SCANZ
SCIENCE COMMUNICATORS
ASSOCIATION OF NEW ZEALAND

Briefing to the Rt Hon Judith Collins

Minister of Science, Innovation and Technology

The effectiveness of scientific research lies in **meaningful translation that leads to impact**—whether it be into policy changes, stakeholder action, public engagement, or innovation. We call this mission-led science communication.

Mission-led science communication goes beyond explaining research. It aims to help people respond to science with meaningful action.

Mission-led science communication is a vital tool for **promoting scientific progress to create impact across society**. The end of the National Science Challenges creates an opportunity to apply the lessons learned to other mission-led science funds. Including science communication expertise **throughout the life of strategically important research programmes** is a key component of ensuring uptake and implementation to deliver national impact for science, industry and society.

Mission-led science communication includes:
Knowledge translation. Research synthesis. Building bridges between research and implementation.

Outcomes include:
Adoption of new processes and innovation. Reduced duplication of research. Evidence-based policy. Practical application of research. Increased revenue and productivity.

Impact:
New Zealanders are better informed when making decisions and can access effective and productive innovations and solutions to problems.

Mission-led science communication should be supported because:

It **increases the influence, relevance, accessibility, trust in, and use of scientific research** for many different science users. New Zealand needs mission-led science communication to:

1. Present research to local and central government in a way that **contributes to clear, evidence-based policy-making and implementation**. This includes the synthesis of diverse research.
2. Translate complex or technical findings, methods and frameworks into **language and formats useful** to industry, business, iwi, hapū, and community stakeholder groups.
3. Make science more accessible for inclusion in **real-world solutions** that address societal challenges, **supporting return** on research investment and **connecting researchers with the innovation ecosystem**.
4. Generate **public interest, support and enthusiasm** for scientific advancements, encouraging a shift in mindset and subsequent implementation.
5. Help stakeholders who are not scientists to collaborate with researchers so the research and its findings are **fit for purpose** and induce less stakeholder fatigue.
6. Translate knowledge across disciplines and between multiple institutes, **increasing transparency, reducing replication of research and supporting meaningful collaboration**.

General communications staff (not attached to specific research projects) are budgeted as 'overhead' within institutes. They have many demands on their capacity and a responsibility to fulfil the needs of their organisation first. Often, they have no incentive to promote research that occurs across institutions and their performance is assessed against organisational priorities (e.g. attracting students or building their institute's profile) rather than their contribution to research outcomes and impact.

Three key audiences benefit:

1. **Policymakers** require information from a wide range of disciplines and organisations and research programmes to be brought together so they can create actionable policy. At the same time, they are faced with more papers, information, research, and data than ever before. They also need to avoid funding research that is narrow, over-specialised, or repetitive due to a lack of transparent information about previously funded research.
2. **Researchers** need support in working with communities and businesses directly affected by their work. They also need help translating and sharing their work so their findings are put into effective, widespread practice.
3. **Decision makers** (e.g. in business and local government) need digestible scientific knowledge to make informed decisions that lead to progress towards their objectives. Without this they may be unsupported while facing a complex world with a raft of existential challenges.

Without mission-led science communication, we risk:

- Poor return on research investment as findings are not communicated and therefore not converted into meaningful impact.
- Inadequate communication about the mission's goals and benefits leading to insufficient co-funding and missed partnership opportunities.
- Decision-makers and communities missing opportunities to solve problems, meet targets and apply new knowledge because the required information and tools are inaccessible.
- Scientists struggling to keep stakeholders informed and engaged with current research, and missing opportunities for collaboration across organisations and business.
- A disconnect between the scientific community and those directly affected by the issue being researched, at best impeding the adoption of innovation or improved practices and at worst resulting in findings that never reach those who need them or that are not fit for purpose.
- The erosion of public trust in the scientific community due to overly technical, incomplete or misinterpreted communication of research findings.

Next step:

This briefing was written by members of the Science Communicators Association of New Zealand with input from National Science Challenge staff. We would like to request a meeting to discuss the opportunities. Please contact us to arrange a suitable time:

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- Annabel McAleer (on behalf of the National Science Challenges) *annabel.mcaleer@agresearch.co.nz*

Recommendation

Mission-led science communication is a vital tool for improving the impact of scientific research across society. Working with research teams from different science disciplines and organisations to translate complex research and connect it to multiple audiences requires the allocation of time and resources. **To be most effective, it needs to occur throughout the research** rather than just after it ends. This cannot be achieved within organisational 'overhead' budgets but must be separately **budgeted as an intrinsic part of strategically important research programmes**.

We recommend that the Strategic Science Investment Fund, Endeavour, and any future priority research funds **specify a requirement for, and allocate appropriate resource to, knowledge translation and mission-led communication in their funding criteria**.

Impact

Where mission-led science communication is funded within or alongside a research programme, greater impact is observed:

Lakes380 is the largest study of lakes in New Zealand's history. It developed an understanding of lake health now and back through time. The Lakes380 mission-led communication includes over 100 videos on YouTube, a lakes-specific outreach programme for children, a virtual reality interactive developed with iwi, and a lake-specific teaching resource. The Endeavour-funded programme received MBIE's highest rating of Gold Status for its research and impact and won the SCANZ Excellence in Science Communication Award for its stakeholder engagement.

NZ Landcare Trust set up the **Aotearoa Catchment Extension Project** to provide nationwide capability development for people working with and in catchment groups, with an initial intake of up to 150 people representing potential impact in 150 catchments. The online and in-person learning programme incorporates end-user-focused science communication materials from several Our Land and Water National Science Challenge research programmes, which are now being synthesised into a practical guidebook by NZ Landcare Trust. The partnership was built by the Our Land and Water engagement and communications team as a pathway to impact for National Science Challenge research.