



Fisheries New Zealand

Tini a Tangaroa



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NIWA
Taihoro Nukurangi

Coastal mapping

Kaikoura to Cape Campbell
27.06.2017



Land Information New Zealand

Strategy & Stewardship

Office of
Surveyor
General/Geographic
Board

Registrar General
of Land

Office of the
Valuer General

Business with
Maori

Customer
Insights

Organisational
Strategy

Location Information

Positioning and
Resilience

Māori
Land Service

Topography

Hydrography

Data Services

Integrated
Property Service
& Addressing

Property Rights

Operations

Property Rights
Advisory

Property Rights
Support

Technical
Capability

ASaTS

Engagement

Landonline
Transition

Crown Property

Crown Property

Canterbury
Recovery

Clearances

Legal Services

Crown
Engagement

Commissioner of
Crown Lands

Residential Red
Zone

Policy & Overseas Investment

OIO Operational
Policy

Policy &
Frameworks

Applications

Enforcement

Corporate

Finance

Human
Resources

Information
Technology

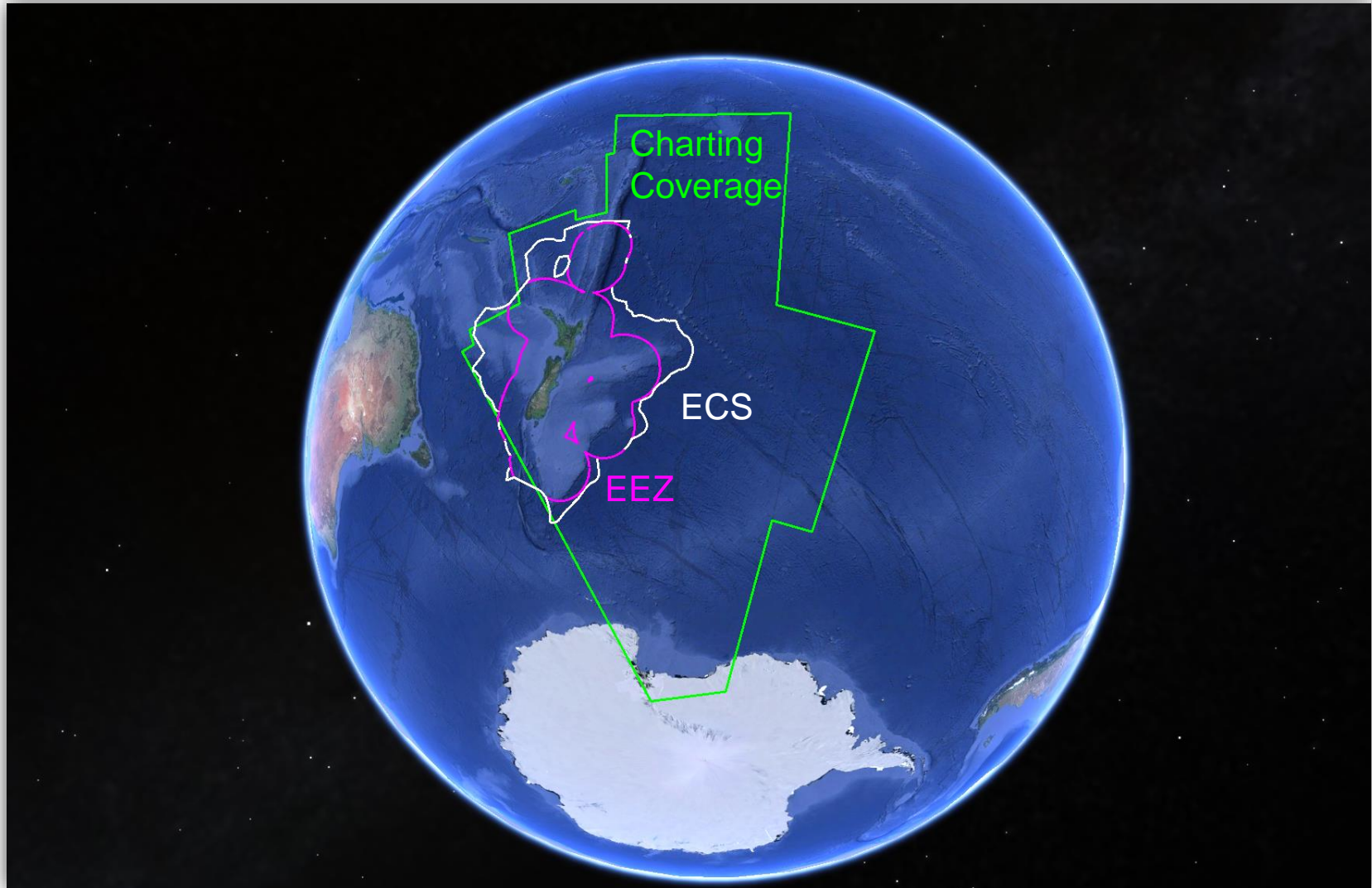
EPMO

Strategic
Communication
s and Digital
Services

Risk &
Assurance



NZHA area of responsibility





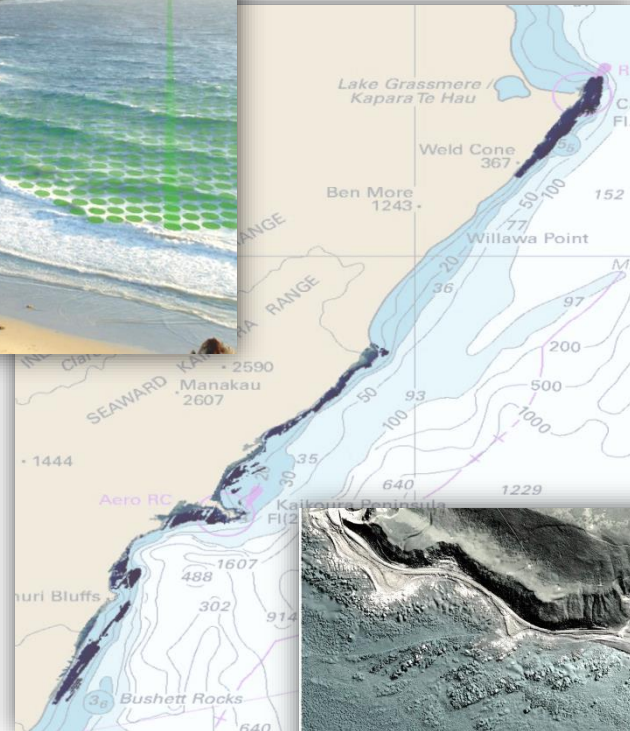
NZHA overview

Official Products	Official Publications
<p>Paper Charts Electronic Navigational Charts (ENC) Raster Navigational Charts (RNC); <i>NZ Mariner</i></p>	<p>Fortnightly Notices to Mariners NZ Nautical Almanac</p> <ul style="list-style-type: none"> - Tidal Information - Astronomical Information - Light List Information - Annual Notices to Mariner's <p>Online Chart Catalogue (paper & ENC)</p>
Products and Services	Technical Advice
<p>Geospatial Hydrographic data – LINZ Data Service (LDS) Sea level data Hydrographic surveys Maritime Boundaries</p>	<p>Tide levels and predictions Sea level advice Hydrographic surveys Maritime Boundaries Charts; Historical information, source data information, interpretation</p>



Initial LINZ response

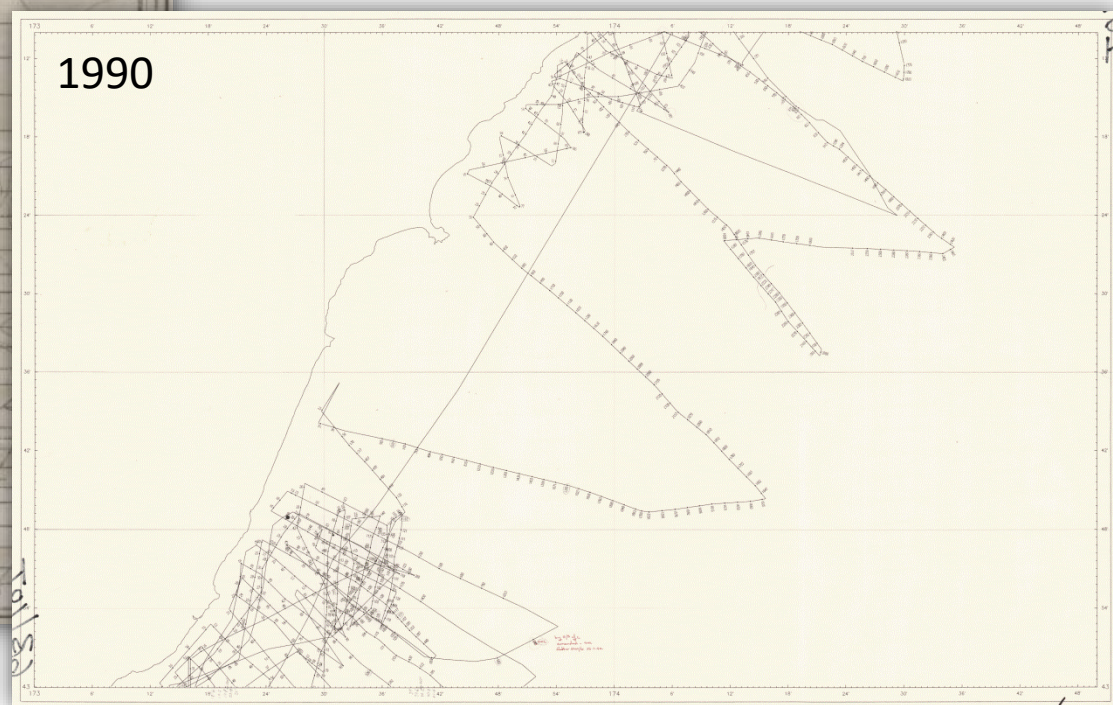
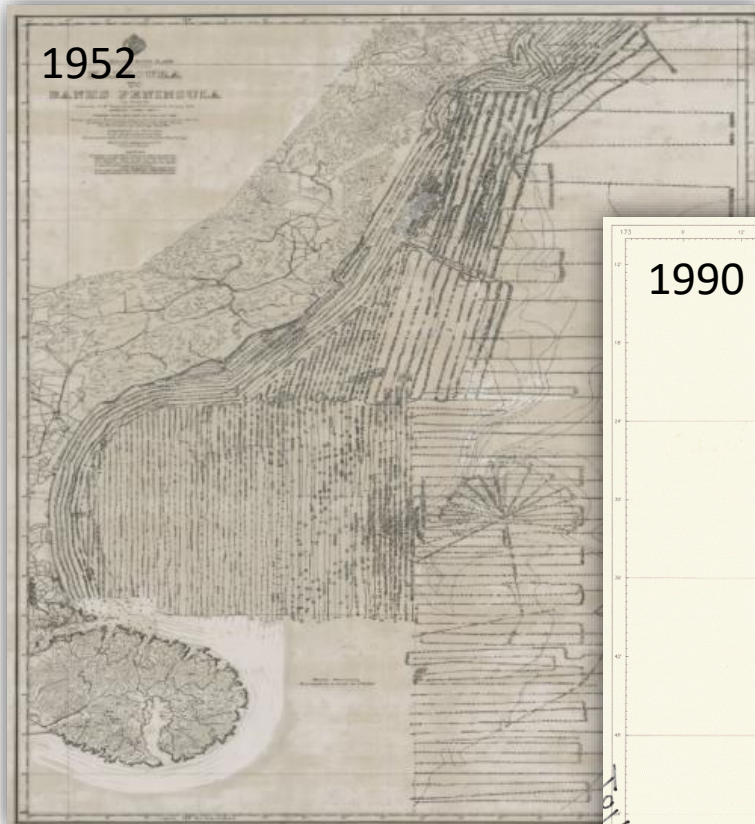
- Update of geodetic marks by LINZ Geodetic Team and GNS
- Coordination of topographic LiDAR and imagery capture
- Collaboration with RAN (Royal Australian Navy)
 - Bathymetric LiDAR along the coast





