

NZ Hydrographic Authority -



Land Information
New Zealand
Toitū te whenua

Unlocking the value of marine geospatial information

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Area of Responsibility





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New Zealand Hydrographic Authority

HYPLAN

Version 1.0

18 April 2017



New Zealand Government

3.8 Region 8: Western Marlborough Sounds



Priority Area

- 1 Admiralty Bay
- 2 Croisilles Harbour
- 3 D'Urville NE Coast
- 4 Pelorus Sound / Te Hōkere

NOT TO BE USED FOR NAVIGATION

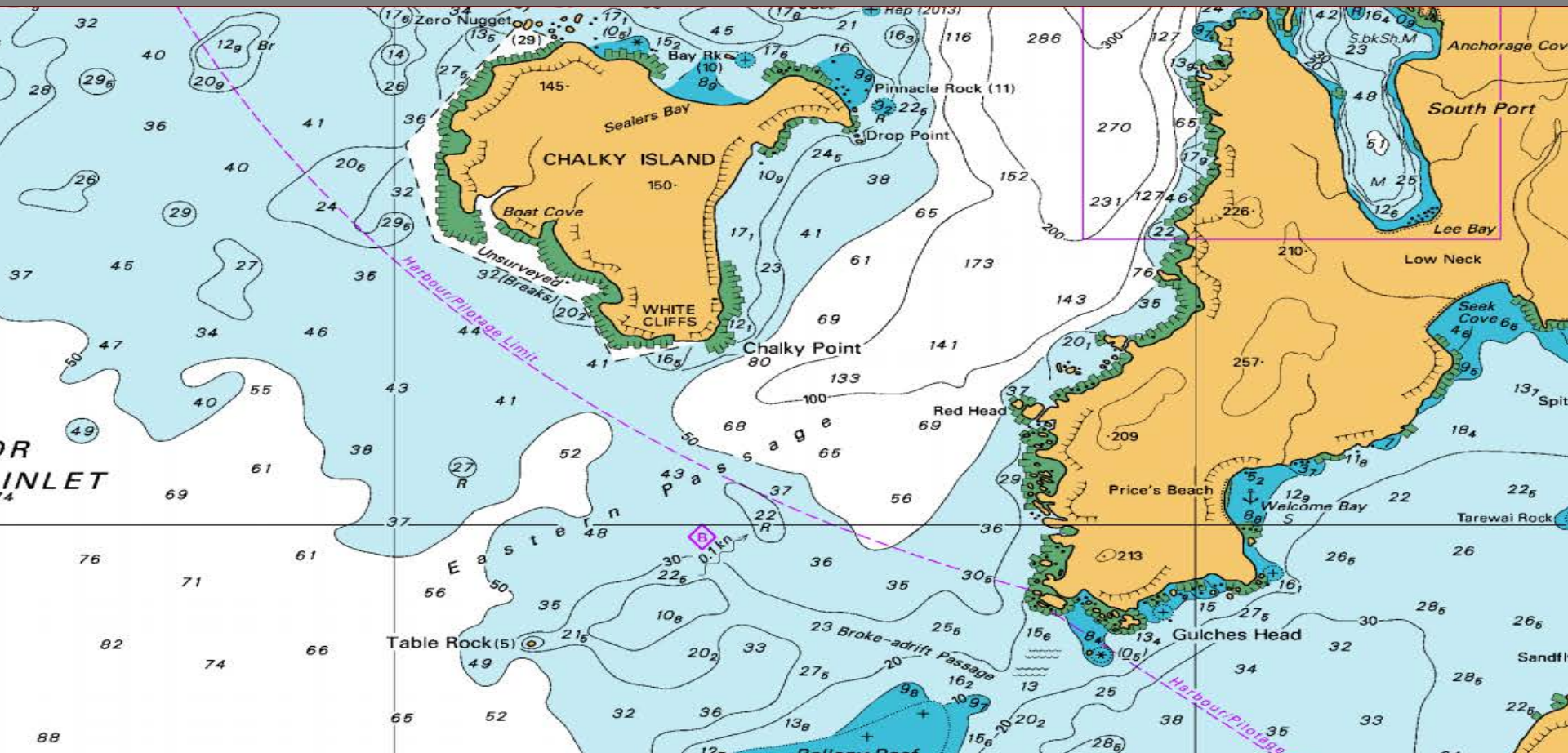
0 5 10 15 Nautical Miles

Purpose	To facilitate safe navigation of tourism, recreational and coastal shipping.
Task	Conduct a modern survey of the coast and identify navigational dangers.
Shipping	Cruise ships, tourist operators, recreational vessels, bulk carriers, tankers and local fishing vessels.
Considerations	Abundance of marine farms in Pelorus & Croisilles Harbour French Pass Tidal Stream Outer areas exposed to Cook Strait weather Inner areas prone to run-off after rain events
Charted ZOC	A2, B & C
Charted survey age	>20 years
Survey Specification	TBA
Charts affected	NZ 46, NZ 48, NZ 463, NZ 61, NZ 614, NZ 615, NZ 6151, NZ 6152
FY prioritisation	TBA
Area (km²)	Admiralty Bay: 403 Croisilles Harbour: 184 D'Urville NE Coast: 500 Pelorus Sound: 748

