



HUNGA MATAI MOANA

Monday, 20 September 2010

Rt. Honourable Prime Minister Mr John Key
Private Bag
Parliament Buildings
Wellington 6160.
Dear Mr Key,

**MAPPING NEW ZEALAND'S MARINE ESTATE AND
THE STATUS OF NEW ZEALAND'S OCEAN SURVEY 20/20 PROGRAMME**

I am writing to you on behalf of the New Zealand Marine Sciences Society¹, a professional society of New Zealand's marine scientists, affiliated to the Royal Society of New Zealand. In March 2009 we wrote to the Minister for the Environment, the Hon Dr. Nick Smith, about our concerns over the future of Ocean Survey 20/20, a cabinet-approved, all-of-government programme to map our ocean real estate, administered by Land Information New Zealand (our letter was copied to the Ministers of Science and of Lands). We received a response about the project prioritised for the years 2008/09 and 2009/10 from the Minister of Lands in April 2009 acknowledging our concerns and identifying the project for 2009/10 and 2010/11. Our letter and the response we received are attached for your convenience. You will see, however, that the long term future of Ocean Survey 20/20 is not discussed, and our attendance at the recent Kermadec Symposium (Te Papa, August 30-31 2010) where no commitment was indicated, has raised the concern again.

During the plenary talk at the Kermadec Symposium on the first day, Dr. Ian Wright (formerly of NIWA, but now Professor of Geology at the University of South Hampton and Deputy Director of the National Oceanography Centre, UK) gave a presentation on the advances that high definition seabed mapping has enabled New Zealand to make regarding the discovery of submerged volcanoes, other seabed features, biodiversity and habitats and the discovery of active hydro-thermal vents and mineral potential along the Kermadec Arc. Thanks to this technology, our knowledge about the seabed in this area has gone from scant to well-informed in the space of 10 years.

Our letter to you is about the general issue of mapping New Zealand's undersea terrain, not the Kermadec Arc as such. Hon. Wayne Mapp, Minister of Science was present for most of Dr Wright's talk, but left before we could follow up with him and Dr. Wright (who was instrumental in helping OS20/20 to get off the ground) on the broader issue of future mapping New Zealand's marine estate.

¹ Letter approved for release by the NZ Marine Sciences Society Council, 20 September 2010

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To date there have been four official OS20/20 surveys each with slightly different objectives:

- Mapping the continental shelf edge in the eastern Ross Sea (Seismic/Multibeam/2006)
- Mapping Chatham-Challenger seabed habitats (Biodiversity/Multibeam 2006-2007)
- International Polar Year (IPY) Census of Antarctic Marine Life survey to the Ross Sea (Biodiversity/Multibeam 2008)
- Bay of Islands coastal survey (Coastal Management/Biodiversity/Multibeam 2009-10).

There have been several other projects conducted under the umbrella of OS20/20 (e.g. seamount biodiversity 2009; the joint Australia-New Zealand whale survey in Antarctica 2010, an investigation of orange-roughy behaviour in spawning plumes 2010). We would like you to note that while these additional projects may be worthy of merit, they have done little to further the main objective of mapping New Zealand's marine estate. We also would like you to note that it is the funding structure of the OS20/20 programme, not the lack of priority regarding mapping the seabed, that that has resulted in this situation. While all marine sectors agree on the need for mapping, this large and essential programme remains under-funded, and worse, without a champion for its future. The situation leads to frustration on a broad-scale as scientists and marine resource managers continue to try and work across the sector, only to be informed by Treasury that the all-of-government approach does not fit with current funding models.

The National Government has demonstrated that where it wishes to exercise flexibility, it can. Perhaps you will consider such flexibility for the OS20/20 programme before we allow it to fall away, thereby wasting a significant amount of investment in capability, infrastructure and commitment. The coming financial year, 2011-12, is the final year of vessel funding towards the OS20/20 programme. To our knowledge, there has been no public discussion or discussion across the marine sector of whether or not this programme will be continued in the future.

As a body of marine scientists with a professional interest in the strategic directions of marine research for NZ Inc. we find this situation unacceptable. We recognise that marine research, especially when a vessel is required, is expensive. We also recognise that where sensible synergies that lead to cost savings can be made to work, such an approach should be applauded. The OS20/20 Programme has been exactly this sort of model, with synergies across government, research providers abounding.

The New Zealand Marine Sciences Society would like to know if this programme is to continue as it was intended, with sufficient funding, or is it going to be allowed to fail with its critical task largely unfinished? Millions of dollars have been spent in developing the logistics, the capability and capacity to conduct OS20/20, aside from the investment and the commitment by scientists to survey design and vessel planning. Mapping our EEZ is not a trivial task and requires the expertise of hydrographers, geologists, biologists, oceanographers and other professional disciplines. Mapping of 415 million ha of seabed requires a long-term commitment and it cannot and should not be done on a shoe string.

We understand that these are hard financial times across the globe and in New Zealand. However, we put it to you that the marine environment is New Zealand's last frontier. It is estimated that 63% of the ecosystem services, which enable us to live on planet Earth, come from the sea. In the March 2002 year maritime activity contributed \$3.3 billion towards New Zealand's economy (almost 3 percent of total GDP). We know, as will the Minister of Finance and the Minister of Economic Development, that exploration for mineral and hydrocarbon wealth is at an all time high in our waters, yet we lack

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detailed maps of our marine estate that, on land, we have taken for granted and employed for resource use and management for decades. The potential return is literally trillions of dollars. Yet we also stand to lose trillions of dollars if we do not rationalise the cumulative effect of extraction on our marine environment. Large scale iron sand and phosphorite nodule extraction (for example) may have a serious interaction with fisheries; oil extraction (for example) has the potential to seriously affect biodiversity and wildlife; fisheries impact on seabed habitats, but the risks vary among habitats.

Identifying risks, environmental weak points, and the cumulative impacts as we develop our marine economy without damage to our green image, is absolutely key to our long term future, and our international reputation as a maritime nation. We cannot do this sensibly without an adequate map of our sea bed.

We urge you take our enquiry about Oceans Survey 20/20 seriously, and to direct your Ministers to make the case for mapping our submarine territory an ongoing priority for New Zealand's economic development.

Yours sincerely,



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Copies to:

Mr Bill English, Minister of Finance, Private Bag, Parliament Buildings, Wellington, 6160
Mr Gerry Brownlee, Minister of Economic Development
Mr Murray McCully, Minister of Foreign Affairs
Mr Nick Smith, Minister for the Environment
Mr Wayne Mapp, Minister of Research, Science and Technology
Mr Phil Heatly, Minister of Fisheries
Kate Wilkinson, Minister of Conservation
Mr Maurice Williamson, Minister of Land Information
Sir Peter Gluckman, Science Advisor to the Prime Minister, The Liggins Institute, University of Auckland, Private Bag 92019, Auckland, 1142.

Relevant Recent References

Cogan, C.B., Todd, B.J., Lawton, P., & Noji, T.T. (2009). The role of marine habitat mapping in ecosystem-based management. *ICES Journal of Marine Science*, **66**: 2033–2042.

Costanza, R., R. d'Arge, et al. (1997). The value of the world's ecosystem services and natural capital. *Nature* **387**(15 May): 253-260.

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