

There is a growing conflict in the way Aotearoa New Zealand uses, protects and manages its marine environment. The current marine management regime is fragmented, complex, and does not adequately provide for the mātauranga Māori and Treaty of Waitangi/Te Tiriti o Waitangi relationship. With the cumulative effects of climate change, and marine and land-based activities continuing to intensify, the health of our seas is declining. **We urgently need to move to an ecosystem-based management (EBM) approach that supports a ‘blue economy’ and is specifically tailored to the context and needs of New Zealand, in order to protect and manage use of the marine environment in a holistic, integrated and inclusive way.**

## How do we achieve it?

- Develop a **shared vision** and engage in activities that will improve the health of our oceans
- Take a **ki uta ki tai / mountains-to-seas approach** and develop outcomes and targets for the ecosystem
- Acknowledge and provide for the **Treaty of Waitangi relationship** to achieve enduring and impactful outcomes
- **Identify, assess and manage cumulative effects** at a strategic level instead of project by project
- Take account of **risk and uncertainty** in our decision-making
- Take a **place-based, opportunities-focused blue economy approach** to decision-making
- Implement a management system that is dynamic and **able to adapt and respond quickly to change**

## What is the Sustainable Seas National Science Challenge doing?

Our research is developing knowledge and tools that can be applied by decision-makers and marine managers under the current marine management system, as well as a framework for how we might implement an EBM approach in New Zealand.

We are working with partners in **Hawkes Bay, Marlborough, Hauraki Gulf** and **Waikato** to undertake **real-world trials of the EBM knowledge and tools** that our research is generating. And we will continue to work alongside agencies to ensure that research is policy relevant and can be used to inform key work programmes, eg resource management system reform, marine protected areas, ecosystem-based fisheries management and environmental reporting. We are also investigating opportunities for **marine activities that create economic value and contribute positively to social, cultural and ecological well-being.**

IN 2021, WE WILL UNDERSTAND:	IN 2022, WE WILL HAVE:	IN 2023, WE WILL HAVE:	POST-2024 LONG TERM OUTCOMES
<b>Investigating people’s perception of risk and uncertainty, and the best ways to communicate them</b>			<p><b>Improved health of our seas</b></p> <hr/> <p><b>Enhanced marine blue economy</b></p> <hr/> <p><b>Increased involvement of tikanga and mātauranga Māori</b></p> <hr/> <p><b>Improved decision-making using an EBM approach</b></p>
<ul style="list-style-type: none"> <li>• How different stakeholders, Māori and sectors regard risk and uncertainty and the limitations of different risk assessment methods</li> <li>• The type of risk assessment needed for EBM</li> </ul>	<ul style="list-style-type: none"> <li>• Mātauranga Māori and western science definitions of risk and uncertainty</li> <li>• Key measures that link risk and uncertainty to investment in restorative economies</li> </ul>	<ul style="list-style-type: none"> <li>• A model and guidelines for integrating risk and uncertainty into decision-making</li> </ul>	
<b>Assessing the effects of human activities and natural events on marine ecosystems, and the potential for recovery</b>			
<ul style="list-style-type: none"> <li>• Mātauranga Māori perceptions of cumulative effects to support kaitiakitanga</li> <li>• The opportunities for blue economy developments in key sectors</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance on the interactions between stressors and responses</li> <li>• Local and national scale SeaSketch tool for marine reserve planning</li> <li>• Guidance on undertaking cumulative effects assessments</li> <li>• Toolkits and frameworks for encouraging a blue economy (ecotourism, restorative and regenerative economies)</li> </ul>	<ul style="list-style-type: none"> <li>• A decision-making framework for assessing cumulative effects that can take account of varying levels of uncertainty and data limitations</li> <li>• Guidance for preventing degradation and enhancing seafloor recovery rates</li> <li>• Tools for assessing relative success of management actions</li> <li>• Mātauranga Māori and western science definitions of degradation and recovery</li> <li>• Clear pathways for blue economy development in key sectors and locations</li> </ul>	
<b>Development of EBM that is founded on and informed by mātauranga and tikanga Māori</b>			
<ul style="list-style-type: none"> <li>• How to apply mātauranga Māori alongside western science</li> </ul>	<ul style="list-style-type: none"> <li>• Insights from existing and emerging partnerships and EBM case studies</li> <li>• Tools and resources to support iwi, hapū and Māori organisation involvement in decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Tools founded on mātauranga and tikanga Māori for application in marine management.</li> <li>• Advice and guidance on creating more enabling opportunities for iwi and hapū management.</li> <li>• Frameworks for indigenising the blue economy</li> </ul>	
<b>Tailoring practice, policy, regulation and legislation to support EBM</b>			
<ul style="list-style-type: none"> <li>• How EBM is being implemented internationally</li> <li>• How EBM and kaitiakitanga practices can complement each other</li> <li>• How EBM approaches can be tailored to accommodate blue economy opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Information about the barriers and opportunities to implement practice, policy and legislative change</li> <li>• A toolkit for developing collaborative EBM approaches that draw on mātauranga and scientific knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• A pathway identified for implementing EBM</li> <li>• A transition plan for implementing EBM in New Zealand that ensures a just transition, a successful blue economy, and fairly distributes costs and benefits</li> <li>• A marine management regime that can practically give effect to the Treaty of Waitangi</li> </ul>	