Data before and after the quake

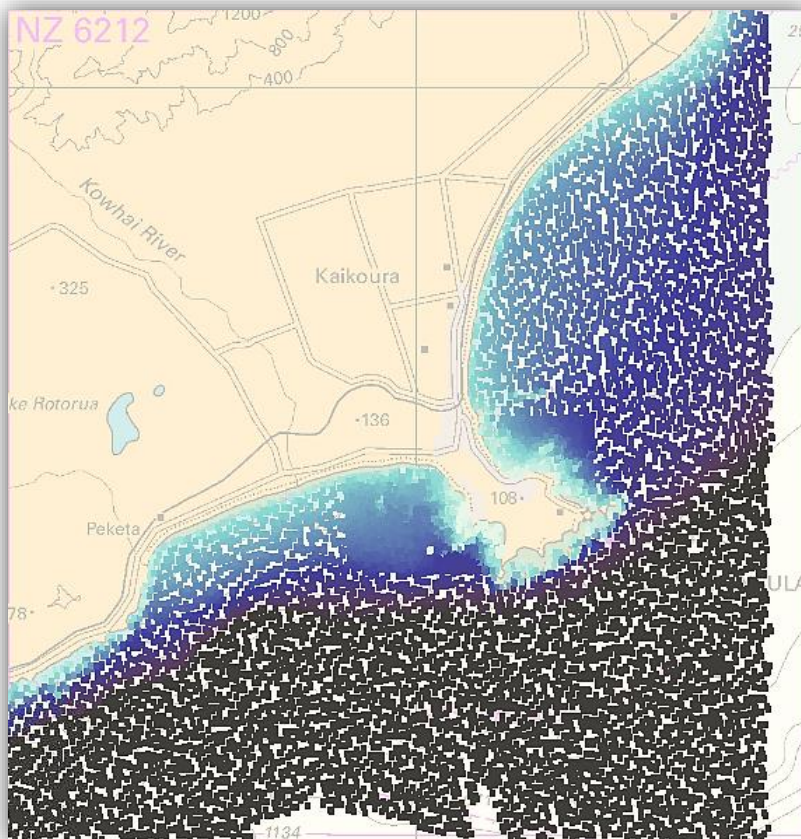
Paper records



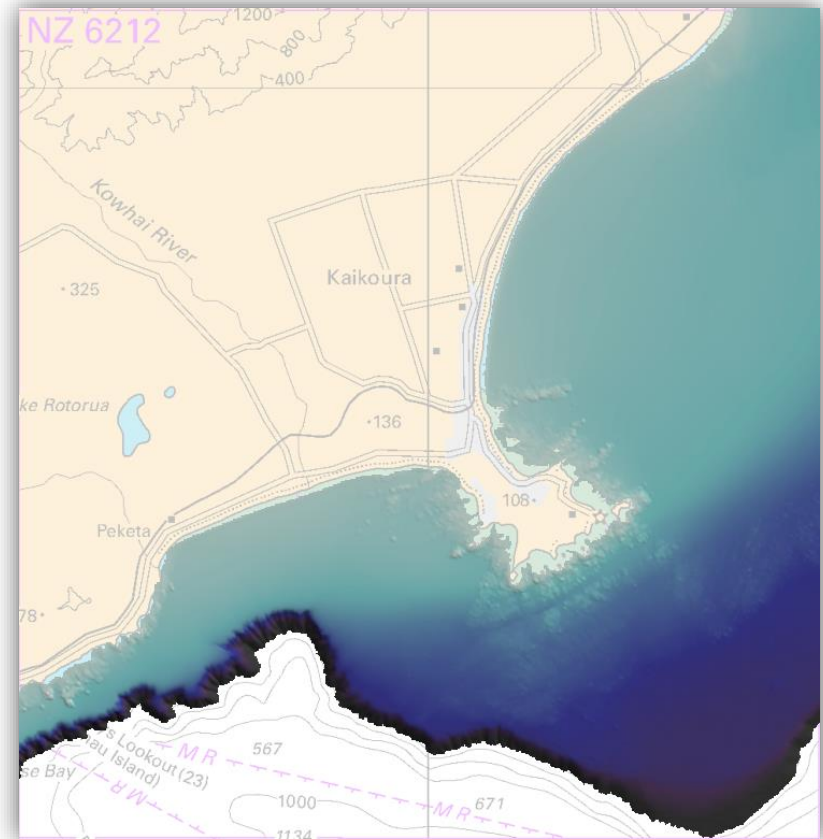


Data before and after the quake

1998 Singlebeam data



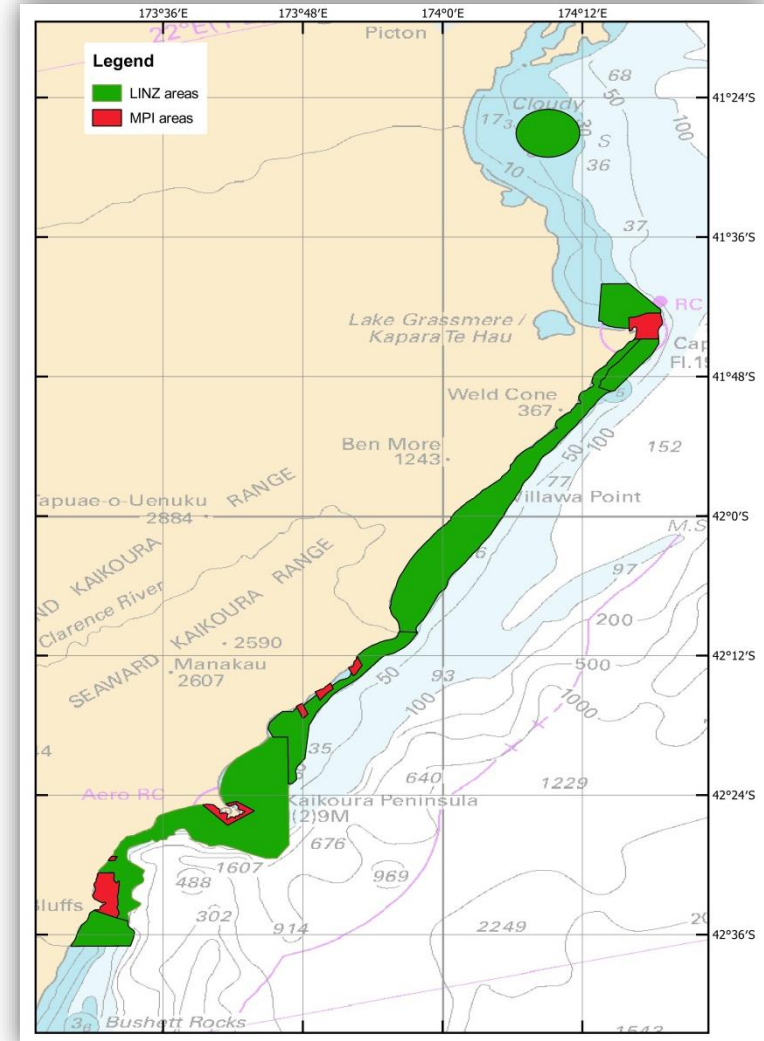
2018 Multibeam data





Kaikoura #1 priority

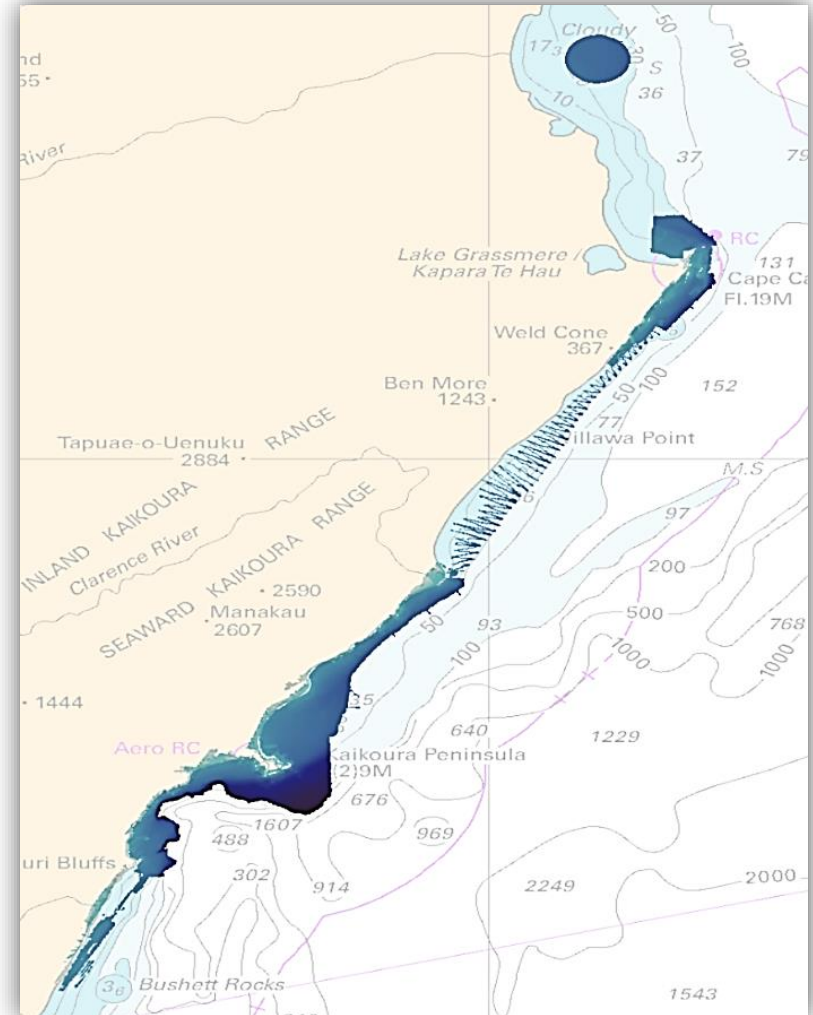
- HYPLAN - long term survey programme
- Safety of navigation priority
- Kaikoura national interest
- MPI collaboration
- DML and iXblue survey panel





What we have now

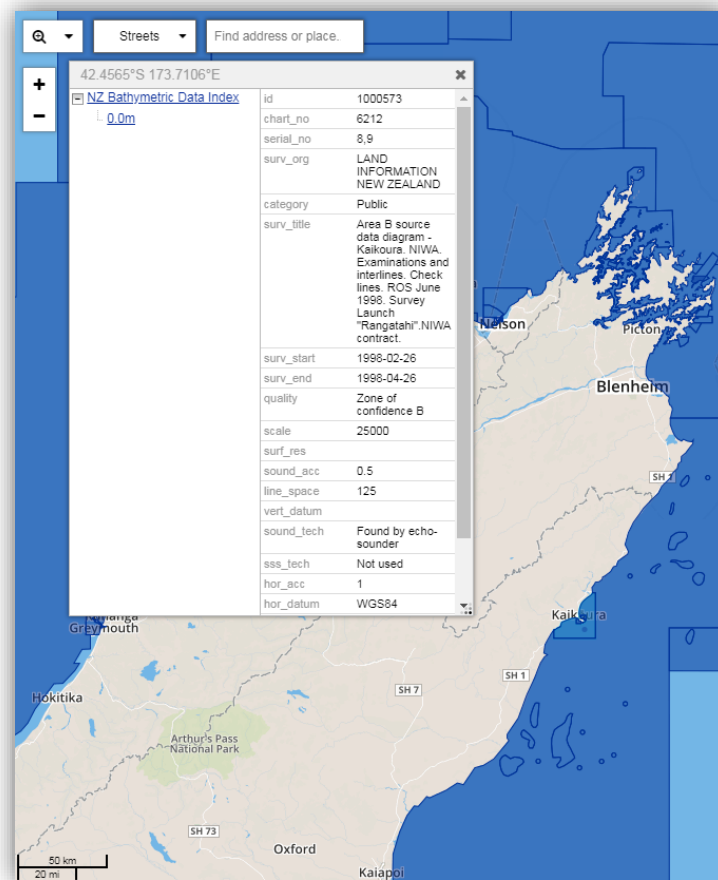
- 100% seafloor coverage
- High density and accurate multibeam bathymetry
- Backscatter data