Navigation Products



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High-value geographic and property information

Geographic and property information are both used effectively to address key challenges for New Zealand, improve outcomes for Māori, and deliver significantly higher-value public services (national and local).

Our Vision

Navigating New Zealand to a
thriving blue economy

What is important to us:

- People can navigate safely
- The marine environment is managed sustainably
- The value of marine geospatial information is realised
- Key datasets are accessible to key users

How we will work:

- Meet our maritime obligations
- Be digital first, data-centric
- Understand our customers
- Partner / work collaboratively
- Apply fresh thinking and be innovative
- Being our BEST



Our Mission

We collect, manage and share marine
geospatial information for the benefit
of New Zealand

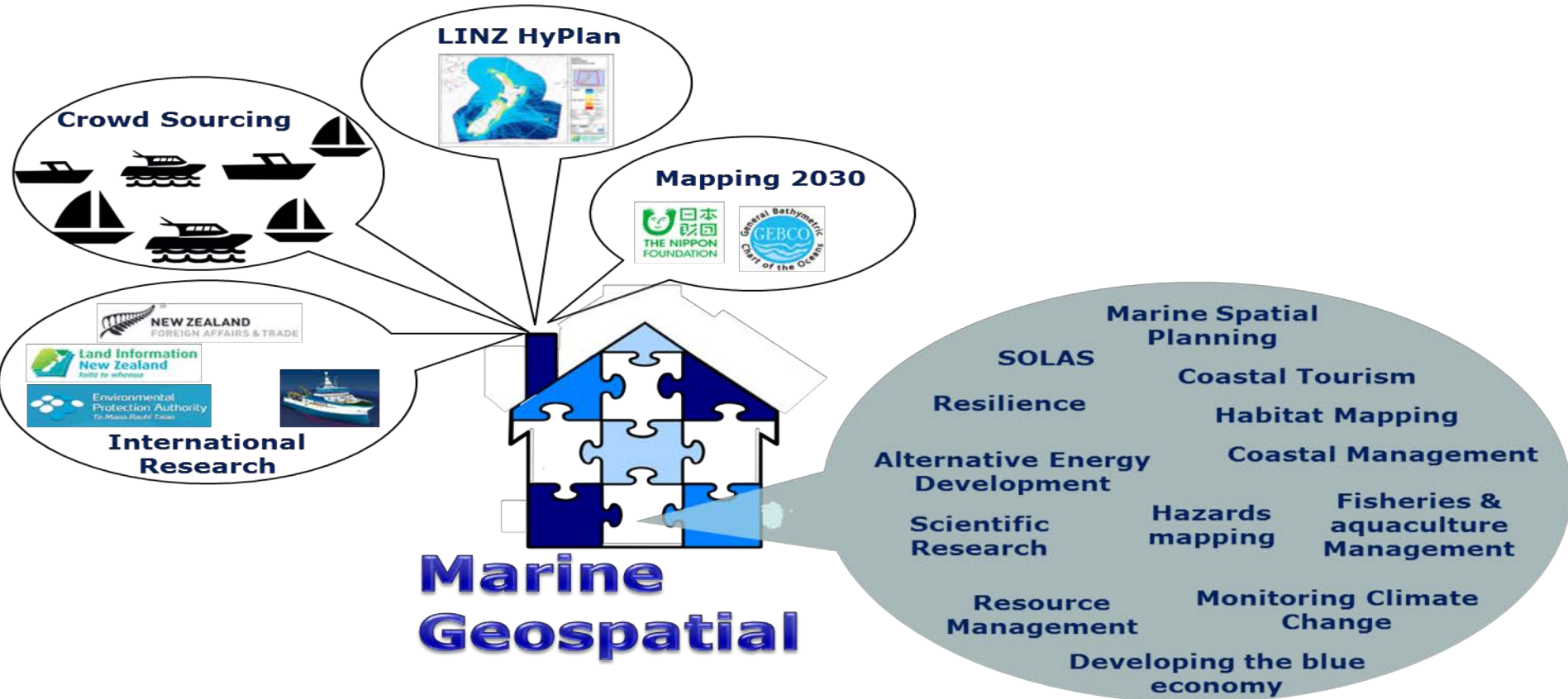
Our focus areas:

- Mapping NZ 2025
 - Coastal mapping
 - Joining Land and Sea (JLAS)
 - Improved bathymetry
- Resilience
 - Share data that enables others to:
 - Assess risk
 - Understand impacts of climate change
 - Responding to events
- Growing Marine Geospatial Information
 - Promote our data
 - Encouraging others to release marine data
 - Enable others to reuse marine geospatial data

Collect once, use many times



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LGNZ.



