Antarctic Science Platform

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New Zealand's Antarctic Science Platform

PHOTO CREDIT: @66NORTH, UNSPLASH.COM

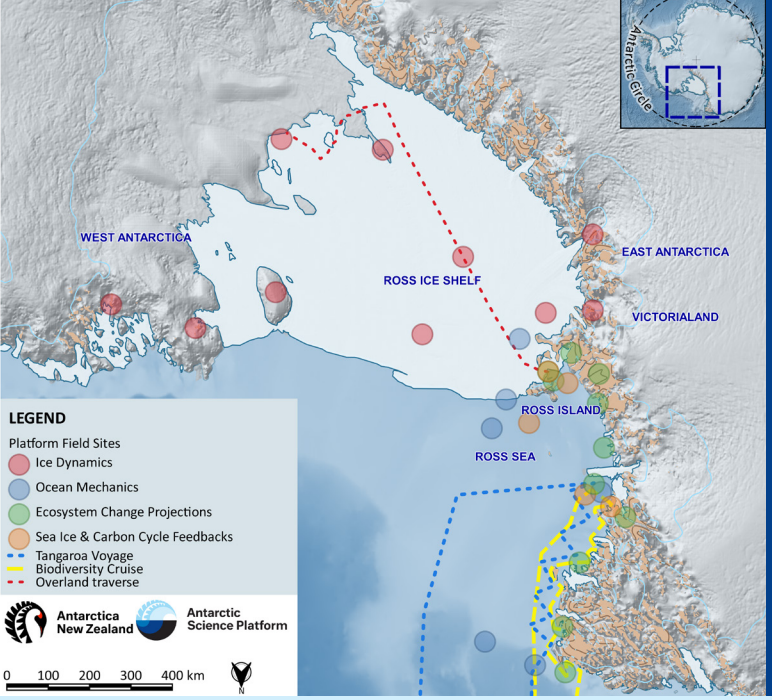
The Antarctic Science Platform is a major New Zealand Government-funded research project, supporting a range of focused physical and biological science, rigorously peer-reviewed by international experts.

The Platform investment recognises the urgency to understand Antarctica's impact on the global earth system, and how this might change in a warming world.

RESEARCH FOCUS

The Platform's portfolio of long-term and short-term projects have a focus on:

- Stability of the West Antarctic ice sheet and its impact on global sea levels
- Ross Sea Region ice, atmosphere and ocean processes in a warming world
- Vulnerability of Ross Sea Region ecosystems to environmental change



BY THE NUMBERS

$49 Million

7 years: 2018—2025

100+ Researchers

25 Early Career Researchers

30+ Graduate Students

10 Research Organisations

ANTARCTICA: A NEXUS OF GLOBAL CHANGE

The frozen continent is an integral part of the Earth's climate and ocean systems, and changes in the Antarctic environment are linked to the rest of the globe.

Antarctic ice melt will contribute significantly to future sea level rise and coastal flooding, directly impacting low-lying properties and communities. Already in Antarctica we are seeing climate-driven changes in sea ice extent, and increasing melt rates of glaciers and ice shelves. Changing environmental conditions, particularly temperature, meltwater production and sea ice cover, also threaten the habitats, abundance and diversity of Antarctica's unique flora and fauna, on land and at sea.

PLATFORM RESEARCH

Field work is undertaken in remote locations and challenging conditions: diving into -1.8°C waters to explore life under the sea ice, visiting remote mountain ranges to determine when the exposed rocks were last covered in ice, and voyaging into the most Southerly seas to understand ocean dynamics and marine ecosystems. Drilling into Antarctica's floating ice shelves will access the ocean cavity and marine sediments below, to decipher the unique record of how Antarctica changed when temperatures were warmer than today.

Building on New Zealand's long involvement in Antarctica, the Platform's research supports stewardship of the Ross Sea region (see map). Our field teams' efforts focus on sea ice dynamics, oceanography and ice shelves, and Antarctic biota – addressing questions that currently limit our ability to understand the consequences of environmental change.

INFORMING OUR FUTURE

Platform research will provide new data to transform our understanding of key processes, attribute change, and reduce uncertainty in future predictions of how the warmer world will unfold. Our transdisciplinary approach, linked through a dedicated modelling hub, will predict how the climate, oceans, ice sheets and biodiversity will change in future.

Antarctica is a key part of the Earth system. Research findings will support an evidence-based approach to policy and decision-making, strengthening New Zealand's involvement in the Antarctic Treaty System, enhancing environmental protection and supporting the effectiveness of the Ross Sea Marine Protected Area.

The challenges of understanding change in Antarctica offer career-defining opportunities for scientists. In accord with New Zealand's values, the Platform is committed to ensuring early career scientists have equal opportunities to participate in the Antarctic research enterprise.

Our ultimate impact will be in the enhanced protection of Antarctica's unique environments, and in improved projections of the implications of a changing climate for the world, to help build a more resilient society.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