #3

Warming reaches 2˚C by 2035, reaching 2.7˚C by 2100, was considered by Tables 1, 4 and 7 who all front-loaded management response with a crisis management plan due to the gravity of the impacts their sections would experience in the next 10 years.

Challenge 2 table outcomes

The climate challenge scenarios required each table to identify key refugia and connectivity reefs within their region and assess whether existing protections were adequate. Through scenario-based questions, participants identified opportunities to enhance protections for priority locations.

Climate scenarios and Reef management challenge

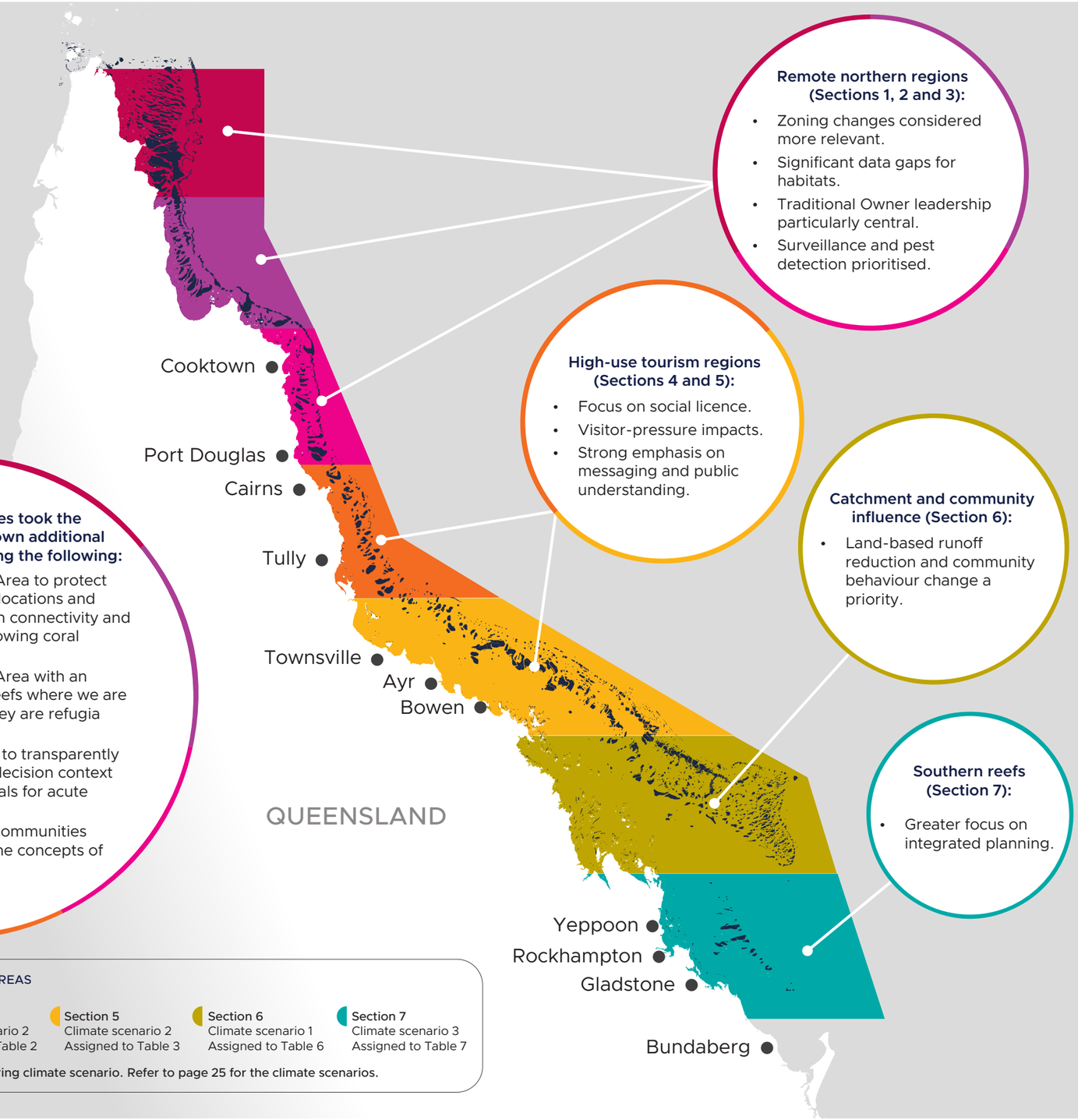
Seven tables of 60 transdisciplinary participants deliberated over three future climate scenarios and the management actions they would take to support the Great Barrier Reef's resilience in preparation for climate change impacts. Through scenario-based questions participants identified opportunities to enhance protections for priority locations.

Partnerships, communication, education, monitoring and research were the most used management tool across all tables and all scenarios. These were seen as critical enablers of all other management actions.

All seven tables used 17 of the 18 Reef Authority management tools provided.

Five of the seven tables took the option to develop their own additional management tools including the following:

- A Special Management Area to protect fish and coral spawning locations and potential closures of high connectivity and high resilience reefs following coral bleaching events.
- A Special Management Area with an additional selection of reefs where we are reasonably confident, they are refugia areas.
- Decision Support Tool – to transparently prioritise and integrate decision context and support pre-approvals for acute responses.
- Education campaign in communities around Reef resilience the concepts of refugia and connectivity.



Remote northern regions (Sections 1, 2 and 3):

- Zoning changes considered more relevant.
- Significant data gaps for habitats.
- Traditional Owner leadership particularly central.
- Surveillance and pest detection prioritised.

High-use tourism regions (Sections 4 and 5):

- Focus on social licence.
- Visitor-pressure impacts.
- Strong emphasis on messaging and public understanding.

