

Resilience-Based Management Case Studies Update

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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.



Nautilus Shell Artwork © 2023 by Laurence Gibson, Yalanji Arts, Mossman Gorge

KEY OUTPUT: RBM POLICY BRIEF

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



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

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 seascapes that have intrinsic value. They support at least 25 per cent of all marine life1 and provide coastal protection, wellbeing, cultural value, food and economic security for approximately 1 billion people². The value of goods and services provided by cora reefs is estimated at (US) \$2.7 trillion per year3, including (US) \$36 billion² in coral reef tourism

NO PERSON

However, coral reefs are also amongst 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 more. The cumulative impact of these pressures is compounded by human-induced climate change.

Coral reefs around the world are rapidly deteriorating. As global average temperatures continue to rise, reefs will continue to degrade and this will have significant impacts on the communities that depend on them. It is estimated that 70-90 per cent of the world's coral reefs could disappear by mid-century if no action is taken4. The next decade is critical if we are to secure their future. We must urgently reduce global greenhouse gas emissions to limit the increase in global average temperature to 1.5°C and ideally less to minimise the loss of coral reef habitats4. Meanwhile, fasttracking management actions to build reef resilience will help buy time for reefs to cope with the changing climate.

With the increased awareness of the vulnerability of coral reefs and the vital role that they play in supporting nature and people, there is an urgent need to build coral reef resilience into marine conservation efforts globally, including in global policy frameworks The purpose of this briefing is to support decision makers to prioritize actions that build reef resilience and deliver on global biodiversity and sustainability commitments.

Con States

Building the resilience of coral reefs delivers on global biodiversity and sustainability targets, such as the UN Sustainable Development Goals and the proposed CBD Global Biodiversity Framework.

What is ecosystem resilience and why does it matter?

Resilience refers to the capacity of a system to resist and recover from impacts and return to a healthy state.

'Resilience-based management', (RBM), identifies and prioritises management actions that build the capacity of coral reefs to withstand and recover from external disturbances. Building coral reef resilience helps to maintain a healthy reef ecosystem, as well as supporting the well-being of communities5.

RBM is forward-looking and cost-effective in the long run. It empowers reef managers and communities to address current and future threats. Taking RBM action now will help secure a future 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 Support sustainable livelihoods (community, governance, ecosystem) and to reduce pressure on coral anticipate future impacts in the context of reef resources, such as climate change. herbivores.

Partner with Indigenous peoples

in coral reef planning, monitoring,

management, and adaptation.

F

climate refugia.

Implement 'ridge-to

reef' strategies for

pollution management,

erosion control and

flood protection.

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.

Protect ecosystem resilience

through targeted compliance.

education and stewardship

actions.

It is important to note that focussing 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; and
- Fast-track actions . to build resilience to maximise 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 ICRI's recommended indicators7 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 reef management.

Governments, scientists, industries and communities must come together to take action on climate change, reduce impacts and build coral reef health and resilience.

Figure 2: Proactive measures to strengthen governance, reduce pressures and help the reef and community bounce back6

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 watersheds.

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

Implement innovative Implement equitable approaches to reef area-based management (MPAs rehabilitation and restoration and OECMs') to protect diversity (e.g., coral gardening and of species and habitats, including selective breeding of heat-resistant corals).

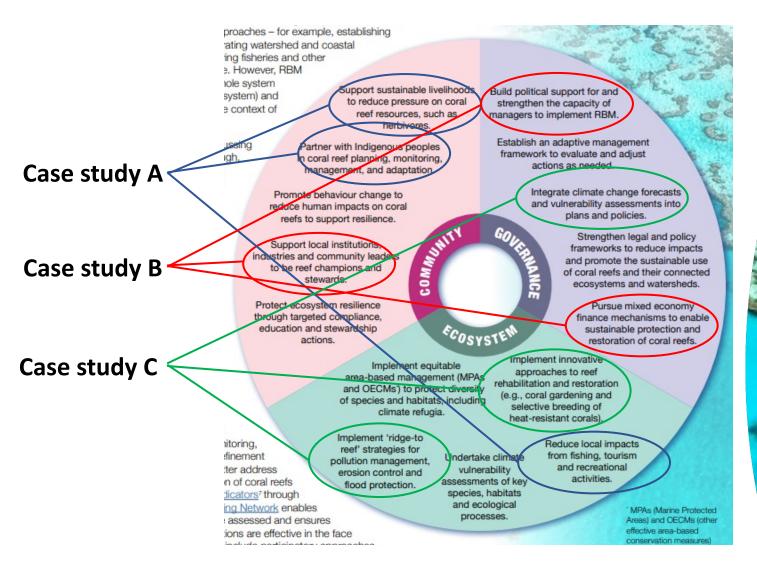
*COSYSTER

processes.

Reduce local impacts from fishing, tourism Undertake climate and recreational vulnerability activities. assessments of key species, habitats and ecological

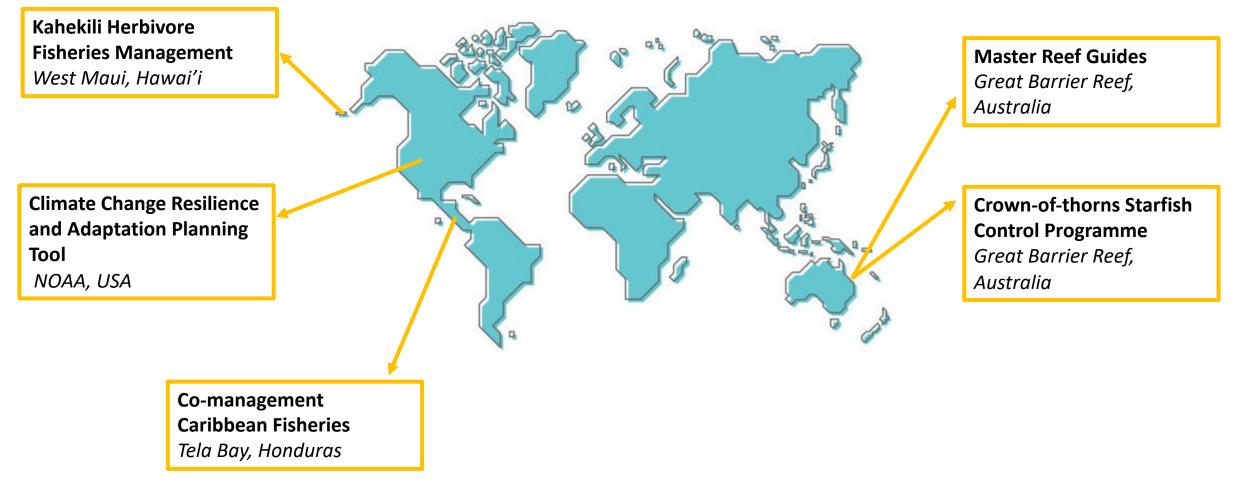
MPAs (Marine Protected Areas) and OECMs (other effective area-based conservation measures)

CASE STUDIES FOCUS





CASE STUDIES



Kahekili Herbivore Fisheries Management

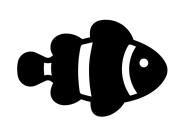
- Community
- Governance
- Ecosystem

Climate Change Resilience and Adaptation Planning Tool

- Governance
- Ecosystem

Co-management of Caribbean Fisheries

- Community
- Governance
- Ecosystem





Master Reef Guides

• Community

Crown-of-thorns Starfish Control Programme

- Community
- Governance
- Ecosystem



Case Study 6?

- Community
- Governance
- Ecosystem



THANK YOU

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