New Zealand
**DEFENCE
FORCE**
Te Ope Kātua O Aotearoa



Ministry for the
Environment
Manatū Mō Te Taiao



UNIVERSITY
of
OTAGO
Te Whare Wānanga o Ōtago
NEW ZEALAND



NIWA
Taihoro Nukurangi



Department of
Conservation
Te Papa Atawhai



Environmental
Protection Authority
Te Mana Rauhi Taiao

Ministry for Primary Industries
Manatū Ahu Matua

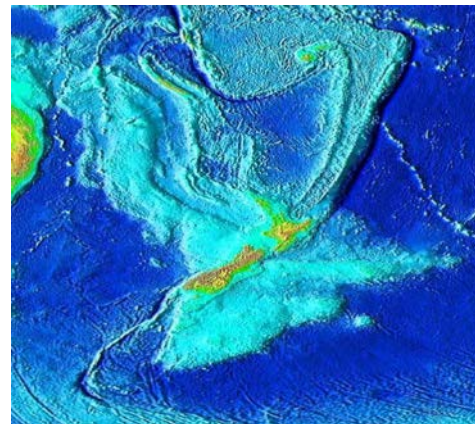


**MARLBOROUGH
DISTRICT COUNCIL**

Mapping NZ 2025

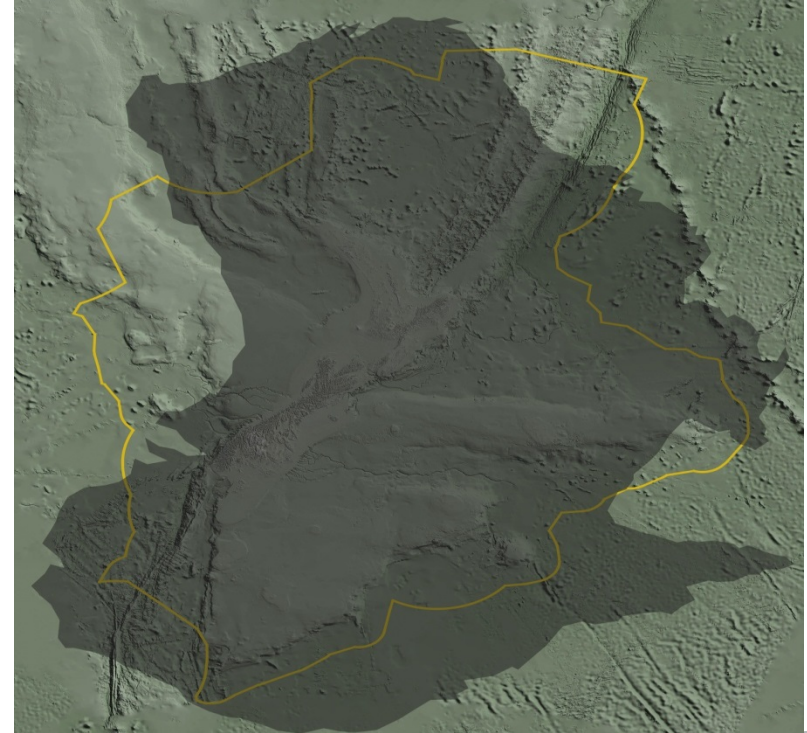
Mapping NZ 2025 is a 10-year programme of leadership and coordination by LINZ.

It aims to ensure seamless, integrated mapping and provision of national datasets that help answer the most critical 'Where' questions.



Mapping NZ 2025

A land and marine domain similar to the size of Australia.



Some predictions for our land and sea domain

By 2068, NZ's population will be 7.5 million

Within the next 30 years, Auckland's population will grow by 1 million

Half of the infrastructure required by 2050 has not been built yet

In the next 10 years, the Government will invest \$50 billion in infrastructure

By 2050, sea levels will rise by 30cm, impacting our coastal communities

Within 50 years, climate change will significantly increase droughts in some areas, flooding within others

By 2030 NZ will need to significantly reduce carbon emissions to meet international obligations

In the next 25 years, dairy cows numbers will double increasing stress on the environment

Since 1990, fertilizer use has increased by 600 % increasing nitrogen runoff into waterways

90 % of NZ wetlands have been drained by farming, continuing to put stress on our environment

While the continental shelf is 21 times larger than NZ's land area, it's poorly mapped, resulting in unrealised opportunities

By 2050 NZ aims to make the nation predator free

Mapping NZ 2025 - will help us answer some of these and other questions

Where to plant 1M ha of trees that can improve our carbon emissions?