Catchment and community influence (Section 6):

- Land-based runoff reduction and community behaviour change a priority.

Southern reefs (Section 7):

- Greater focus on integrated planning.

SECTION AREAS

Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
Climate scenario 1	Climate scenario 3	Climate scenario 2	Climate scenario 2	Climate scenario 2	Climate scenario 1	Climate scenario 3
Assigned to Table 4	Assigned to Table 1	Assigned to Table 5	Assigned to Table 2	Assigned to Table 3	Assigned to Table 6	Assigned to Table 7

NOTE: Each table was assigned a specific section of the Reef and a differing climate scenario. Refer to page 25 for the climate scenarios.

Section 1 – Northern boundary of the Great Barrier Reef Marine Park to Olive River (Table 4)

Facilitator	Mark Read
Scenario	**Warming reaches 1.3˚C by 2035, stabilising by 2100**

Discussion

Key observations included:

- This section includes some of the Reef's most remote and least accessible areas, characterised by strong cultural values, low levels of commercial activity and high ecological integrity.
- There is an existing TUMRA (Wuthathi) within the section.
- Due to the region's remoteness, the condition of some key habitats, for example Halimeda beds, remains uncertain. In contrast, information on islands, seabirds and marine turtles was more robust, providing clearer insights into their status and management needs.
- Participants noted the presence of a significant cross-shelf Marine National Park (Green Zone), which provides broad protection across much of the area.
- The region was likely to have an increase in visitation as the condition of the Peninsula Development Road, Queensland's main link across Cape York, improved. This is likely to lead to increasing pressures in the catchment (access to campgrounds, increase in litter); on the condition of roads (and potentially an increase in runoff) and users entering the Marine Park for recreational fishing. This underscored the requirement to lean into a foundational management activity, the Reef Joint Field Management Program's compliance and enforcement.

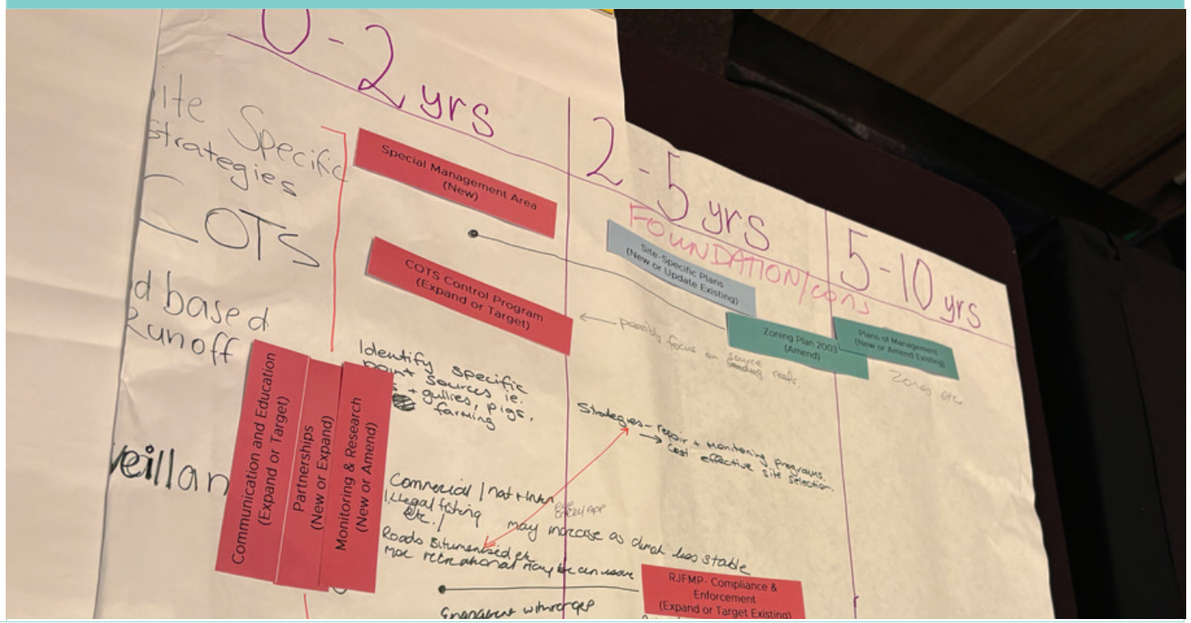
The table used 11 Reef Authority management tools, eight within the first two years and developed the following approach to managing for this future climate scenario:

- Develop site-specific strategies and continue leveraging existing programs such as the Crown-of-thorns starfish Control Program and the Reef Joint Field Management Program.
- The group identified updates to the Zoning Plan as a key action for enhancing protection and futureproofing management.
- Enhanced surveillance of the Great Barrier Reef Marine Park and islands to ensure use is sustainable and that ecosystem-changing pests on islands are detected early.
- Expanded COTS control across those reefs that are disproportionally more important.
- Expand the role of Traditional Owners and Land and Sea Rangers to deliver a range of surveillance activities and resilience-based management actions on islands and reefs.
- Reduce land-based runoff by building better roads and drainage systems to reduce sediment and pollutant runoff.
- Invest in restoration and interventions and prioritise coral larval re-seeding for reefs impacted by COTS, coral bleaching and cyclones.
- Adopt innovative technology solutions that can enhance safety and efficiency of monitoring and data capture.
- Strengthen communication and engagement efforts, sustain partnerships to keep communities connected to the Reef and support sustainable use.