- Physical water properties
- Habitat mapping in selected locations
- Update of charts in progress (NZ6212, NZ62, NZ63 ...)





Data and products

- Preliminary data used already:
 - Tonkin +Taylor
 - NCTIR
- Request for sea water temperature data
- Data request from Otago University for bathymetry, backscatter – seafloor & water column
- All data will be made available to all via the **LINZ Data Service**



<https://data.linz.govt.nz>





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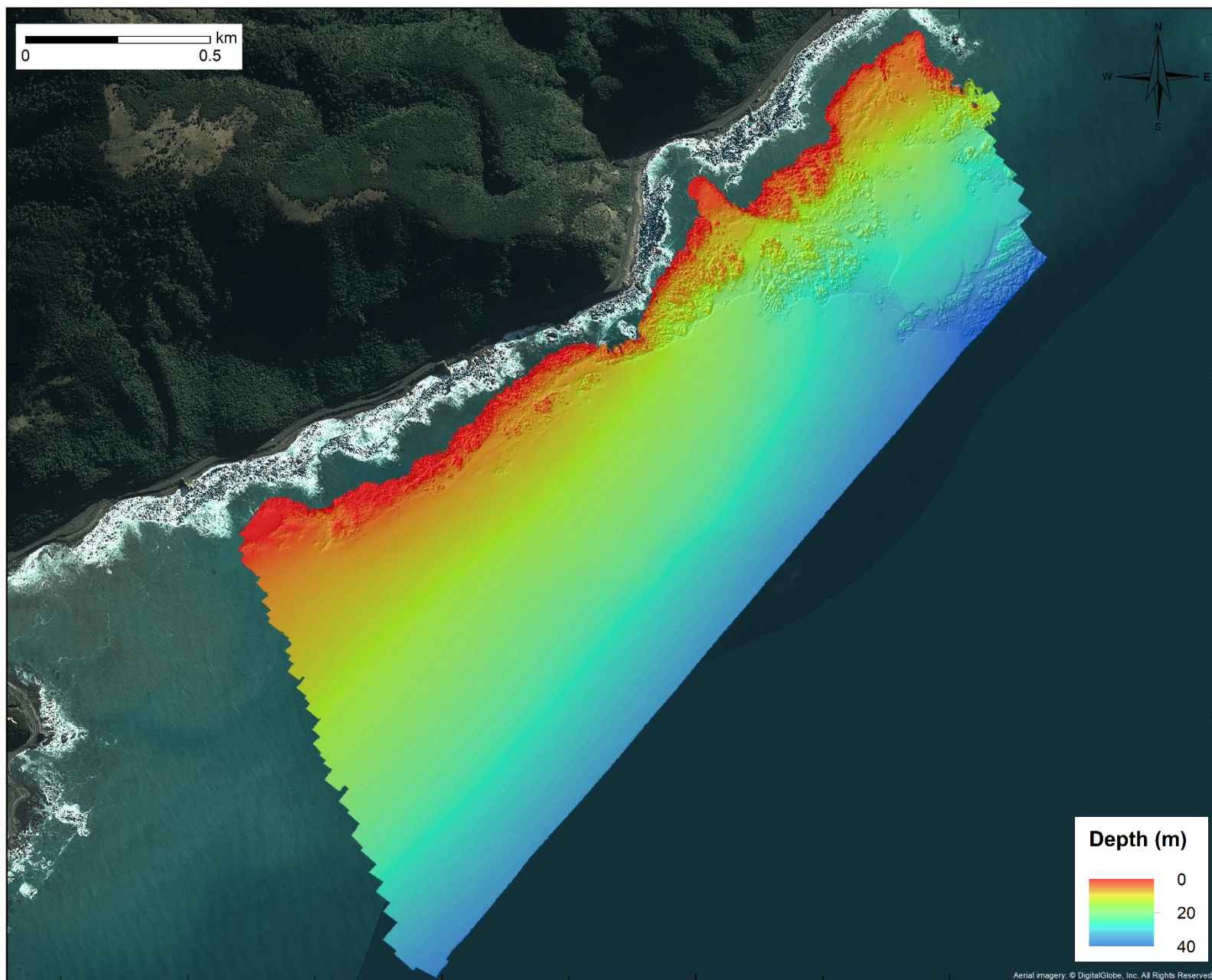


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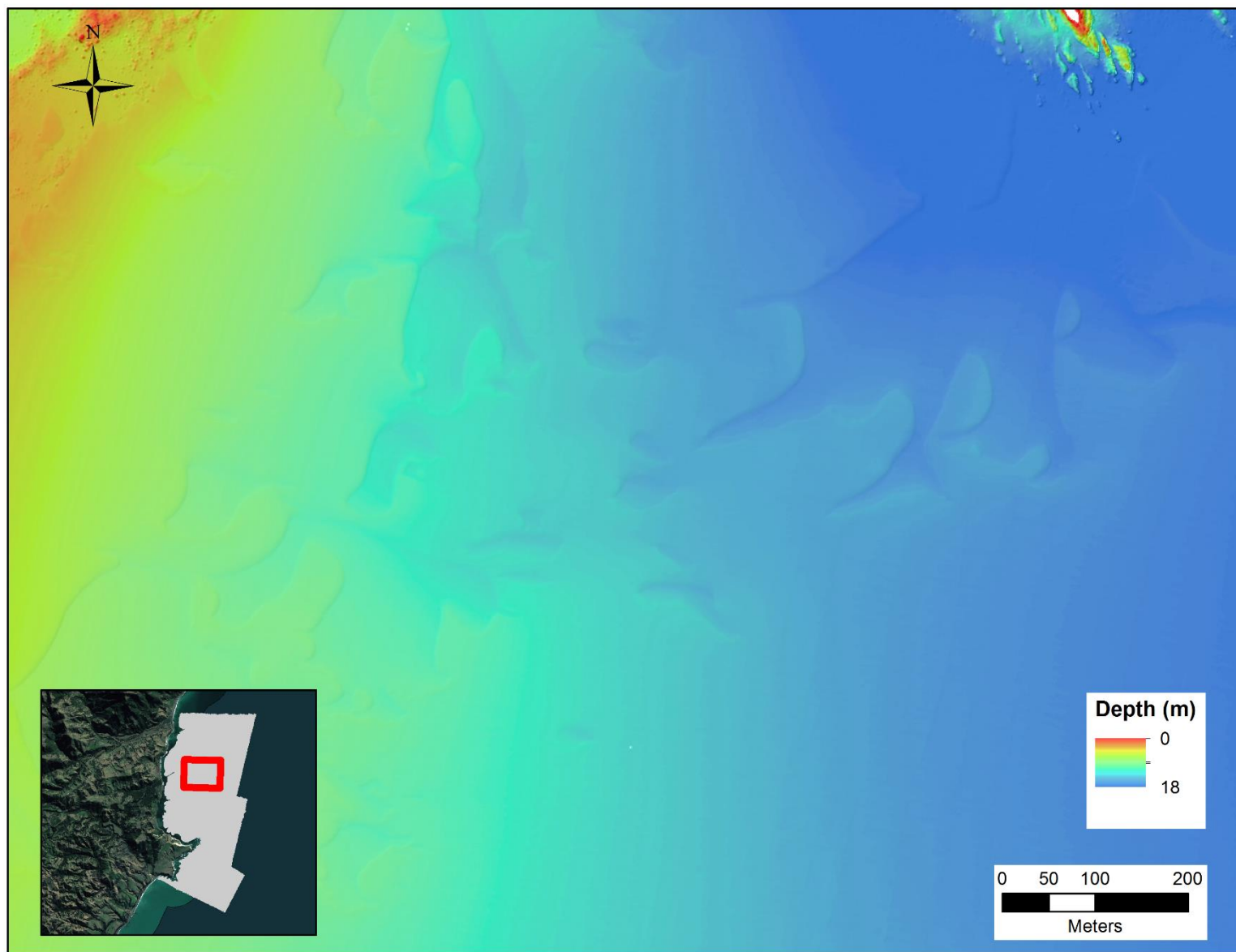