Where are waterways affected by intense agriculture?

Where to build 500k buildings needed in Auckland?

Where to minimise the impacts of flooding?

Where to invest \$50B in infrastructure over the next 3 decades?

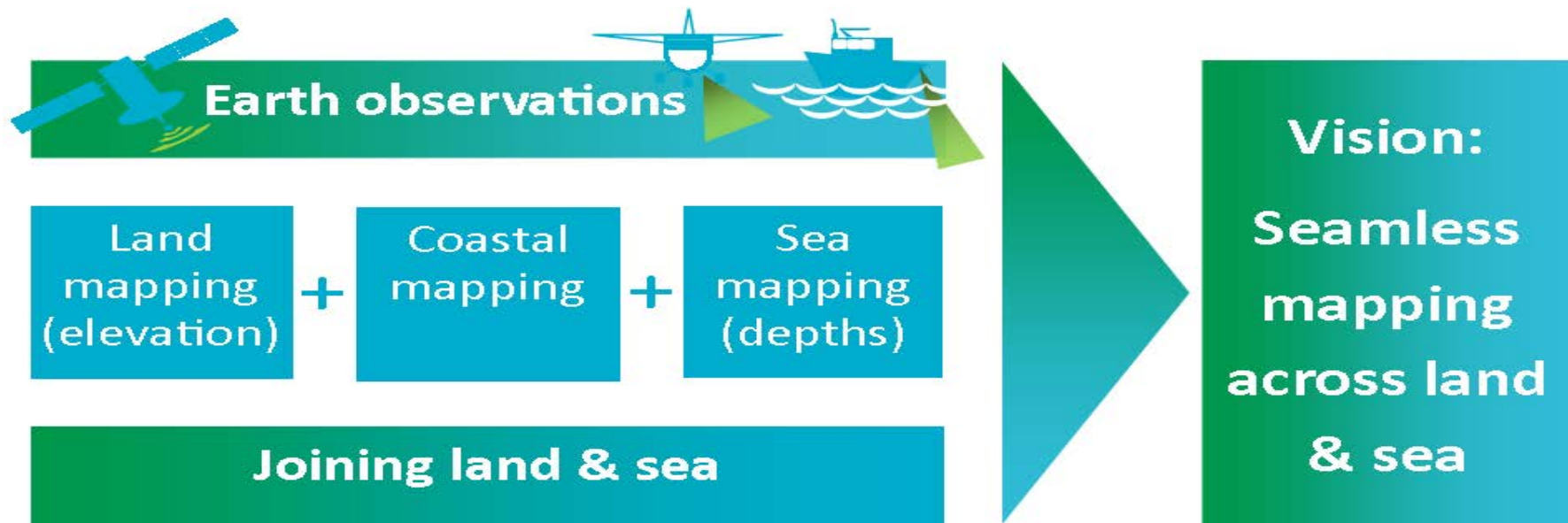
Where is the greatest potential for productivity gains in Māori land?