Timeline of actions

0-2 years	2-5 years	5-10 years
• Special Management Area (new) • COTS Control Program • Communication and education • Partnerships • Monitoring and research • Zoning Plan 2003 (amend) • Compliance and enforcement	• Site-specific plan • Communication and education • Partnerships • Monitoring and research	• Plans of management • Interventions and adaptation • Communication and education • Partnerships • Monitoring and research

Table output



Section 2 – Olive River to Princess Charlotte Bay to Cooktown (Table 1)

Facilitator

Roger Beeden

Scenario

Climate Scenario #3 – Warming reaches 2˚C by 2035, 2.7˚C by 2100

Discussion

Key observations included:

- The table agreed that under this climate scenario, a 2.7˚C trajectory, the section is in a crisis.
- A critical connectivity bottleneck (Cape Melville – South Warden Reef) was discussed as a priority focus for resilience-building efforts.

The table agreed on the following approach to managing for this future climate scenario:

- With the exception of the Zoning Plan, all of the 18 Reef Authority management tools were used with most implemented immediately or within the next five years, given the scale of the warming threat.
- The table agreed that the zoning arrangements should be retained and supplemented with a Special Management Area (SMA).
- The Zoning Plan could be reviewed to determine whether adjustments could amplify resilience benefits.
- The table outlined an SMA to protect fish and coral spawning locations and potential closures of high connectivity and high resilience potential reefs following coral bleaching events.
- There was a consensus that they would expand/enhance COTS Control Program as there is no culling capacity currently in the area and given the connectivity value this was a key limitation.
- They would lever education and communication about the importance of this area from a connectivity and potential thermal refugia perspective.

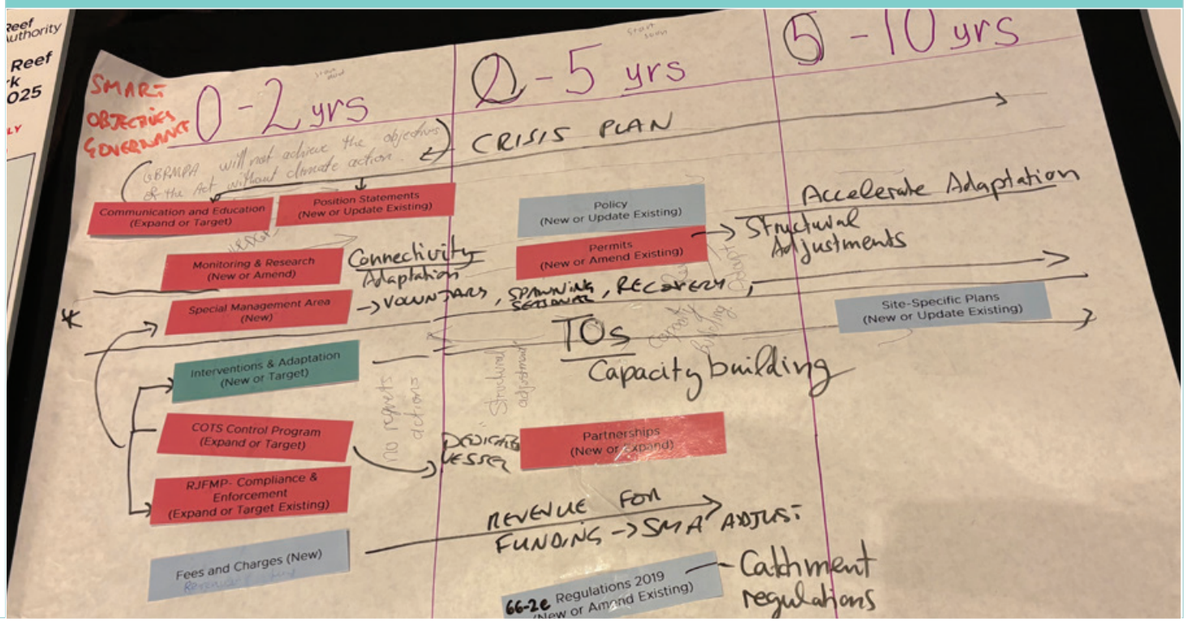
Additional actions the table developed to address the challenge:

- The table identified the priority was the need for a crisis plan given the climate scenario with appropriate governance and objectives.
- Recognise and extend the protection and co-management of the cultural heritage in the Flinders Group of islands through linkages to the Lama Lama TUMRA were also discussed.
- Develop a Reef interventions knowledge hub with Lama Lama TUMRA, the Lizard Island Research Station and COTS control vessel. This would aid regional resilience building and integrate existing stewardship programs with intervention projects. This knowledge hub could host the monitoring, modelling and research needed to resolve critical connectivity uncertainties while also implementing actions and evaluating outcomes.

Timeline of actions

0-2 years	2-5 years	5-10 years
• Communication and education • Position statements • Monitoring and research • Special Management Area (new) • Interventions and adaptation • COTS Control Program • Compliance and enforcement • Fees and charges • Part 5.4 management action (new) • Traditional Use of Marine Resource Agreements – TUMRAs	• Policy • Partnerships • Regulations 2019 (new or amend) • Reef stewardship programs • Plans of management • Permits	• Sites specific plans (new or updated)

Table output



Section 3 – Princess Charlotte Bay to south of Mossman Ribbon Reefs and Lizard Island (Table 5)

Facilitator	Caroline Turnour
Scenario	**Scenario #2 – Warming reaches 1.5˚C by 2035, 1.8˚C by 2100.**

Discussion

Key observations included:

- Participants noted signs of strong ecological recovery in several areas despite historic pressures, including bleaching and past cyclone impacts, most recently Tropical Cyclone Jasper.
- Zoning in this region was a key contextual factor, with Green Zones on inner reefs, Olive Zones for charter fishing on the outer reefs, and adjacent Blue Zones for shipping traffic.