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Flat Seafloor – Sediment cover





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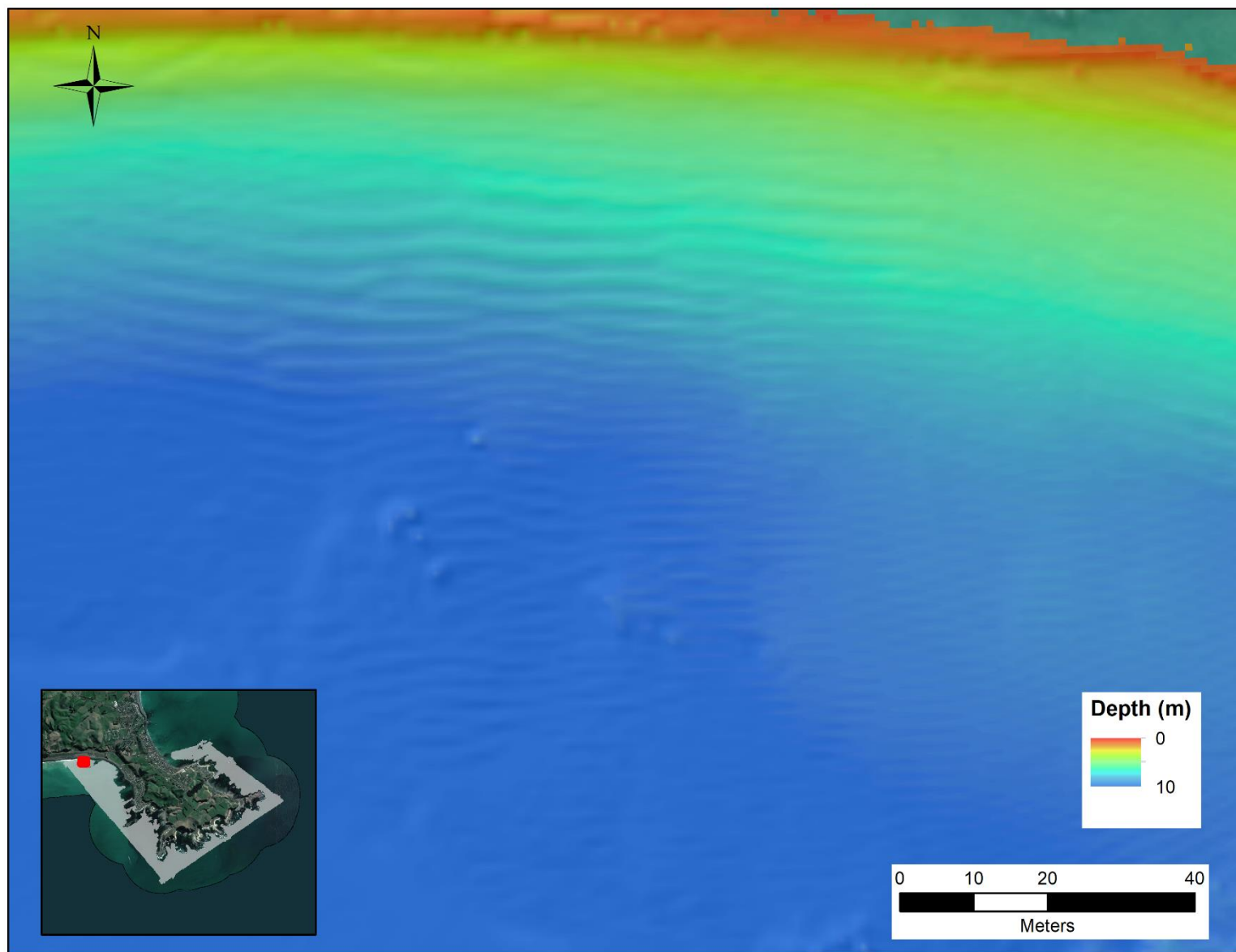
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Sediment Ripples





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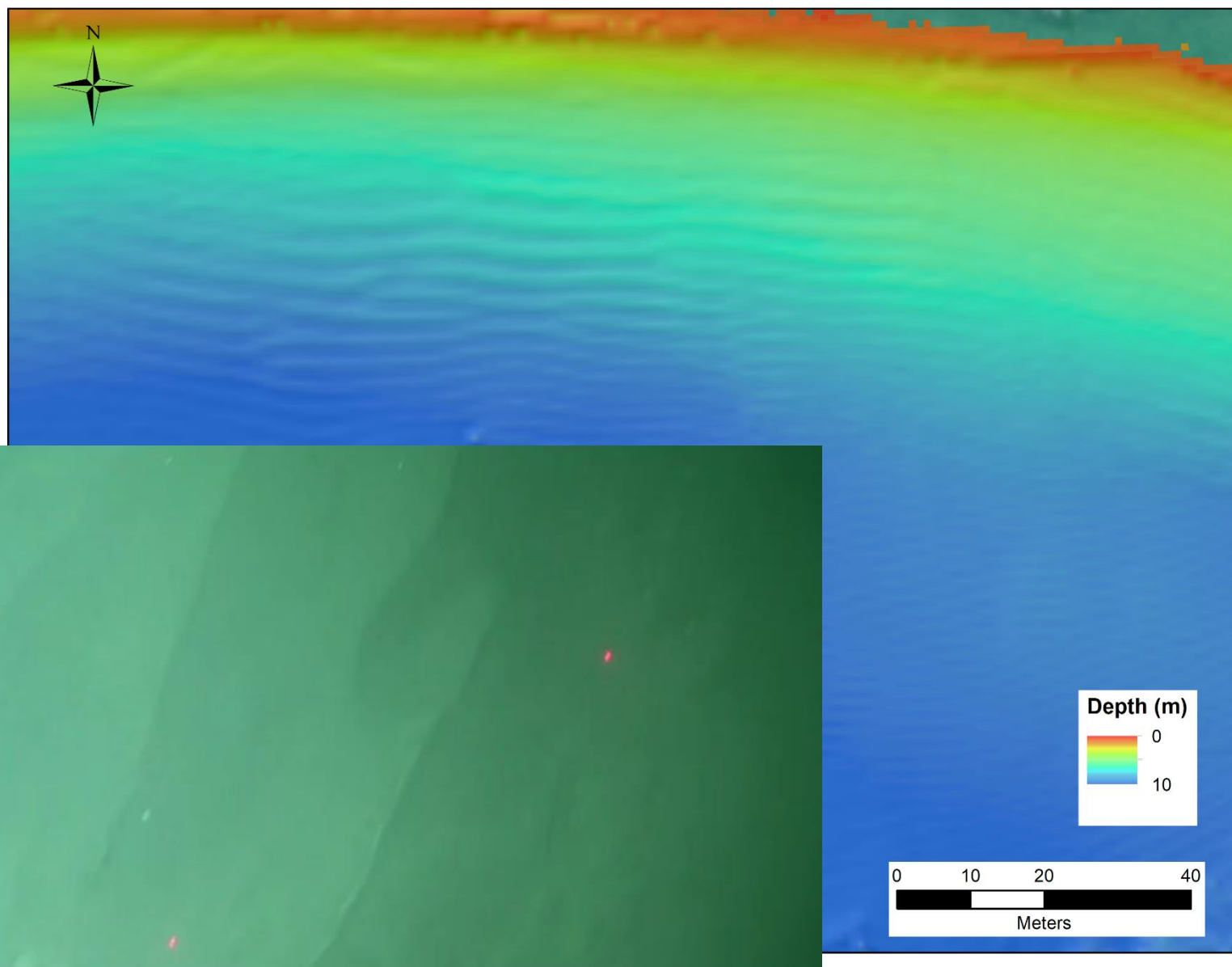
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Sediment Ripples





