Report from ICRI ad-hoc committee on resilience-based management

Thea Waters, Assistant Director World Heritage and International
Great Barrier Reef Marine Park Authority
The Reef Authority acknowledges the expertise, wisdom, and enduring connections that have informed the guardianship of the Reef for millennia. We pay our respects to the 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 for future generations.
BRIEF RECAP

- 34th ICRI GM (December 2019): formation and objectives
- 35th and 36th ICRI GMs (Feb/Dec 2021): Extensions and revised objectives
- ICRI Plan of Action 2021-2025 (May 2022) sets goals

Achievements

RBM Policy Brief (November 2021), Resilience Hub (ICRI website), comms, means of sharing experiences and resources

Key collaboration with restoration committee

Shaver et al (2022) A roadmap to integrating resilience into the practice of coral reef restoration (April 2022)
BRIEF RECAP

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Achievements to end 2021
Resilience Hub (ICRI website), RBM Policy Brief and animation, comms, means of sharing experiences and resources

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A Policy Brief for Decision Makers: Building Resilience into Coral Reef Conservation

**Why are coral reefs so important?**
Coral reefs are one of the most biologically rich and productive ecosystems on Earth, as well as being beautiful underwater environments that have intrinsic value. They support almost 25% of all marine life and provide coastal protection, wellbeing, cultural, social, and economic security for approximately 1 billion people. The value of goods and services provided by coral reefs is estimated at US $315 billion per year, including US $54 billion in tourism and recreation.

However, coral reefs are also among the most vulnerable ecosystems on the planet. Coral reefs are under intense pressure from human activities including land-based pollution from agricultural and urban areas, unsustainable exploitation of marine resources, destructive fishing practices, marine plastics and mining activities, and the impacts of climate change. Coral bleaching from impacts of climate change is a significant cause of coral reef degradation and for the loss of marine biodiversity.

Coral reefs around the world are rapidly deteriorating. As global average temperatures continue to rise, we are only seeing the tip of the iceberg.

**What is ecosystem resilience and why does it matter?**
Resilience refers to the capacity of a system to recover from disturbances and return to a healthy state.

**Resilience-based management**: RBM, identifies and prioritises management actions that build the capacity of coral reefs to recover and recover from severe impacts. Building coral reef resilience helps to maintain a healthy reef ecosystem, as well as supporting the well-being of communities.

RBM is forward-looking and cost-effective in the long run. It ensures reef managers and communities are better prepared and able to deal with environmental impacts. Taking RBM action now will help secure futures for our valuable coral reefs.

**Actions for decision-makers**

There is an urgent need to accelerate actions to support the resilience of coral reefs and coral reef-dependent communities globally. RBM builds on conventional management approaches – for example, establishing marine protected areas, integrating watershed and coastal zone management, and ensuring fisheries and other extractive uses are sustainable. However, RBM requires us to consider the whole system community, governance, ecosystem and anticipate future impacts in the context of climate change.

It is important to note that focusing on resilience alone is not enough. To secure a sustainable future for coral reefs and the people who depend on them, we need to:

- **Decrease global greenhouse gas emissions to limit the increase in global average temperature to 1.5°C.**
- **Fast-track actions to build resilience to minimise the ability of coral reefs to resist and recover from external impacts.**

RBM is most effective when applied within an adaptive management framework that involves experimentation, monitoring, evaluation, and subsequent refinement of management actions to better address impacts. Tracking the condition of coral reefs using ICRAF’s recommended indicators through the Global Coral Reef Monitoring Network enables progress against targets to be assessed and ensures empowering management actions are effective in the face of future changes. RBM must include participatory approaches, co-management regimes, and engagement with Indigenous Peoples and local communities to ensure effective and equitable management.

**Support sustainable livelihoods to reduce pressure on coral reef resources, such as herbivores.**

- **Partner with Indigenous peoples in coral reef planning, monitoring, management, and adaptation.**
- **Promote behaviour change to reduce human impacts on coral reefs to support resilience.**
- **Support local institutions, industries and community leaders to be reef champions and stewards.**
- **Protest ecosystem resilience through targeted compliance, education and stewardship actions.**

**Build political support for and strengthen the capacity of managers to implement RBM.**
Establish an adaptive management framework to evaluate and adjust actions as needed.

Integrate climate change forecasts and vulnerability assessments into plans and policies.

Strengthen legal and policy frameworks to reduce impacts and promote the sustainable use of coral reefs and their connected ecosystems and waterways.

Pursue mixed economy finance mechanisms to enable sustainable protection and restoration of coral reefs.

**Implement equitable area-based management (MPAs and OCEMs) to protect diversity of species and habitats, including cultural values.**

**Implement innovative approaches to reef rehabilitation and restoration (e.g., coral gardening and selective breeding of heat-resistant corals).**

**Understand climate vulnerability; assessments of key species, habitats and ecological processes.**

**Reduce local impacts from fishing, tourism and recreational activities.**
SINCE JULY 2022

• Discussions with members to understand needs and future directions

• Two principles for committee
  1. Implement the RBM Policy Brief
  2. Build on what is there already; don’t duplicate

• Ideas for deliverables:
  • Webinars
  • Consolidate and make resources accessible
  • High-level policy guidance (e.g. RBM and CBD Post-2020 Global Biodiversity Framework)
  • Case studies
CASE STUDIES

Case study A

Case study B

Case study C
FUTURE OPPORTUNITIES?

Government / manager perspective:
- Legislation, statutory authority
- Management objectives expressed through policy, strategy, planning
- Operational management activities

RBM theory perspective:
- Vulnerability or resilience assessments
- Identify suitable management interventions
FUTURE OPPORTUNITIES?

Government / manager perspective

Legislation, statutory authority
  ↓
MPA establishment
  ↓
Management objectives expressed through Policy and strategy
  ↓
Operational planning
  ↓
Operational management activities
  ↓
Assessing management effectiveness
FUTURE OPPORTUNITIES?

Government / manager perspective

- Resilience-based laws
- MPA design optimizes resilience objectives
- Resilience-based policy and strategy
- Decision support (where, when, what)
- Resilience-based evaluation

Legislation, statutory authority
MPA establishment
Management objectives expressed through Policy and strategy
Operational planning
Operational management activities
Assessing management effectiveness

How can we better integrate resilience thinking into this perspective?
(As opposed to ‘implement RBM’)
**MOST IMPORTANTLY:**

**THANK YOU** to members for all your efforts

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<th>Member (alphabetical order)</th>
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THANK YOU

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