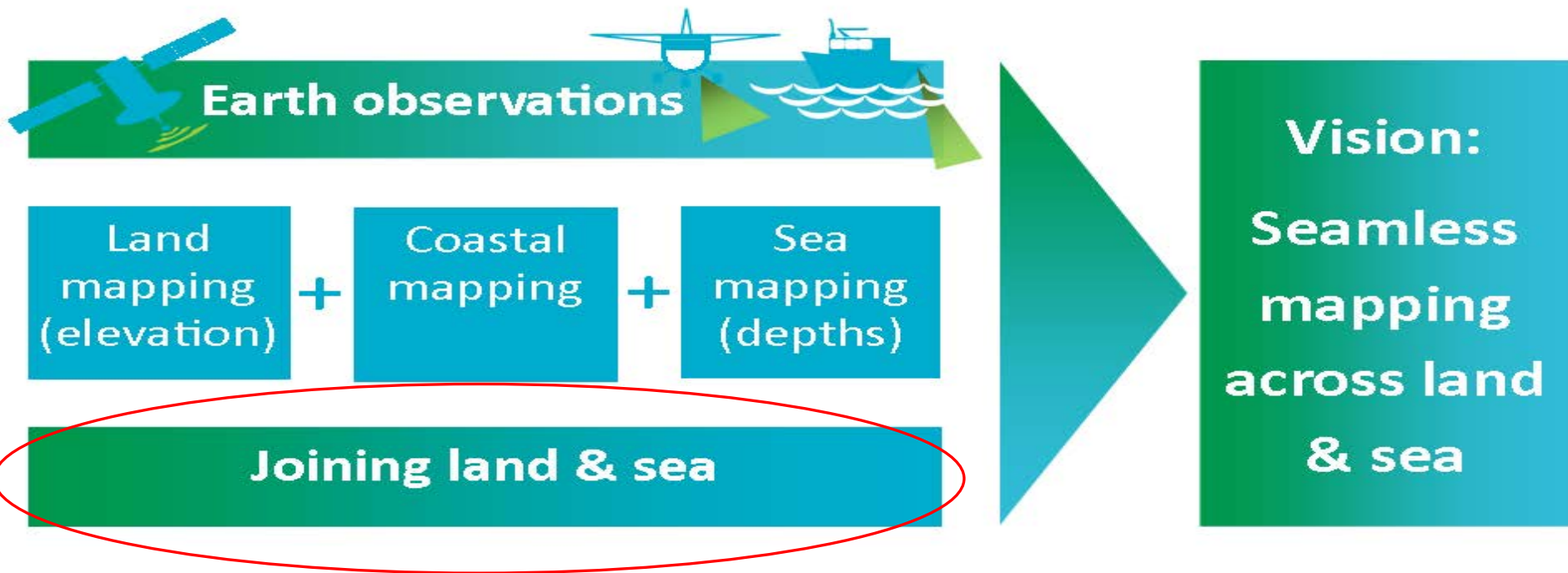


Where is productive land most at risk from climate change and how do we mitigate that?

Where are pests impacting our native vegetation?