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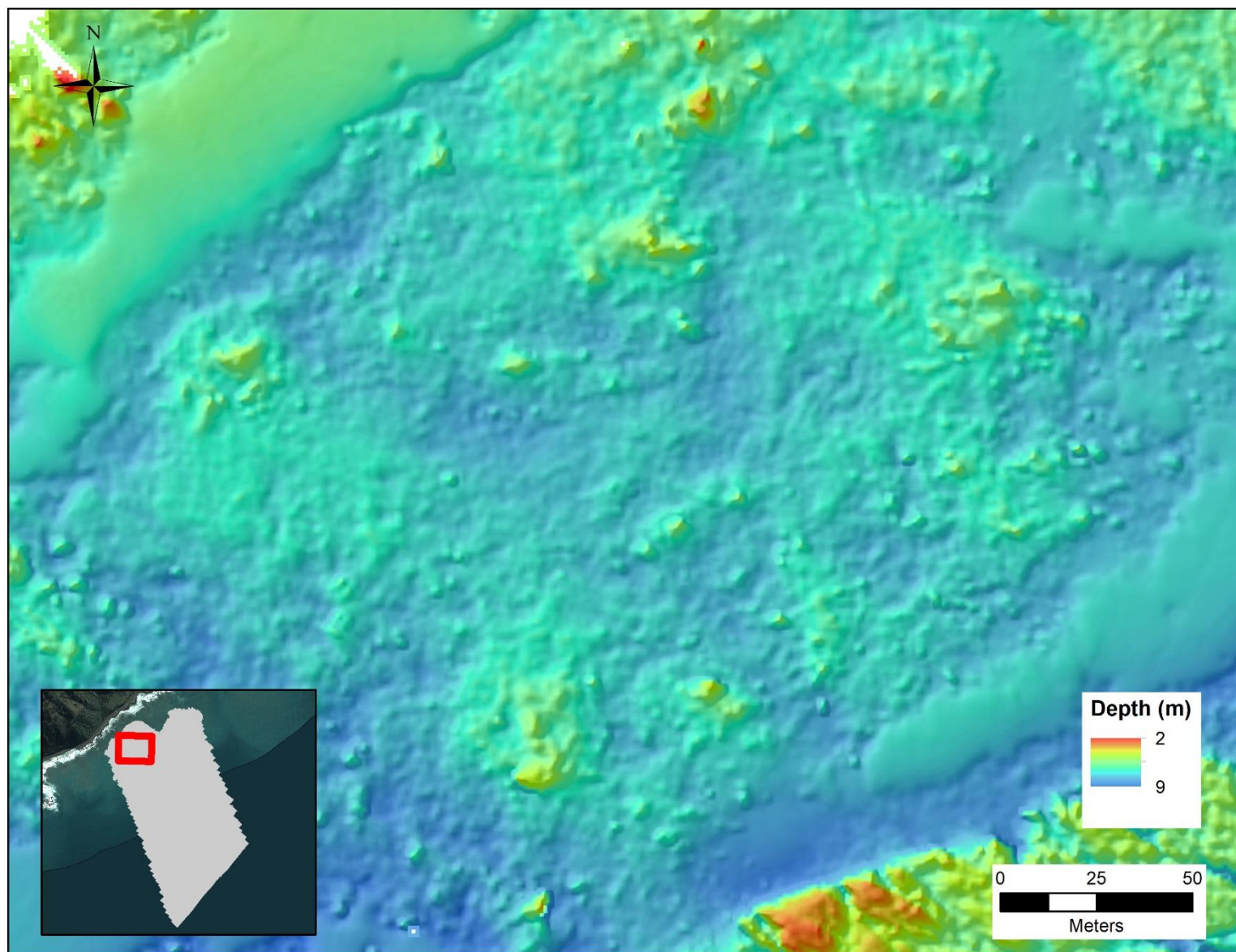
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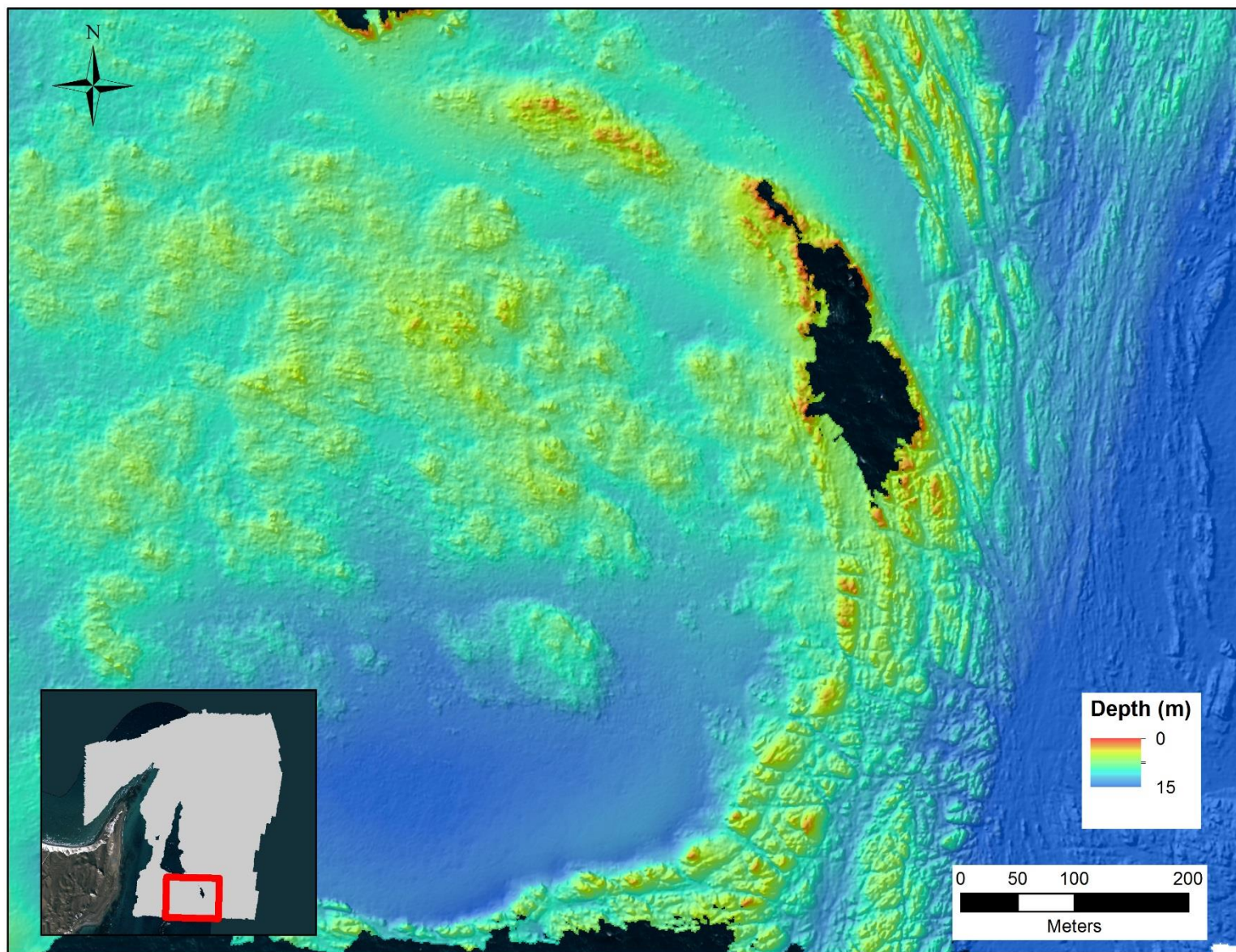
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Boulder Apron



