

For immediate release

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\$11.5 million grant to help safeguard New Zealand's blue economy

A new research project spearheaded by MetService's oceanography division, MetOcean Solutions will shed new light on the performance of New Zealand's oceans to support the seafood sector.

The Moana Project was today awarded \$11.5 million over five years from the Government's Endeavour Fund.

MetService Chief Executive Officer Peter Lennox says the grant is an endorsement of the capability and expertise that exists within MetService, and the contribution the State-owned enterprise is continuing to make in advancing the knowledge of New Zealand industry and communities.

General Manager MetOcean Solutions Dr Brett Beamsley says there is a significant lack of knowledge about our marine environment despite the ocean providing vital social, cultural, economic and environmental benefits for New Zealanders.

"As a marine nation, New Zealand derives wealth and wellbeing from the ocean and yet, our oceans are very poorly understood.

"Our seafood sector alone is worth \$4.18b annually to New Zealand's economy and its resources are directly threatened by rising ocean temperatures and marine heatwaves.

"To safeguard these benefits for future generations we need to understand how our marine environment works so we can better manage our resources in a time of rapid ocean warming.

"This project will combine Māori knowledge, seafood sector data, cutting-edge ocean sensing, and advanced numerical modelling to provide a reliable ocean forecast system to support marine industries."

The proposal was led by MetOcean Solutions' Chief Scientist Professor Moninya Roughan who says: "The Tasman Sea is warming at one of the fastest rates on Earth, four times the global average, yet we currently have limited ability to comprehensively measure, monitor and predict the state of New Zealand's oceans.

"Our marine industries are operating in the dark but through the Moana Project, all that will change.

"This programme will create a new, dynamic and more integrated marine knowledge base - reducing uncertainty, maximising opportunity and preparing for future ocean changes."

The Moana Project is a cross-institutional programme involving all the oceanographic research organisations in New Zealand, collaborating with international experts and supported by a wide range of end-users in industry and government.

Professor Roughan says: "We are partnering with the seafood sector to develop a low-cost ocean sensor that will revolutionise ocean data collection. The sensors will be deployed throughout New Zealand's exclusive economic zone with support from the commercial fishing sector.

"Through a research partnership with the Whakatōhea Māori Trust Board, we expect the project to facilitate the exchange of oceanographic knowledge between Te Ao Māori and western science, and empower engagement in coastal management and policy fora."

Research organisations involved include MetOcean Solutions, the Cawthron Institute, NIWA, and Victoria University of Wellington, Auckland, Waikato, and Otago Universities. The team will collaborate with international experts from Australia (the University of New South Wales, and the United States).

In addition, the Moana Project has support from technology partners (including ZebraTech) and a wide range of ocean-information end-users, including the New Zealand Defence Technology Agency, the NZ Seafood sector (including Seafood NZ, Paua Industry Council, Deepwater Group, NZ Rock Lobster Industry Council, Terra Moana), the Ministry for Primary Industries and Regional Councils.

MetOcean Solutions was fully acquired by State-owned Enterprise MetService in September 2017.

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About the Moana Project

The seafood sector brings \$4.18B to New Zealand annually. The resources that the sector depends on are threatened by increasing ocean temperatures. Thermal stress is one of the greatest threats to aquaculture and above average ocean temperatures are also impacting deepwater fisheries (e.g. Hoki). New Zealand has recently experienced its worst marine heatwave on record, yet nothing about these events is known.

This project will vastly improve understanding of coastal ocean circulation, connectivity and marine heatwaves to provide information that will support sustainable growth of the seafood industry (Māori, fisheries and aquaculture). Project partners will apply the internet of things concept to develop a low-cost ocean temperature profiler that will be deployed by the fishing communities 'on all boats, at all times'. New Zealand's first open-access ocean forecast system will be delivered by developing new ocean circulation models using a combination of advanced numerics, modern genomics and data from our smart ocean sensors.

The project will investigate the drivers and impacts of marine heatwaves so that they can be predicted, and investigate ocean transport pathways and population connectivity of kaimoana species. This project will provide a step-change in the oceanic information available to the seafood sector and the broader community, accessible through the open-access user-friendly datasets and tools developed.

This information will help the New Zealand seafood sector retain its competitive edge in a rapidly changing ocean impacted by marine temperature extremes and shifting currents. Project partners will build bridges to ensure this new knowledge informs regional marine policy and management.

This project is anchored in mātauranga Māori through the partners' relationship with Whakatōhea, facilitating exchange of oceanographic knowledge between Te Ao Māori and western science and serve as an exemplar for other coastal iwi.

About MetService



MetService is New Zealand's National Meteorological Service. MetOcean Solutions was fully acquired by State-owned Enterprise MetService in September 2017.

As a State-Owned Enterprise its core purpose is to protect the safety of life and property in New Zealand while operating as a commercial business. MetService recently emerged as one of the highest rated agencies in Colmar Brunton's annual survey of reputation in the public sector. <http://www.colmarbrunton.co.nz/opinion-does-our-public-sector-measure-up/>