The table used eight Reef Authority management tools, all within the first two years, and developed the following approach to managing for this future climate scenario:

- Develop a decision-support tool to help managers prioritise reef sites for resilience-based actions, particularly following major events.
- Develop a Special Management Area to protect fish and coral spawning areas post-bleaching events.
- Develop regulations protecting ecological connectivity.
- Strengthen compliance presence around multi-use zones.
- Maintain capacity of the COTS response despite historically low outbreaks levels.
- Consider future restoration and interventions as they become scientifically and operationally viable.
- Engage early and consistently with communities affected by proposed management actions.
- Strengthen partnerships with tourism.
- Integrate actions with TUMRAs to support holistic Sea Country stewardship.

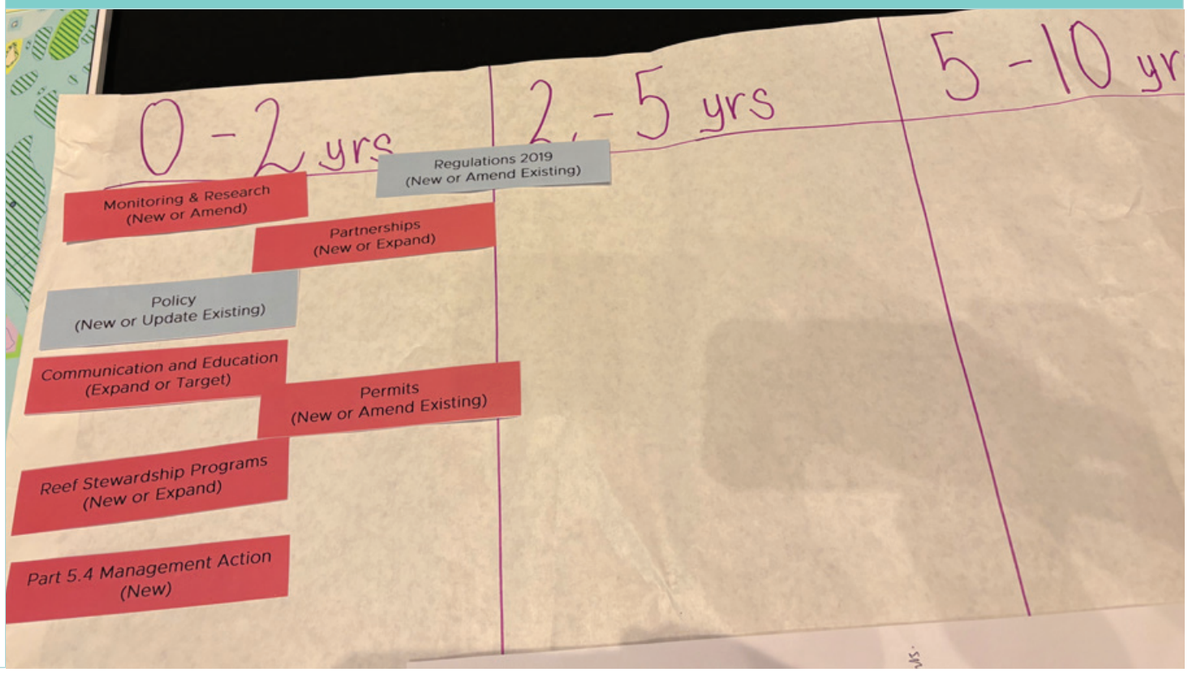
Additional actions the table developed to address the challenge:

- Deploy targeted monitoring and research to inform actions and evaluate their effectiveness.

Timeline of actions

0-2 years	2-5 years	5-10 years
• Monitoring and research • Regulations 2019 (new or amend) • Partnerships • Policy • Communication and education • Permits • Reef stewardship programs • Part 5.4 management action (new)		

Table output



Section 4 – Port Douglas to Townsville (Table 2)

Facilitator	Richard Quincey
Scenario	**Climate Scenario #2 – Warming reaches 1.5˚C by 2035, 1.8˚C by 2100.**

Discussion

Key observations included:

- Table 2 examined the most intensively used region of the Marine Park.
- Port Douglas to Cairns is a significant tourism and recreation area, with almost half of all Reef tourism occurring in this area and the second largest population along the Reef coast.
- The area has two sugar loading ports and one all-purpose port in Cairns and moderate commercial fishing/trawling including, Spanish mackerel, coral and prawn. The Hinchinbrook area is a popular recreational-use area.
- Noted the level of protection through Marine National Park Zones that was in place, particularly on mid-shelf and offshore reefs.
- The Resilient Reef Network indicated a significant cluster of Low Disturbance/High Recovery reefs in the north of the section which align with tourism sites. However, the area is vulnerable due to significant flood event exposure.

The table agreed on the following approach to managing for this future climate scenario:

- The table used all 18 Reef Authority management tools, starting with an amendment to the Zoning Plan and Cairns Plan of Management as a priority, along with COTS Control and Compliance and enforcement. The group questioned if updating position statements was a priority given the list of other priority tasks.
- Participants focused on improving social licence and public understanding of Reef management, given the high visibility of climate and bleaching impacts near major population centres. The table identified partnerships, Reef stewardship programs and communication and education as required across all timeframes.
- The table identified new climate adaption strategies for coastal areas are likely required (compared to current practice).
- Key actions included refining crisis communication planning, enhancing monitoring programs that link science directly to management decisions and improving place-based narratives that explain why certain decisions fall within (or outside) the Reef Authority's remit.
- The group questioned if updating position statements was a priority given the list of other priority tasks.