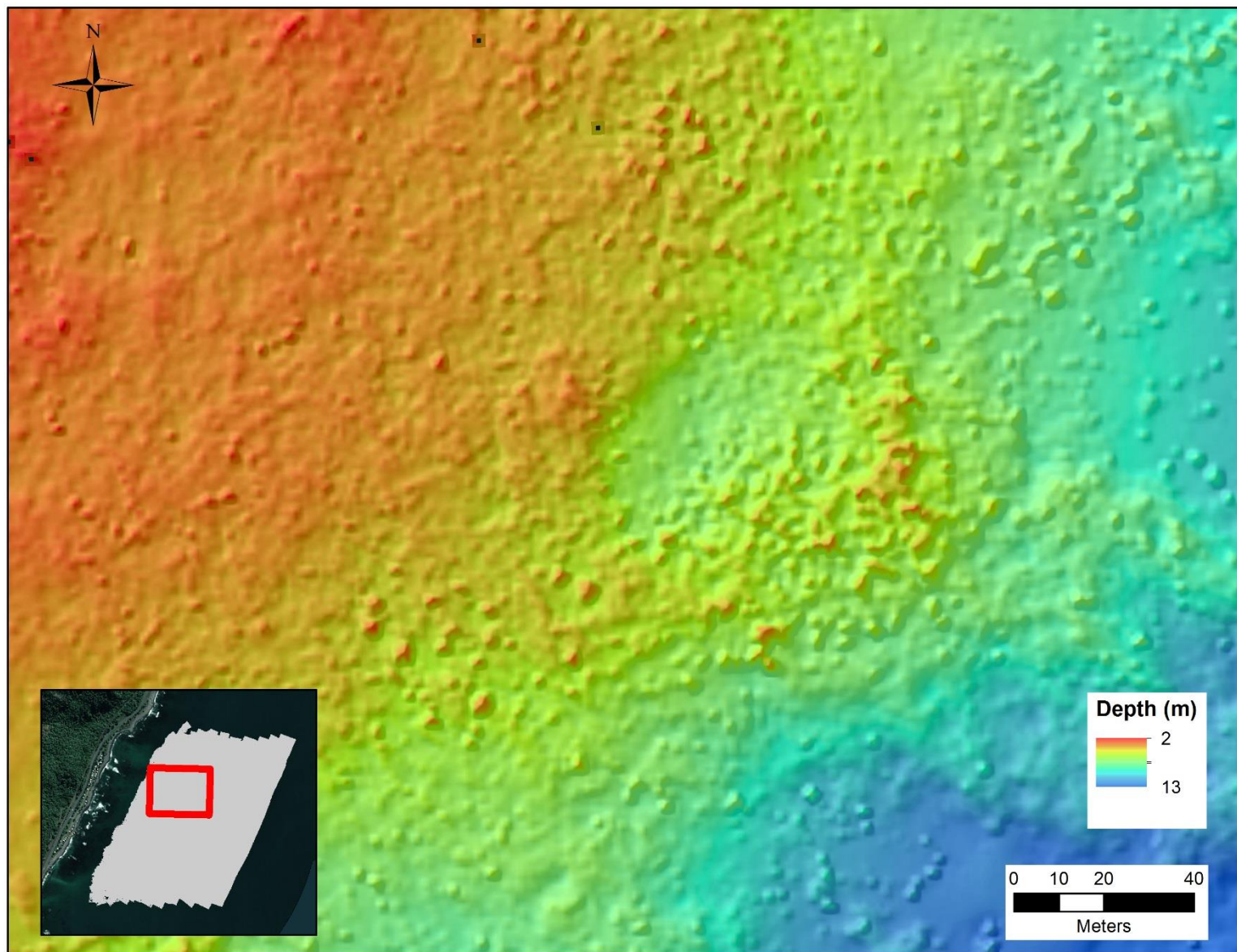


Rocky Reef





Rocky Reef





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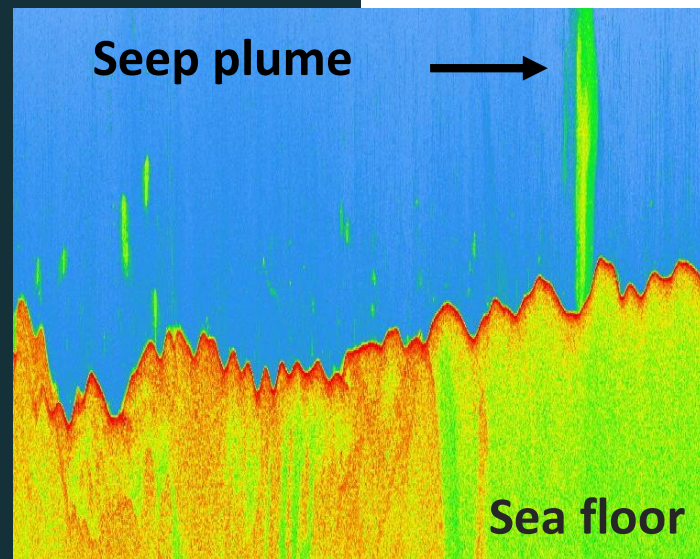
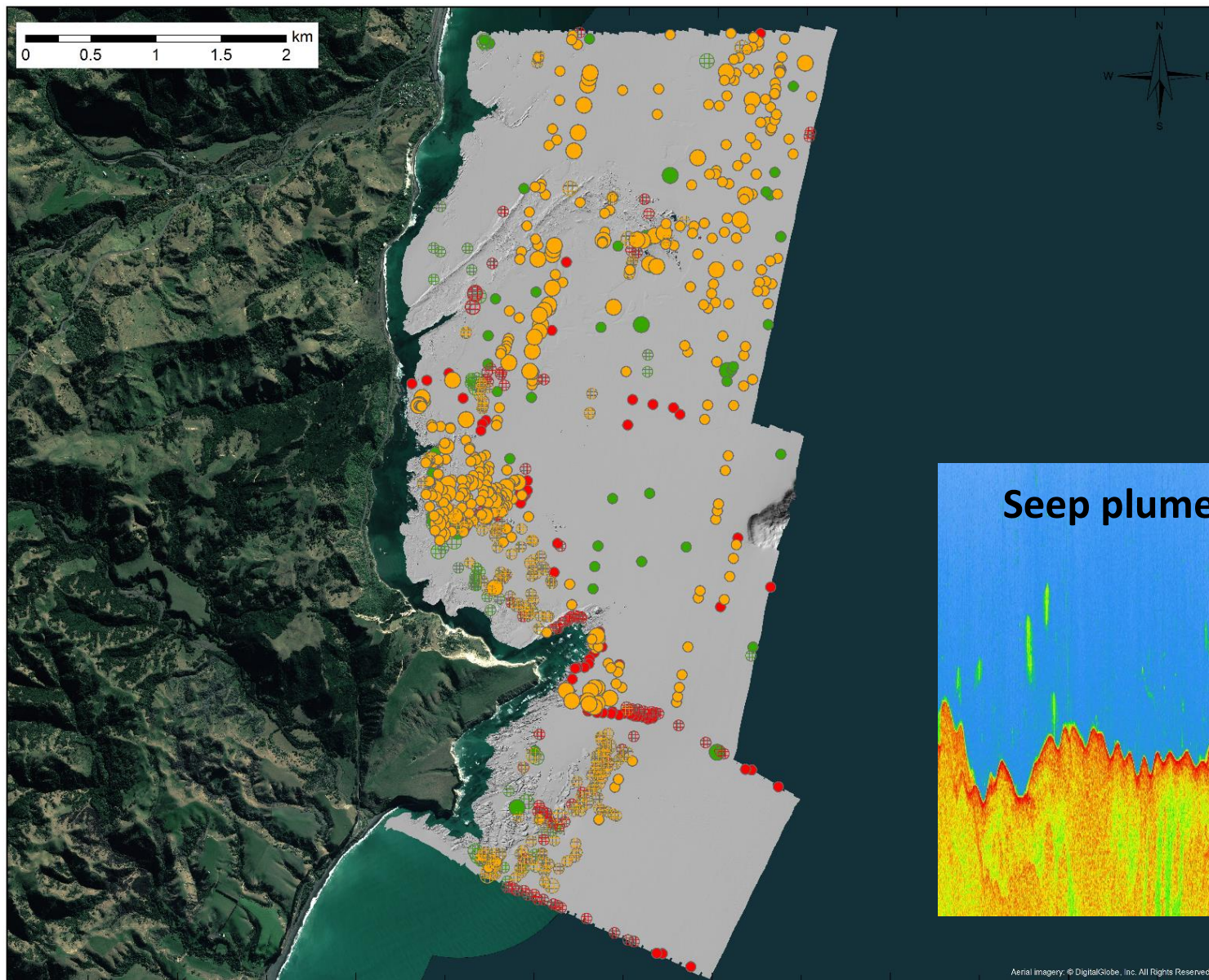


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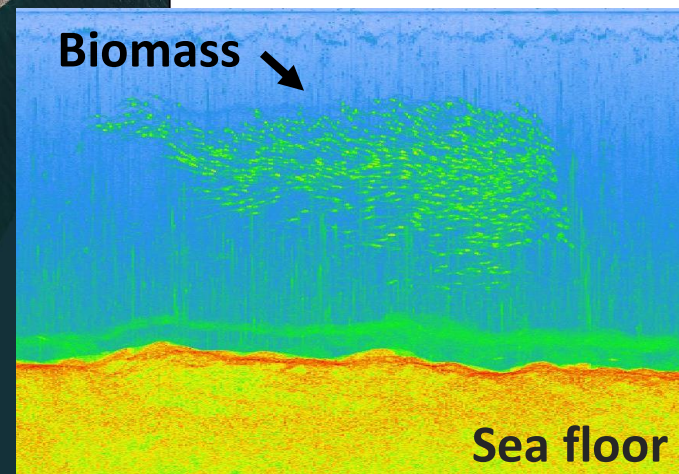
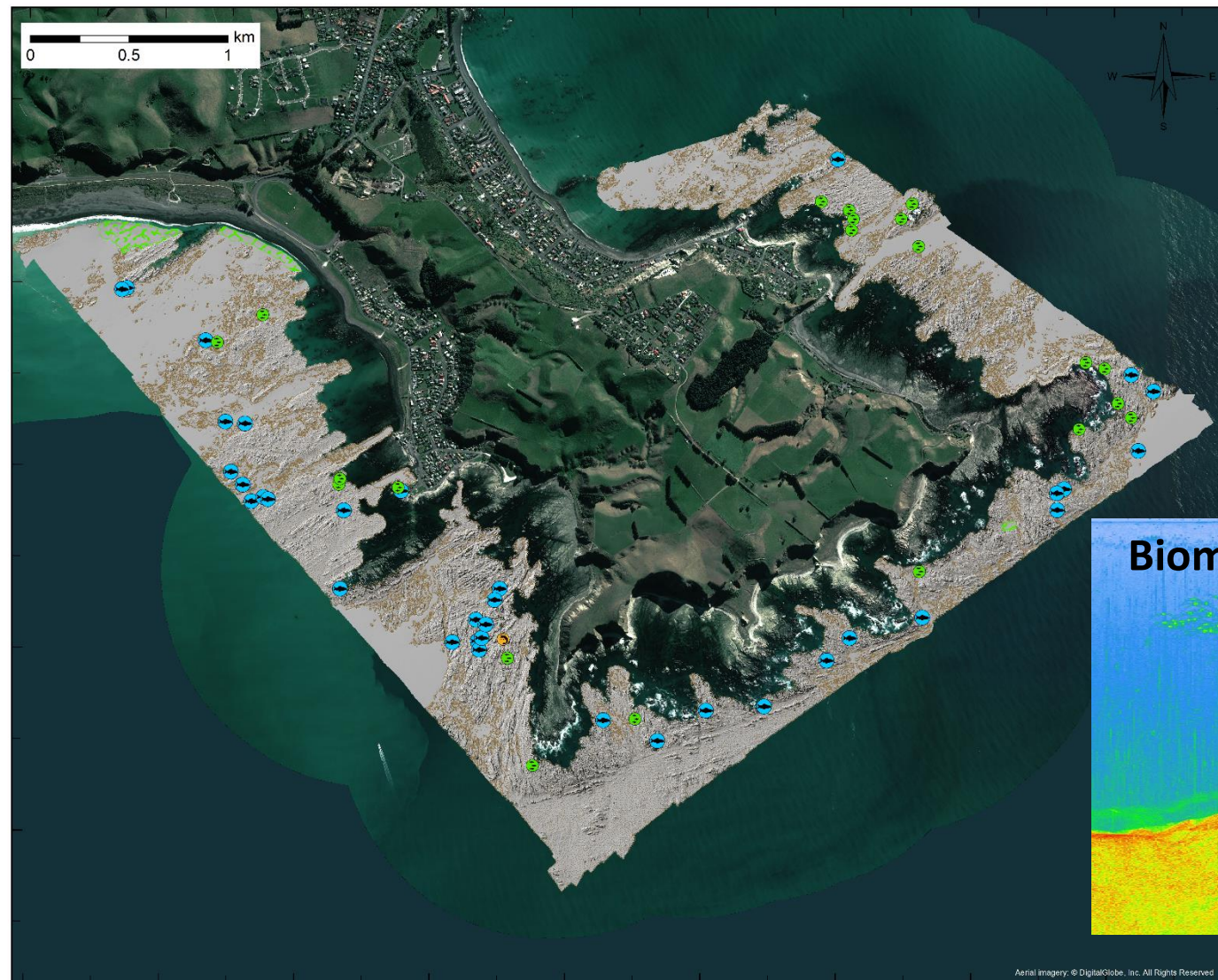