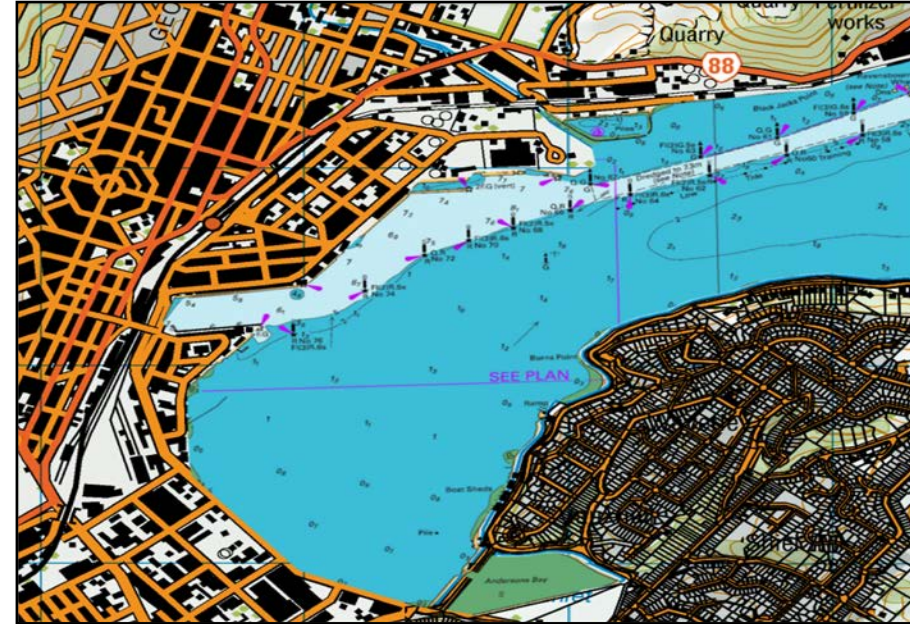
Mapping NZ 2025





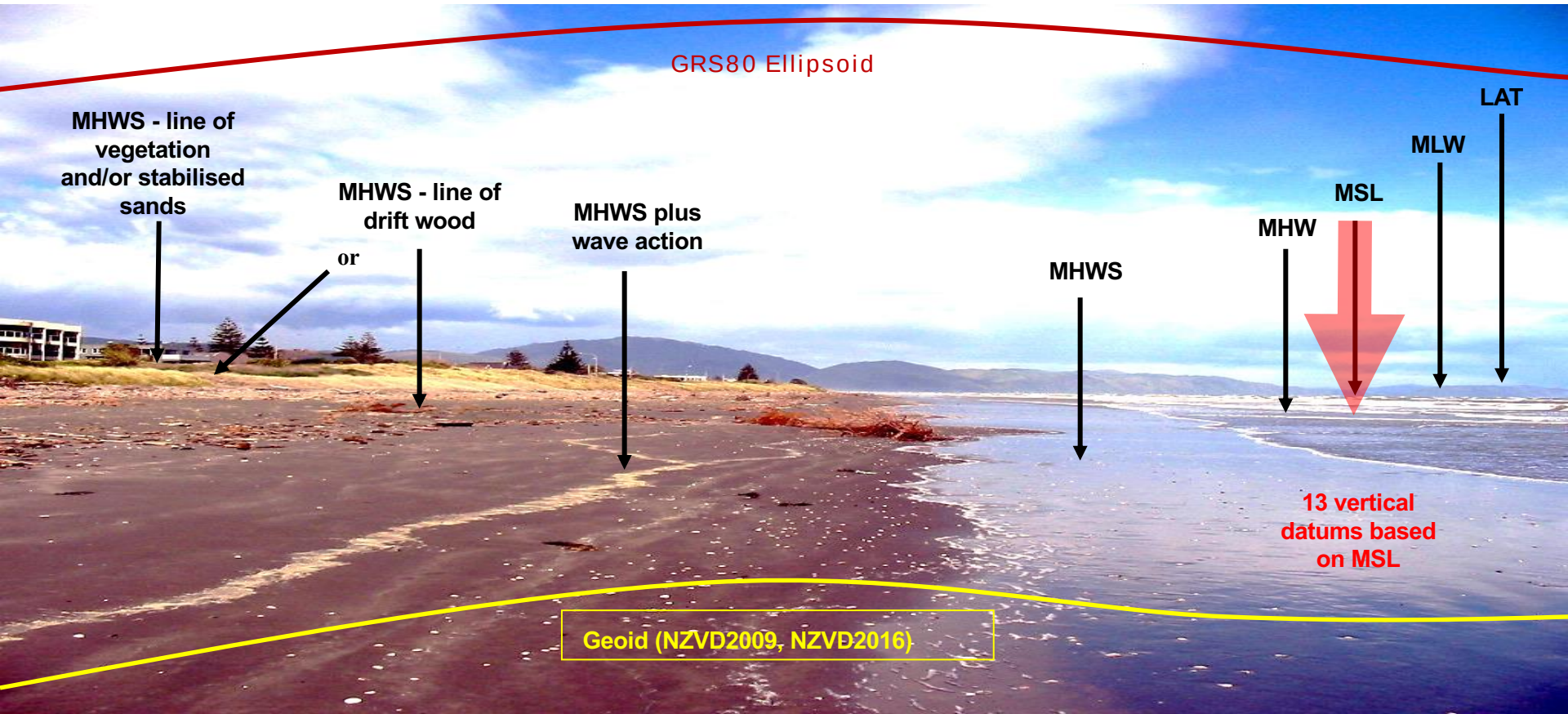
Joining land and sea datasets

- Datasets defined in terms of different vertical datums and reference surfaces
 - Topography – MSL
 - Hydro – LAT/CD
 - Cadastral – MHWS
 - Geodesy – MSL & ellipsoid.
- The challenge is to combine different datasets.