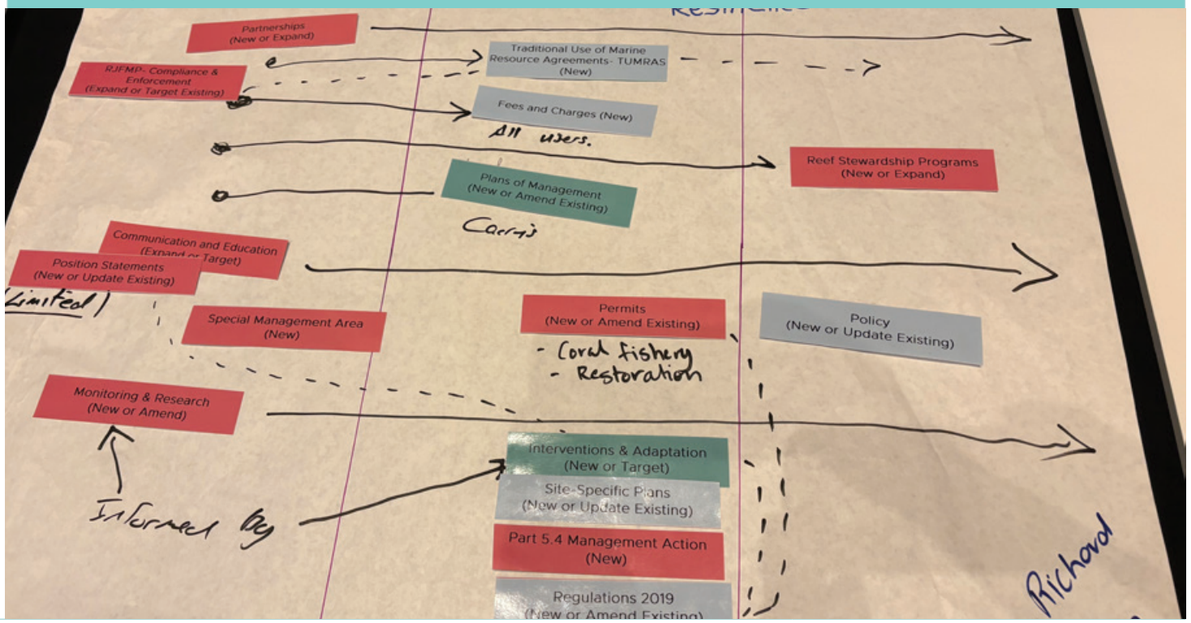
The table developed the following additional approaches to manage this future climate scenario:

- Use of special management areas or some other responsive spatial management for climate related events.
- Fees and charges applied to all Reef users.
- Greater emphasis on hearing Traditional Owner stories and embedding Traditional owner knowledge.

Timeline of actions

0-2 years	2-5 years	5-10 years
• COTS Control Program regulations 2019 (new or amend) • Zoning Plan 2003 (amend) • Partnerships • Traditional Use of Marine Resource Agreements – TUMRAs • Compliance and enforcement • Fees and charges (new) • Reef stewardship programs • Plans of management (new or amend) • Communication and education • Position statements – with a review of if needed • Special Management Area (new)	• Permits • Site-specific plans (new or update) • Part 5.4 Management action (new) • Regulations 2019 (new or amend)	• Policy

Table output



Section 5 – Townsville to Whitsundays to Bowen (Table 3)

Facilitator	Brigid Kerrigan
Scenario	**Climate Scenario #2 – Warming reaches 1.5˚C by 2035, 1.8˚C by 2100.**

Discussion

Key observations included:

- Table 3 focused on a tourism-intensive and mixed-use section. This section includes a mix of farming, mining and tourism, with the popular Whitsunday Islands included. Tourism visitation and recreational use is high in the region as is mining.

The table agreed on the following approach to managing for this future climate scenario:

- Table three used all 18 Reef Authority management tools in a strategic long-term response, with actions implemented simultaneously to address immediate impacts and sequentially to adapt to outcomes from previous actions.
- Discussion included a focus on catchment use and management; the adequacy of the current zoning in terms of protection of potential high recovery reefs – protecting coral source reefs; and recreational fishing – noting high use areas and limitations on recreational catch and effort.
- Discussions prioritised sustainable tourism pathways, enhanced monitoring of visitor pressures, and better integration of science outputs into spatial planning. Adaptation tools and restoration activities were also identified as critical for cyclone-impacted and high-value tourism reefs.
- Participants identified the importance of education programs, stronger engagement with operators, and refining resilience actions that align with local stewardship.

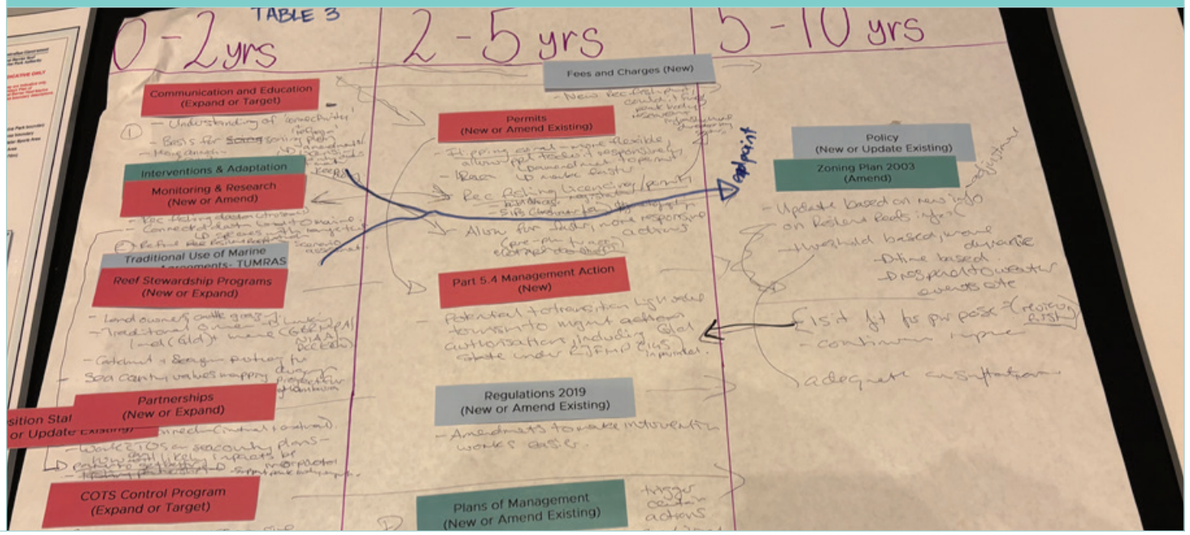
The table developed the following additional approaches to manage this future climate scenario:

- Introduce permits/licence for recreational fishing.
- Build education program in communities around refugia and connectivity.
- Update the Zoning Plan from information gathered from Resilient Reef Network.
- Adopt a threshold-based approach to response levels.
- Permits to be used for quick interventions e.g; flipping corals.
- Strengthen community involvement by enhancing stewardship incentives.

Timeline of actions

0-2 years	2-5 years	5-10 years
• Communication and education • Fees and charges • Interventions and adaptation • Monitoring and research (new or amend) • Traditional Use of Marine Resource Agreements – TUMRAs • Reef stewardship programs • Zoning Plan 2003 (amend) • Partnerships • Position statements • COTS Control Program (expand or target) • Compliance and enforcement • Site-specific plans (new or update existing)	• Permits • Part 5.4 Management action (new) • Regulations 2019 (new or amend) • Plans of management (new or amend) • Special Management Area (new)	• Policy

Table output



Section 6 – Mackay to Shoalwater to Swains (Table 6)

Facilitator	Chloe Schauble	
Scenario	**Climate Scenario #1 – Warming reaches 1.3˚C by 2035, stabilising by 2100**	**Table output**

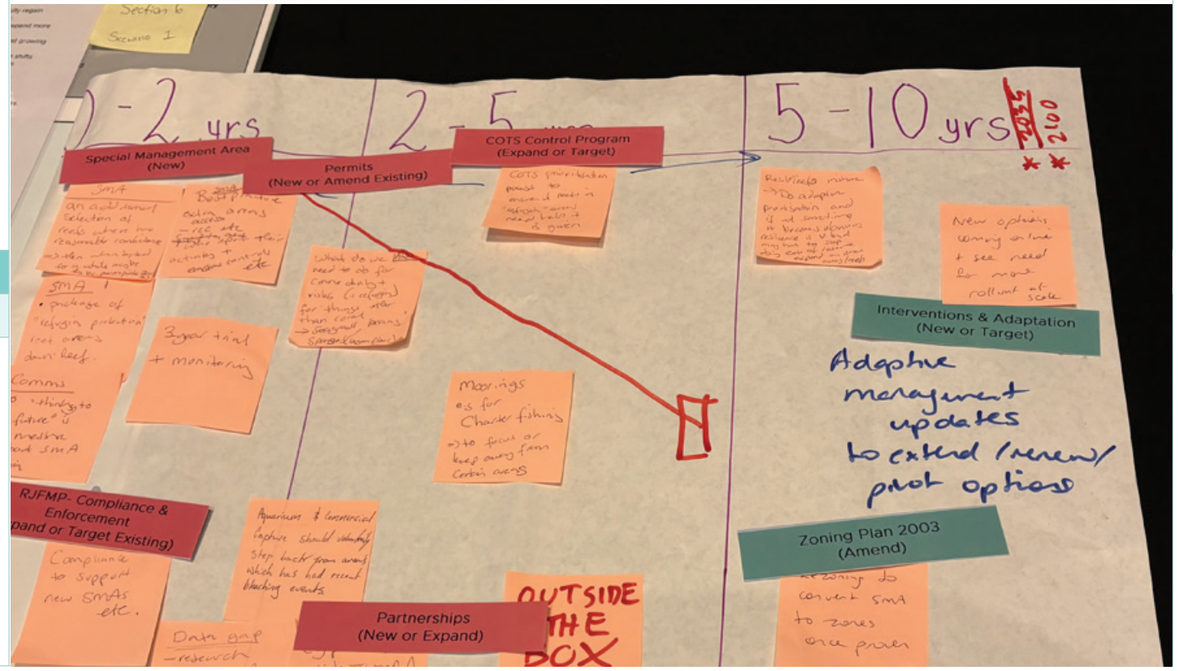
Discussion

Key observations included:

- The area has both inshore and remote offshore reefs and comes under multiple catchment influences.

The table used 11 Reef Authority management tools, with the majority implemented in the first five years and developed the following approaches to managing for this future climate scenario:

- Behaviour-change messaging for communities and industry, including around activities, supporting use of the Reef's inshore areas to improve monitoring of runoff impacts on inshore reefs.
- Enhanced research into offshore connectivity and expanded restoration trials as conditions allow.
- Prioritise interventions on high-value reefs.
  - Use the Crown-of-thorns starfish Control Program strategically to prioritise assistance to high value 'refugia' reefs as needed.
- Review and adjust spawning fishing closures in Swain Reefs (and whole Reef) to ensure the closure period captures peak spawning window (likely to change as temperatures warm).
  - Use spatial and temporary closures as necessary to capture spawning aggregations.
- Implement Special Management Areas, (SMAs) covering a selection of 'refugia' reefs
  - Continual review process to adaptively manage SMAs – to extend, renew or pilot options.
  - Increase compliance and enforcement of the SMAs.
  - If SMAs are shown to be working consider a Zoning Plan amendment in the five to 10-year horizon, capturing learnings from the SMA monitoring.



