

# Key Drivers for RS&T

Research strategy needs to respond to key drivers, and these change over time. The Covid-19 disease outbreak, which became a major disruptor in 2020, is the most recent driver in a rapidly changing world. In addition, since the last revision of the Regional Council RS&T Strategy in mid 2016 there has been a new government and a number of new policies implemented.

The range of issues that councils are expected to tackle is expanding into new fields, while at the same time councils are under ever-increasing pressure to deliver effective and efficient interventions that can be justified to a critical and diverse community and delivered at minimum cost.

## Summary of Key Drivers

- Covid-19 pandemic and associated global recession impact on environmental and science priorities.
- Continually increasing public focus on the state of the environment, particularly water quality.
- Additional national policy statements that will require environmental standards and application of science.
- An increasingly stronger focus on freshwater management and increasing policy-based and societal expectations of councils.
- Need for land-use transformation, to uses that are more sustainable in the long term as well as better water quality outcomes.
- A greater focus on "well-being" vs economic growth alone.
- Challenges to connect all the land-use policies and transition to a lower emissions economy.
- A greater focus on environmental health (the effects of the environment on human health).
- Increasing risk – from natural hazards, climate change, biosecurity, and social pressures.
- Increasing recognition of the social, cultural and economic implications and consequences of our scientific research and increasing encapsulation of Mātauranga Māori in science.
- The need for ever increasing engagement with communities in decision-making.



## Strategic goals

The goals for the RS&T Strategy remain largely as before:



### Goal 1: To provide timely, authoritative and respected direction to science research and funding

This is mainly about having input to Government science direction, strategic priorities, and funding allocation. It is also about partnering with research providers in RS&T. This goal recognises the key role that Regional and Unitary Councils play in delivering environmental outcomes.



### Goal 2: To catalyse and enhance science delivery

This goal focuses on ensuring that Regional and Unitary Councils have the capability and capacity to deliver good science, and also that there is communication with research providers and especially universities as to future skill requirements and with Government on maintaining and enhancing key capability within the science sector generally.



### Goal 3: To facilitate science uptake

This goal focuses on ensuring that science outputs are useful to Regional and Unitary Councils and that research results are applied in a timely manner. Ideally the process starts with the initiation of a research project and extends throughout the life of the project.



### Goal 4: To ensure an ongoing RS&T strategy process

This goal is about providing processes for governance and keeping the strategy alive and regularly updated.

# Research for Resource Management

## Regional Council Research, Science & Technology Strategy 2020

This document presents the strategy at a glance. To read the full strategy, go to: <http://www.envirolink.govt.nz/Research-Strategy/>



# Introduction

**New Zealand requires effective policy to be underpinned by excellent and relevant environmental research and this in turn requires strategic thinking to identify needs well in advance of the emergence of big problems and policy response requirements.**

This is the fourth version of the Regional Councils' Research, Science & Technology strategy since the first one was compiled in 2009. It is timely to develop and implement a new Regional Council RS&T Strategy as there are several new drivers for science and most of the regional sector's Special Interest Groups (SIGs, which are subject and function-based technical and policy groupings) have developed strategies and research priorities of their own that need to be communicated and implemented in a coordinated fashion.

As for previous Regional Council RS&T Strategies, there will be a process to review as new drivers emerge and to implement changes in direction through the Annual Operating Plan.

## Vision

The Regional Council vision is to be effectively involved in the identification, development, communication and implementation of research, science and technology that will serve as a foundation for Regional and Unitary Councils' actions for the wider benefit of New Zealanders.

'Effective involvement' covers collaboration and coordination between councils and with research providers and funders; credible and timely engagement; clarity around current and future research priorities; meaningful partnerships; transfer and uptake of research and knowledge; and promoting the availability of RS&T capability and capacity.

(Science Advisory Group, on behalf of Regional and Unitary Councils)

# Strategic Priorities

**This Regional Councils' Research Science & Technology Strategy has taken a top-down and a bottom-up approach to determine key research priorities for the next 5 to 10 years.**

This has identified, in no particular order, 10 key priorities:

## 1 Priority 1: Influencing government science direction

This priority recognises there is an important need to ensure that science investment is matching policy needs and responding to the country's policy drivers. The need is not only to influence investment but also the science view around policy need and recognising that needs change. It is important that we keep an eye on the future to ensure our science responds early to inevitable change. Central Government science leadership is required particularly in the complex area of land use and water quality but other priority areas as well.

## 2 Priority 2: Incorporation of mātauranga Māori

The bridging of mātauranga Māori (Māori knowledge) alongside science is seen as a priority to answer complex questions, find holistic solutions, and achieve good environmental outcomes for Regional Councils. Drawing on and understanding mātauranga Māori alongside science creates an important Treaty perspective (to date often lacking) to inform effective regional council planning and policy.

## 3 Priority 3: Better science utilisation

An ongoing priority for Regional Councils is to better access science results from New Zealand and also international research providers and to incorporate the findings from relevant research projects into decision-support tools. Improving the utilisation and extracting more value from existing science and optimising the uptake of new science is seen as a priority opportunity for Councils.

## 4 Priority 4: Enhancing policy effectiveness

There is a need for better approaches for assessing the effectiveness and efficiencies of policy, including a tool that can model the likely impact of policy options in terms of effectiveness. The opportunity is to undertake research into the challenging area of assessing the efficacy of different policy approaches. Such research would need to be integrated with State of the Environment Monitoring and Long-term Plan monitoring.

## 5 Priority 5: Integrated land and freshwater science for enhanced resource management

The integrated management of land and water to provide for enhanced sustainable production, meet the requirements of adjacent and downstream ecosystems, and to support the values of iwi and wider community is one of the greatest challenges facing Regional Councils. There are a significant number of research needs within this priority area.

## 6 Priority 6: Improving biosecurity and biodiversity

The issues and threats posed by current biosecurity challenges and potential new introductions have significant consequences for our productive land uses and native biodiversity.

## 7 Priority 7: Better hazard risk management

The regional hazard risk management role requires councils to engage with potential affected communities on a range of natural hazards and develop risk reduction/mitigation options. There is currently a lack of science and research to support these processes which can result in difficulty in defining/modelling risk, impacts of some mitigation options not being fully understood, and inconsistent approaches being applied across hazards.

## 8 Priority 8: Improving coastal management

The Coastal Marine Area (CMA) includes a range of diverse and complex ecosystems, many of which are under pressure from upstream impacts and resource use demands. The CMA is a priority area for research to ensure a better understand the responses to these pressures and to create sustainable management approaches.

## 9 Priority 9: Cross-cutting themes: Adaptation and mitigation of climate change and improving data management

Climate change and data management are priority issues that cut across all science research areas.

Our changing climate is having a significant impact on our environment across all domains: terrestrial, freshwater, and marine. We need to better predict how climate will change in order to prepare to mitigate and adapt to the impacts of climate change on the natural environment.

## 10 Priority 10: Retaining and building science capability and capacity

The Resource Management Amendment Act came into force 1 July 2020 and means that councils have a whole new range of Climate Change/Green House Gas emission matters to consider in plan-making and consent decision-making. There needs to be greater science capability to deal with these matters, either in-house or external.