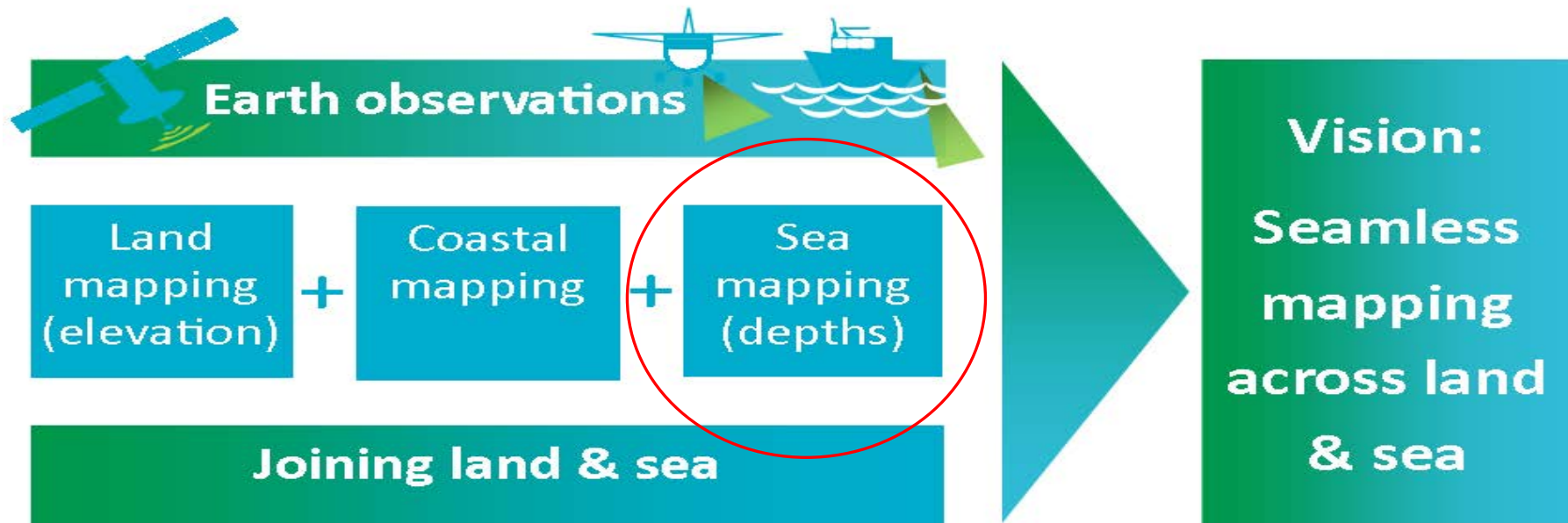


- Working with NIWA to enable linking boundaries in the littoral zone and seamless data:

- tool for transforming data between datums
- improved NZ tidal model

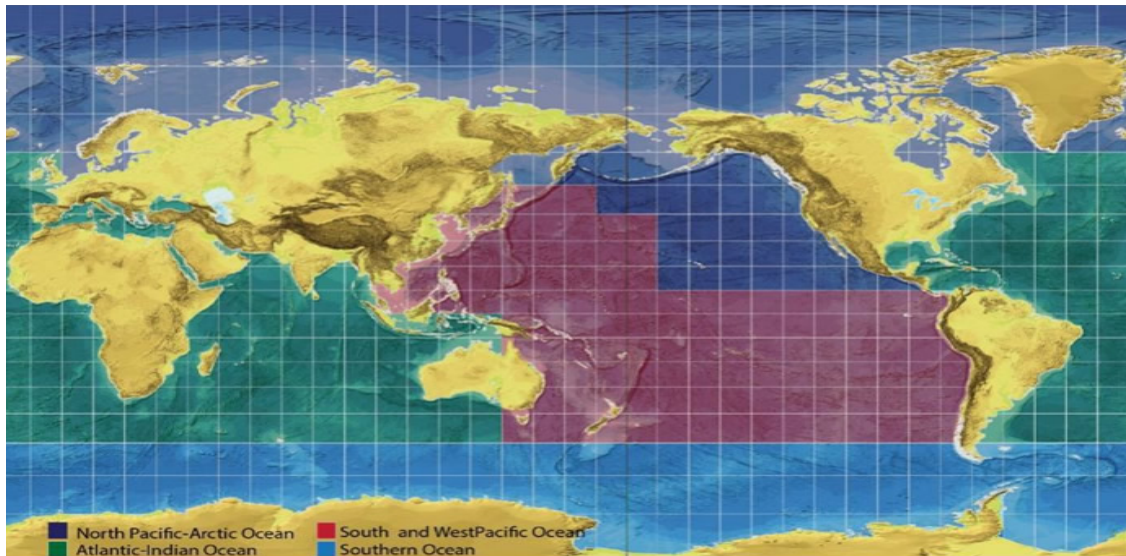


Mapping NZ 2025

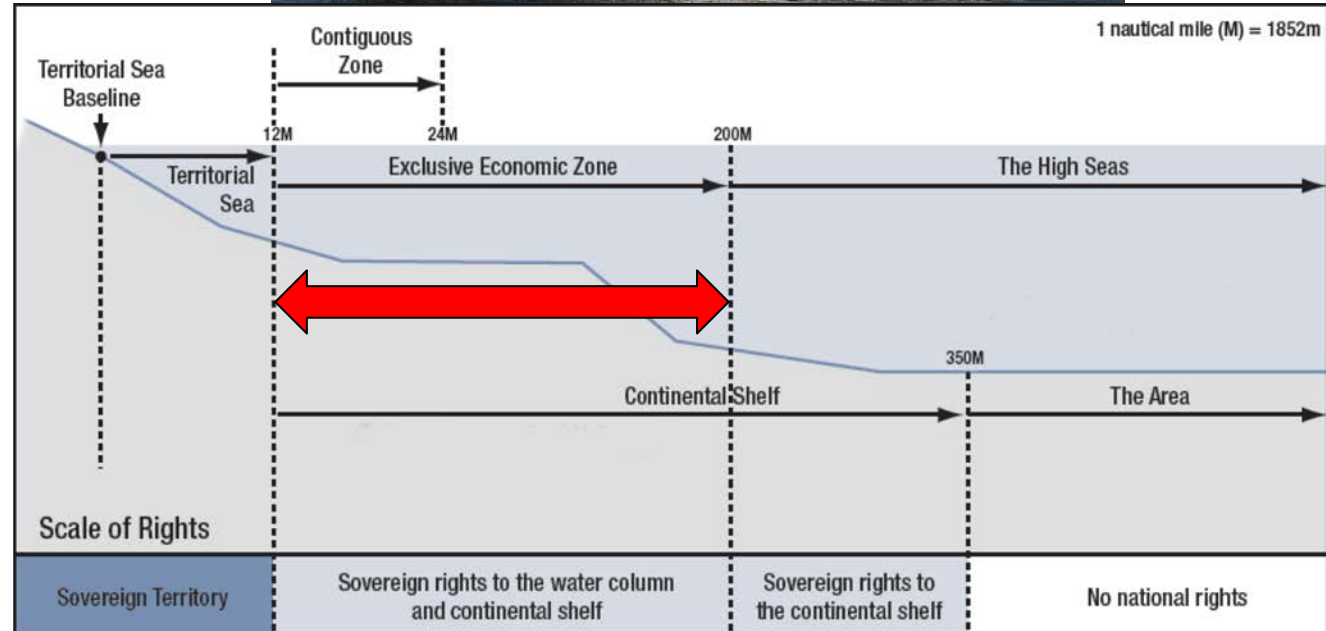


Improving national bathymetry

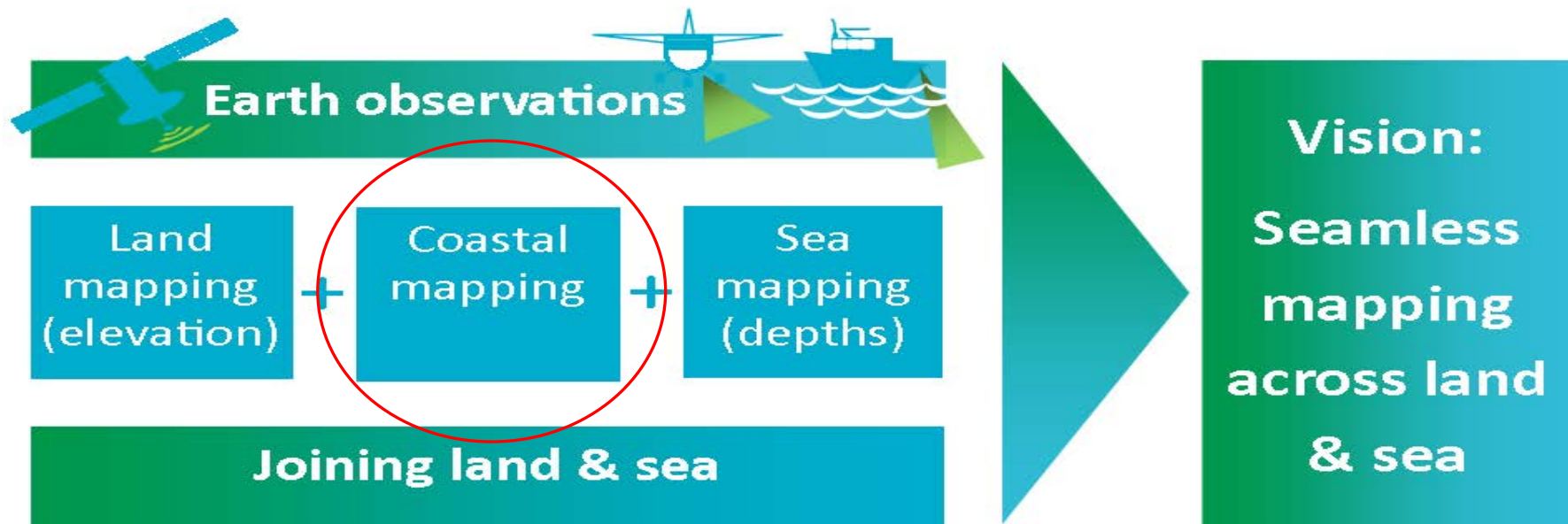
- Operating survey programme and partnerships
- Joint agency work on international initiatives (Seabed 2030)
- Gathering bathymetric data from research vessels
- Focus on near shore mapping.



UNCLOS MSR



Mapping NZ 2025



Coastal mapping benefits and applications

- Improved modelling
 - Sea level rise
 - Flooding
 - Tsunami
- Integrated ocean and coastal mapping
 - Shoreline studies
 - Hydrographic surveying
 - Integrating bathymetric datasets
- Collecting and Processing survey data
- Surveying on the ellipsoid.



Questions?

