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# **Guiding Coastal and Marine Resource Management:**

## The Coastal Special Interest Group Strategic Priorities

2025-2028



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# Coastal Special Interest Group

The Coastal Special Interest Group (Coastal SIG) is a sub-group of the regional government special interest group network that brings together regional and unitary councils to facilitate the sharing of expertise and knowledge. Together regional and unitary councils manage 15,000 km of coastline and approximately 168,000 km<sup>2</sup> of Territorial Sea including coastal environment that encompasses the coastal marine area and the land-sea interface.

Managing the effects of activities, use, and development on coastal systems and resources is a costly task for councils. The Coastal SIG plays an important role in providing a robust and consistent knowledge base for the benefit of the environment and communities.

## Our purpose

To enhance regional coastal policy, planning and resource management across Aotearoa New Zealand through a collaborative approach to research, data sharing, upskilling and communication for improved decision-making.

## Our people and values

We are coastal planners, scientists, and knowledge experts bringing together our collective expertise in issues, biophysical processes, and policy frameworks to address shared regional coastal challenges. As a group we provide the benefit of efficiency through collaborative effort, consistency of workings, shared development of methodology and data sharing.

## Purpose of this strategy

The purpose of this strategy is to identify and facilitate alignment of research and monitoring needs across the regional sector and with central government. It will inform science providers in key areas where advancement is necessary. Progress will enable and enhance the sustainable management of the coastal environment.

## Our aims:

1. Provide a unified and effective research approach for shared issues.
2. Provide information for effective knowledge-based decision-making.
3. Assist in closing the feedback loop in the policy cycle through fit-for-purpose monitoring and the transfer of knowledge and insights into policy review.
4. Aid in fulfilling statutory obligations including the Resource Management Act 1991 (RMA), National Policy Statement for Freshwater Management (NPSFM), and the New Zealand Coastal Policy Statement 2010 (NZCPS).
5. Inform and influence decision-making on research and investments.
6. Promote a collaborative approach to coastal management.
7. Develop tools and processes to enable effective application of ecosystem-based management in Aotearoa New Zealand.



## Our ways of working

The complexity of legislation, and variety of agents and activities in the coastal environment necessitates an integrated approach to coastal management:

### 🌿 **Ki uta ki tai**

The coast is the receiving environment for upstream activities. This requires our work to take a system approach from the catchment to the sea, including participating in terrestrial and freshwater research programmes that influence coastal systems.

### 💧 **Environmental resilience**

Healthy and resilient environmental systems are required to achieve wider social, cultural, and economic goals. Past environmental damage and future climate challenges necessitates a focus not just on protection but also restoration and recovery.

### 💧 **Collaboration with external agencies**

Coastal SIG works with central government agencies, research centres and communities with shared and cross-boundary interests in the coastal environment. We aim to align the needs of regional and unitary councils with external agencies to achieve common objectives.

## **Consistency of approach**

We apply rigour in the development of information and knowledge and a nationally consistent approach to research, monitoring, and communication.

## **Policy – Science Interface**

Coastal SIG understands the importance of science in informing, monitoring and providing feedback into the policy cycle to generate better decision-making and increase public confidence in council resource management.

## **Science Communication**

Coastal SIG produces fit-for-purpose outputs to communicate results to policy writers, decision-makers and the community.

## **Mātauranga Māori**

Coastal SIG understands and values the multiple knowledge systems and ways of understanding the world, including mātauranga Māori. Co-producing knowledge in partnership with iwi/hapū/whanau will be essential to achieving our strategy outcomes and is a cross-cutting priority for implementation.

## **Funding**

Coastal SIG, regional and unitary councils partner with research providers to support research proposal development and provide ‘in-kind’ support. This ranges from supporting proposals to generate useful research or outputs, through to embedding council scientists as full members of research teams responsible for the project delivery.

Regional and unitary councils can access funding through the Envirolink scheme which is administered by the Ministry of Business, Innovation, and Employment (MBIE). The scheme funds research organisations to provide scientific advice and support for regional councils. It also funds larger projects led by regional councils in partnership with providers to develop or adapt new and/or existing resource management tools. Other SIG strategies can be found on the Envirolink webpage: <https://www.envirolink.govt.nz/research-strategy/>.