Water Column – Seep Plumes





Water Column – Biomass





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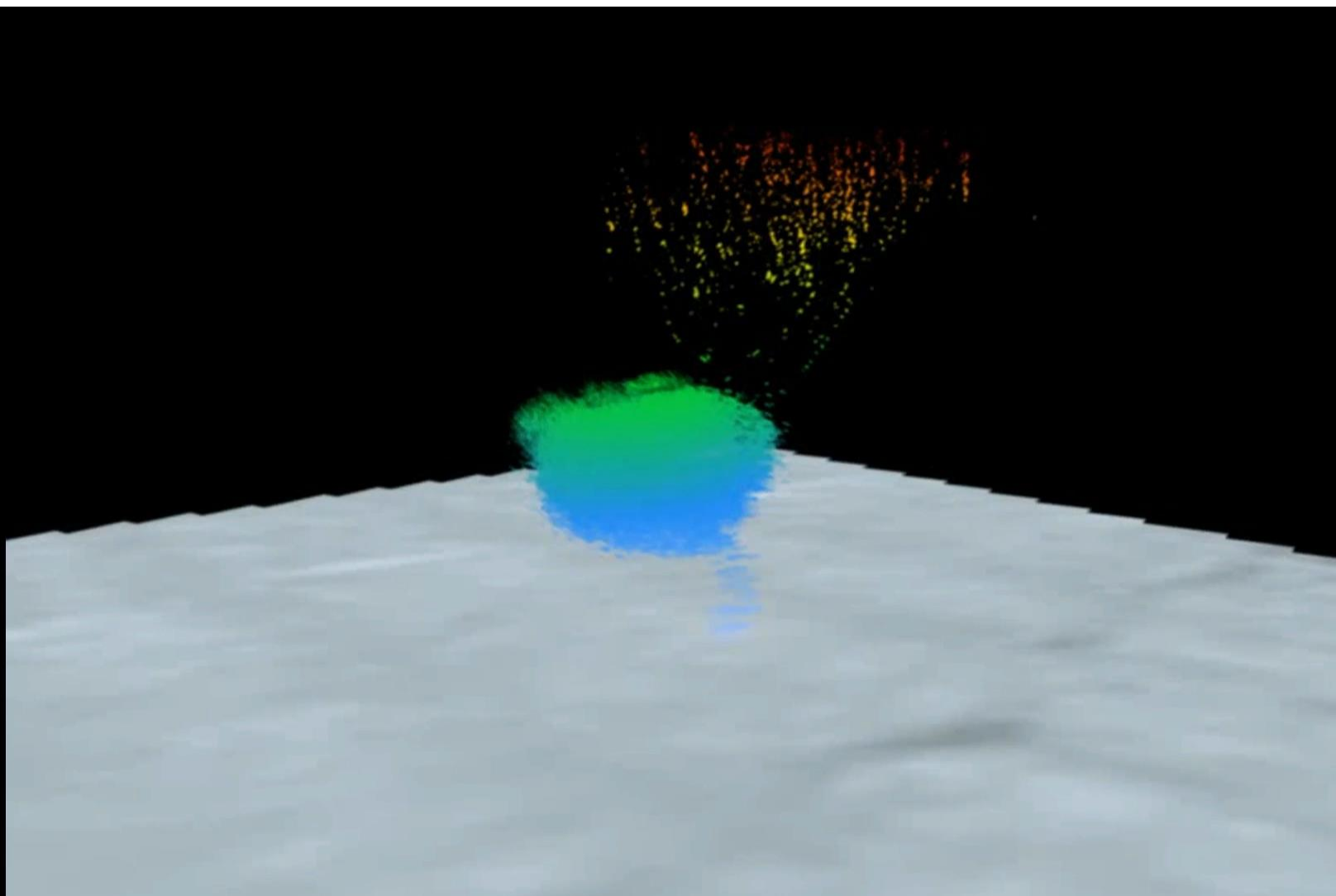


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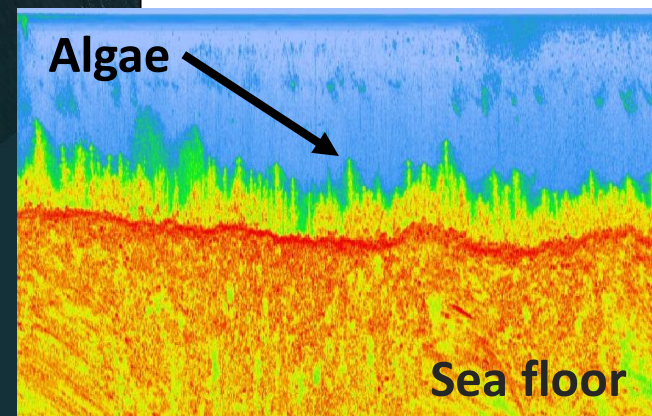
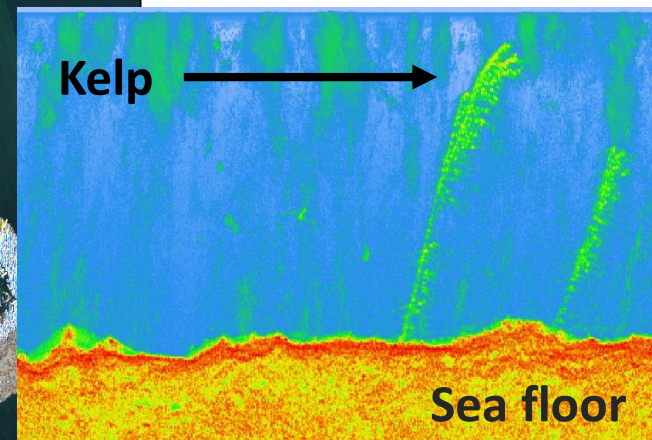
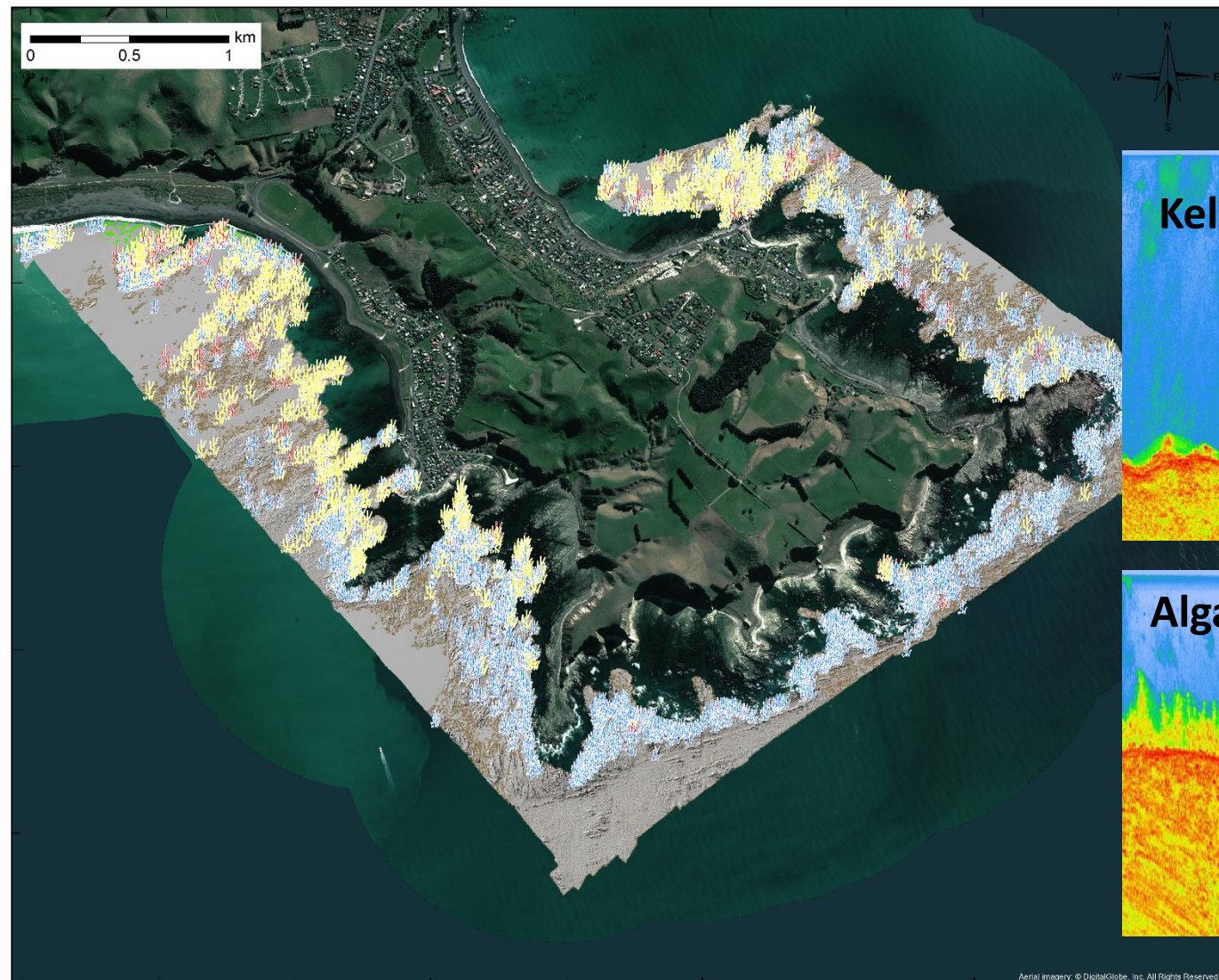