Timeline of actions

0-2 years	2-5 years	5-10 years
• Special Management Area (new) • Compliance and enforcement • Communication and education • Reef stewardship programs • Site-specific plans (new)	• Permits • COTS Control Program • Partnerships • Monitoring and research	• Interventions and adaptation • Zoning Plan 2003 (amend)

Section 7 – St Lawrence to southern boundary of the Great Barrier Reef Marine Park (Table 7)

Facilitator

Fred Nucifora

Scenario

Scenario #3 - Warming reaches 2˚C by 2035, reaching 2.7˚C by 2100

Discussion

Key observations included:

- The need for coordination across stakeholders to align communications, including integrated planning with Queensland agencies.Communication with stakeholders will be key to maintaining social licence to confront this challenging future.
- Under this warming scenario an emergency response plan should be developed immediately.
- An activity analysis should be conducted and activities that are not ecologically sustainable should be reduced/ceased.
- There was keen interest/support for investment into decision support tools that enable near real time understanding and subsequent management action.
- There was some discussion about potential GBRMP Act review with the lens of changes that enable more agile response in a dynamically changing environment.

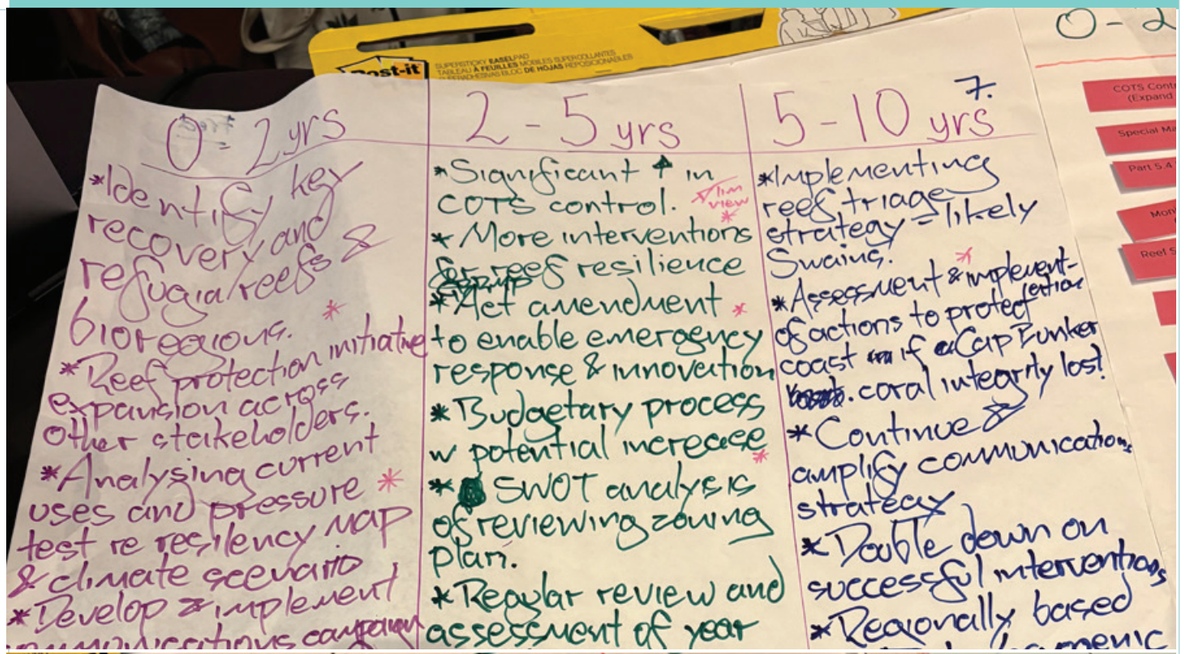
The table used 17 of the Reef Authority management tools and agreed on the following approaches to managing for this future climate scenario:

- Reef protection coordinated across stakeholders.
- A Special Management Area to protect the refugia in the Swains.
- Enhanced COTS control.
- Double down on successful interventions.
- Maintaining strong partnerships with tourism, local councils and Traditional Owners.
- SWOT analysis reviewing Zoning Plan.
- Identification of new economic opportunities within 2–5 years.

Timeline of actions

0-2 years	2-5 years	5-10 years
• COTS Control Program • Special Management Area (new) • Part 5.4 Management action (new) • Monitoring and research • Reef stewardship programs • Position statements • Partnerships • Communication and education • Compliance and enforcement • Permits	• Site-specific plans (new) • Traditional Use of Marine Resource Agreements – TUMRAs • Regulations 2019 • (new or amend) • Policy • Fees and charges	• Zoning Plan 2003 (amend) • Plans of management (new or amend) • Interventions and adaptation

Table output



Management tools: Participant poll

The closing activity for the Forum was a digital poll where participants were asked as individuals to reflect on what they had learnt and heard over the past two days and vote on which management tools the Reef Authority should focus capability on in response to future climate scenarios.