# Strategic Outcomes





# Climate change and resilience

Coastal species, habitats and ecosystems are resilient to the impacts of climate change

The coastal and marine environment is physically dynamic, and conditions are inherently variable in response to topography, weather and climate-related processes. Council policy, planning and resource management efforts must plan for a changing ocean and climate, which requires knowledge around the nature and intensity of changes that will occur over space and time and identify the opportunities for mitigation and adaptation.

Ocean acidification and climate change-related issues may vary regionally due to the compounding effects of land use, coastal development, land subsidence, run-off and the water chemistry in coastal water bodies. An integrated consideration of effects on biodiversity is required when exploring climate change mitigation and adaptation, in order to minimise or avoid adverse effects on biodiversity.





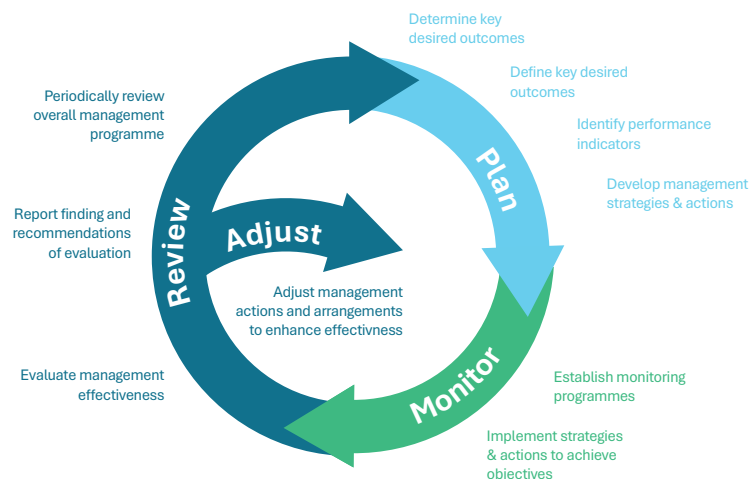
## Monitoring, research, and reporting

**Monitoring and research of coastal ecosystems is purposeful and directly informing policy development and decision-making**

Monitoring, research, and reporting are important for measuring how well councils are achieving the RMA's purpose through our plans, policies and operations, and in providing accountability to our communities. The 'plan - do - monitor - review' cycle involves setting targets or objectives, monitoring, analysing and interpreting data, then reporting findings, and reviewing and revising plans and actions accordingly to respond to new issues identified.

The variety of environments and pressures is large and complex, and monitoring must be prioritised and streamlined for maximum insights within constrained resources. We can improve monitoring through collaborative and consistent effort, by applying new approaches and technologies resulting from pure and applied research. We need to make more effective use of the data we have through analyses and modelling and filling strategic knowledge gaps that help with interpreting and communicating what is changing, why, and how this relates to regional resource management.

### The Adaptive Management Cycle



The challenges of climate change, increasing population growth and changing national direction continue to place pressure on existing monitoring networks and introduces new requirements that need to be met without compromising the robustness of existing monitoring.

To effectively inform decision-making, monitoring information must be visible, accessible and understandable for a variety of purposes and users. There is value in national consistency, while recognising regional needs. This requires systems that support sharing and communication of large and complex data sets.



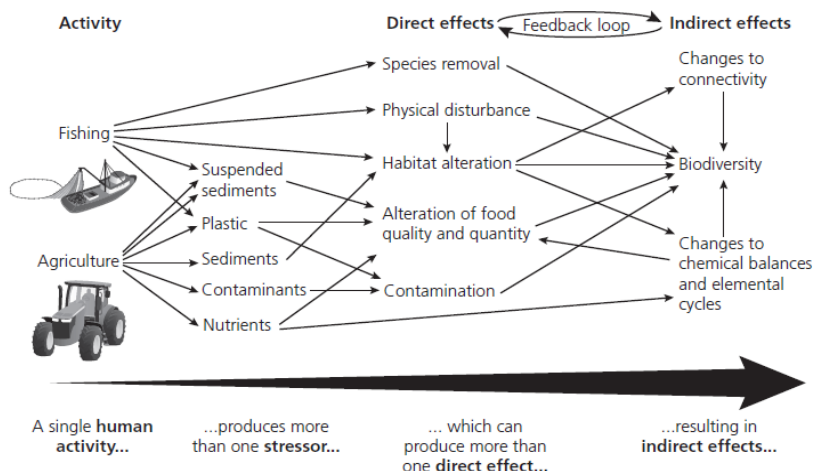
# The response of coastal ecosystems to stressors

We have effective policies and tools to manage effects of multiple stressors on coastal ecosystems

The management of coastal ecosystems and resources requires an understanding of how the coastal environment and associated organisms and habitats respond to various and cumulative stressors. The impacts of land and marine-based activities compound at the coast resulting in stressor interactions, cumulative effects and feedback loops. Understanding these impacts and stressors on the marine environment is vital to ensuring that the life-supporting capacity is protected and enhanced.

Progress towards this is complicated by the fact that many activities and their effects, operate on different spatial and temporal scales, and that activities have historically been managed in isolation. To be successful ecosystem-based management will require fundamental research, tool development, and delivery of management relevant applications.

There is a gap in the understanding of how coastal ecosystems respond to multiple stressors and the ability to develop effective and relevant policies that manage multiple interacting activities overlapping in their environmental impacts. To implement these types of policies, it will be necessary to have appropriate tools that support more effective decision-making.



Single activities can produce more than one stressor and result in a range of cumulative effects. Adapted from Thrush et al. 2021.



# Coastal Special Interest Group Strategic Priorities

Below we outline the strategic priorities (based on our three strategic outcomes) to achieve our purpose,

**“To deliver robust science and a nationally consistent approach to monitoring and reporting that supports and enhances the sustainable management of New Zealand’s coastal environment.”**

We envision these priorities will help drive specific projects to help achieve our strategic outcomes.

# To deliver robust science and a nationally consistent approach to monitoring and reporting that enhances and supports the sustainable management of New Zealand's coastal environment

## Principles: Integration - Collaboration - Partnership

### Climate change and resilience

**Coastal species, habitats and ecosystems are resilient to the impacts of climate change**

- Identify and include climate change indicators in monitoring programmes.
- Identify vulnerability of indigenous ecosystems and habitats to climate change impacts.
- Understand the impact of increased rainfall and extreme weather events on water quality.
- Model potential range shifts of ecologically important species.
- Produce regional-scale predictions of specific changes or responses.
- Understand how climate change may impact the spread of marine pest plants and animals, including potential changes to toxicity of pest species.
- Understand and develop restoration ecology principles/guidelines for increased system resilience to climate change.
- Identify opportunities for nature based solutions and understand determinants of success.

### Monitoring, research, and reporting

**Monitoring of coastal ecosystems is purposeful and directly informing policy development and decision-making**


- Work with different knowledge systems to improve environmental outcomes.
- Develop indicators, data sharing systems and visualization tools for improved communication.
- Develop novel technologies for cost-effective environmental monitoring.
- Understand and monitor the adaptive capacity of ecosystems.
- Develop signals and triggers for dynamic adaptive path planning.
- Use integrated approaches to monitoring and modelling to understand land-based impacts.
- Develop guidance for trend analysis for different types of data and integrated reporting.
- Develop methodologies to identify, quantify and monitor changes in ecosystem services.
- Develop tools for working with, sharing and communicating continuous data, big data and geospatial data.
- Develop consistent reporting frameworks for national reporting supported by regional monitoring.

### The response of coastal ecosystems to stressors

**We have effective policies and tools to manage effects of multiple stressors on coastal ecosystems**

- Identify indicators and determine the response of ecosystem attributes (e.g. biodiversity, biological and physical processes, water quality) to stressors (individual and cumulative).
- Develop environmental thresholds and establish appropriate and relevant limits and standards for stressors impacting on the CMA, including those derived from land-based activities. Consider the complexity of receiving environments.
- Develop further understanding of cumulative effects and tipping points that change how coastal systems are structured and function.
- Develop cumulative effects tools to assist effective policy development.
- Develop principles for policy that facilitate decision-making where there is limited information.
- Develop knowledge, tools, guidelines and strategies for effective restoration.

**Enablers:** shared databases and integrated data platforms, continued development of coastal modules for LAWA



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