The below table reports the results and indicates management actions that are adaptable, targetable and supported by communication and strong partnerships have strong support. *The following are participant views and not recommendations.*

Reef Authority management tool	Participant vote (%)
Interventions and adaptation (new or target)	14%
Communication and education (expand or target)	13%
COTS Control Program (expand or target)	11%
Special Management Area (new)	11%
Partnerships (new or expand)	10%
Monitoring and research (new or amend)	7%
Reef stewardship programs (new or expand)	7%
Regulations 2019 (new or amend existing)	4%
Compliance and enforcement (expand or target existing)	4%
Zoning Plan 2003	4%
Permits	3%
Traditional Use of Marine Resource Agreements – TUMRAs (new)	3%
Fees and charges (new)	1%
Part 5.4 Management action (new)	1%
Plans of management (new or amend existing)	1%
Policy (new or existing)	1%
Site-specific plans (new or update existing)	1%
Position statements (new or update existing)	0%

Conclusion

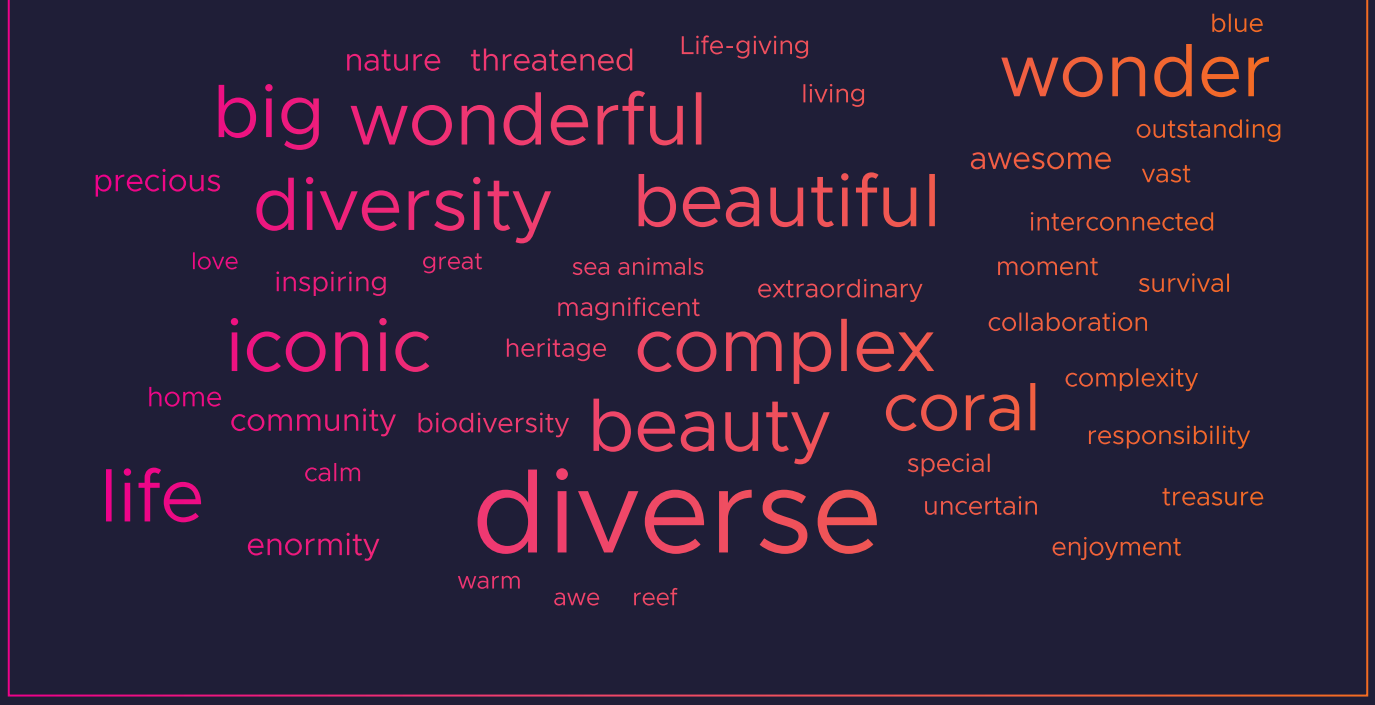
The 2025 Forum reaffirmed that safeguarding the Reef is a shared endeavour. No single organisation can protect the Reef alone; its long-term resilience depends on strong relationships and coordinated action across Traditional Owners, industry, science, government, communities and Reef users. Over the course of the Forum, these partnerships were strengthened through constructive, deliberative dialogue that deepened collective understanding, including enhanced awareness of the Reef Authority's regulatory responsibilities and the tools at its disposal to manage and protect the Great Barrier Reef.

The insights gathered will inform future management actions, including the review of the Reef 2050 Plan and ongoing collaboration through the Reef Restoration and Adaptation Program. Discussions reinforced the importance of resilience-based management and the need to make transparent, evidence-driven decisions in the face of increasing climate pressure and inevitable trade-offs.

The Reef Authority thanks all participants for their time, expertise and engagement. The Forum highlighted both the scale of the task ahead and the strength that comes from working together. We look forward to continuing this partnership as we progress the shared goal of strengthening the Reef's resilience into the future.

Forum participants were asked to share a single word they felt best described the Great Barrier Reef:

What word best describes the Reef?



Appendices

Appendices are available in the digital version of this document only.

View all appendices

Appendix A	Full agenda
Appendix B	Pre and post survey report
Appendix C	Management Tool Cards Summarises the Reef Authority's suite of management options including each tool's purpose, implementation requirements, current application, and indicative timelines for implementation
Appendix D	Climate scenarios
Appendix E	Reef Forum Compendium • Placemat • Outlook Report Figure 9.3 • Reef Forum Great Barrier Reef threats – Participant poll results • Factsheet: Crown-of-thorns starfish • Factsheet: Reef stewardship • Factsheet: Responsible Reef practices factsheet • Factsheet: Reef Joint Field Management Program • Factsheet: Traditional Use of Marine Resources Agreements (TUMRA) • 20 years of zoning