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Water Column – Kelp





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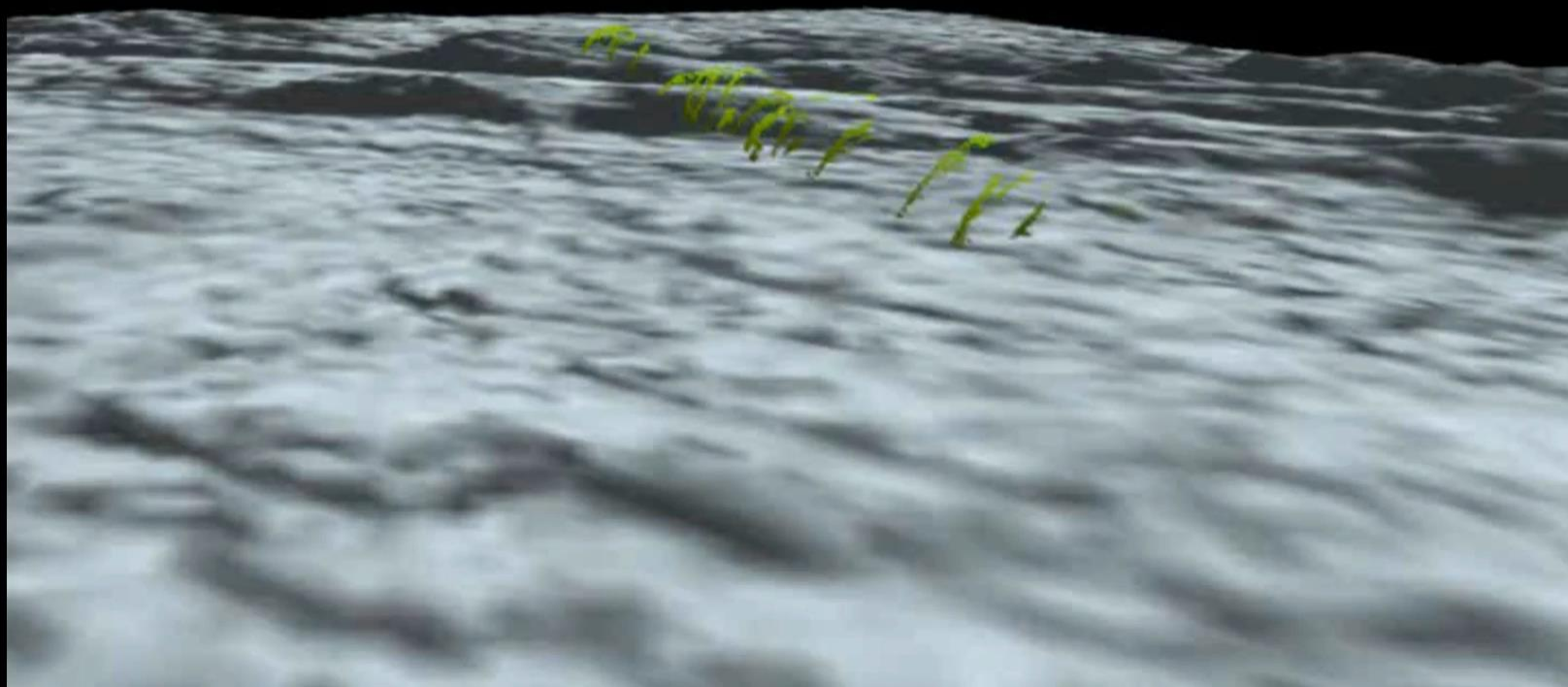


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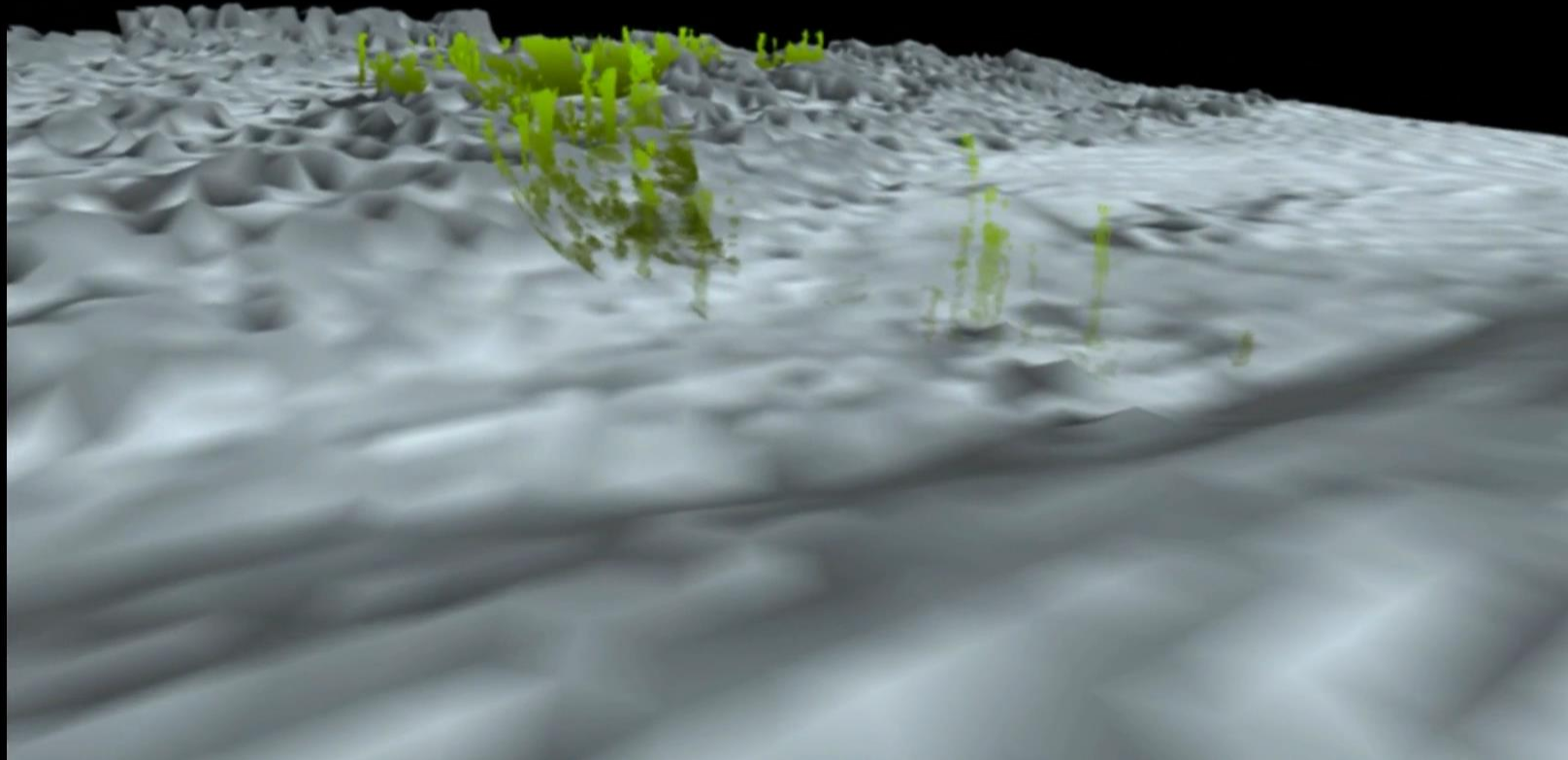


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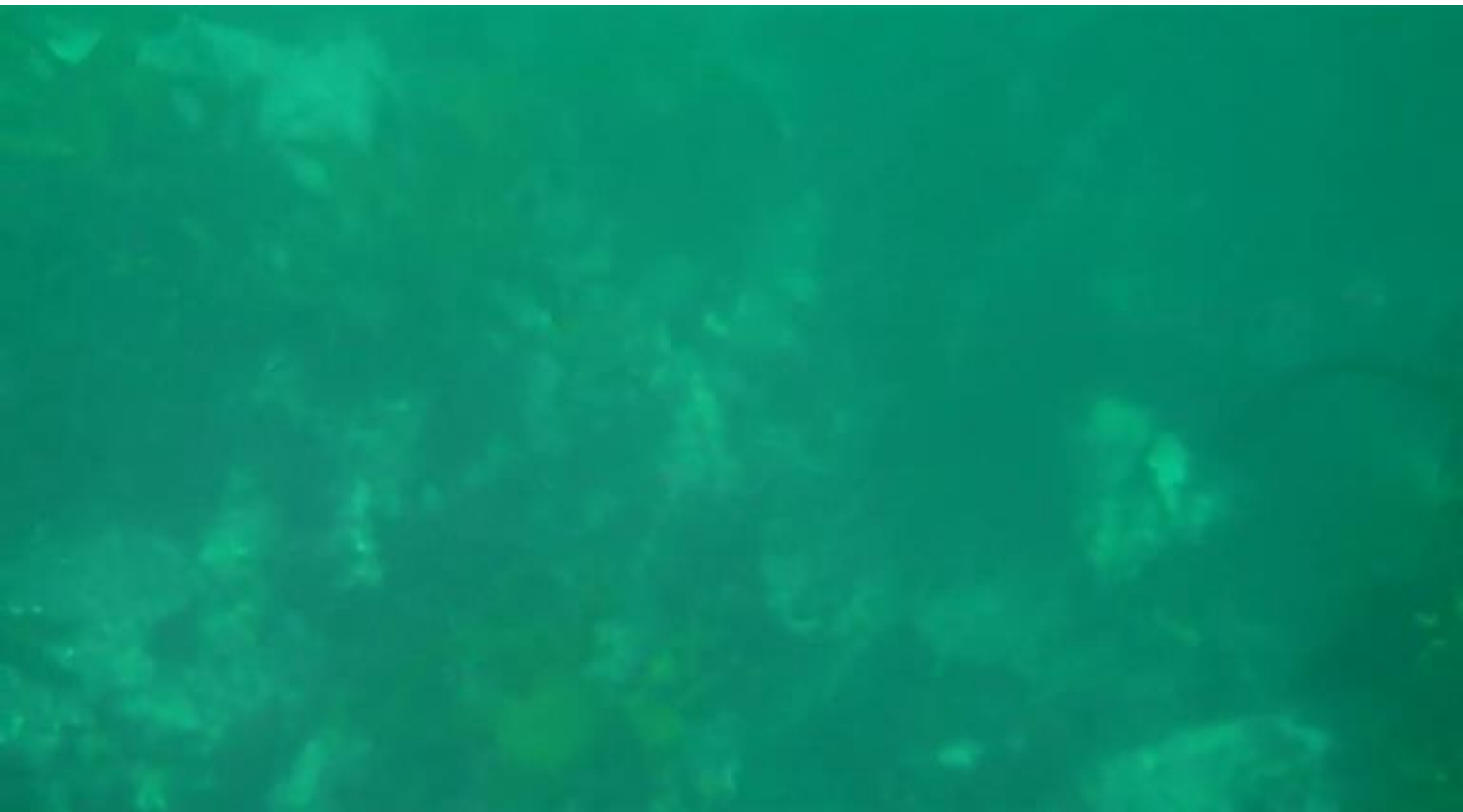


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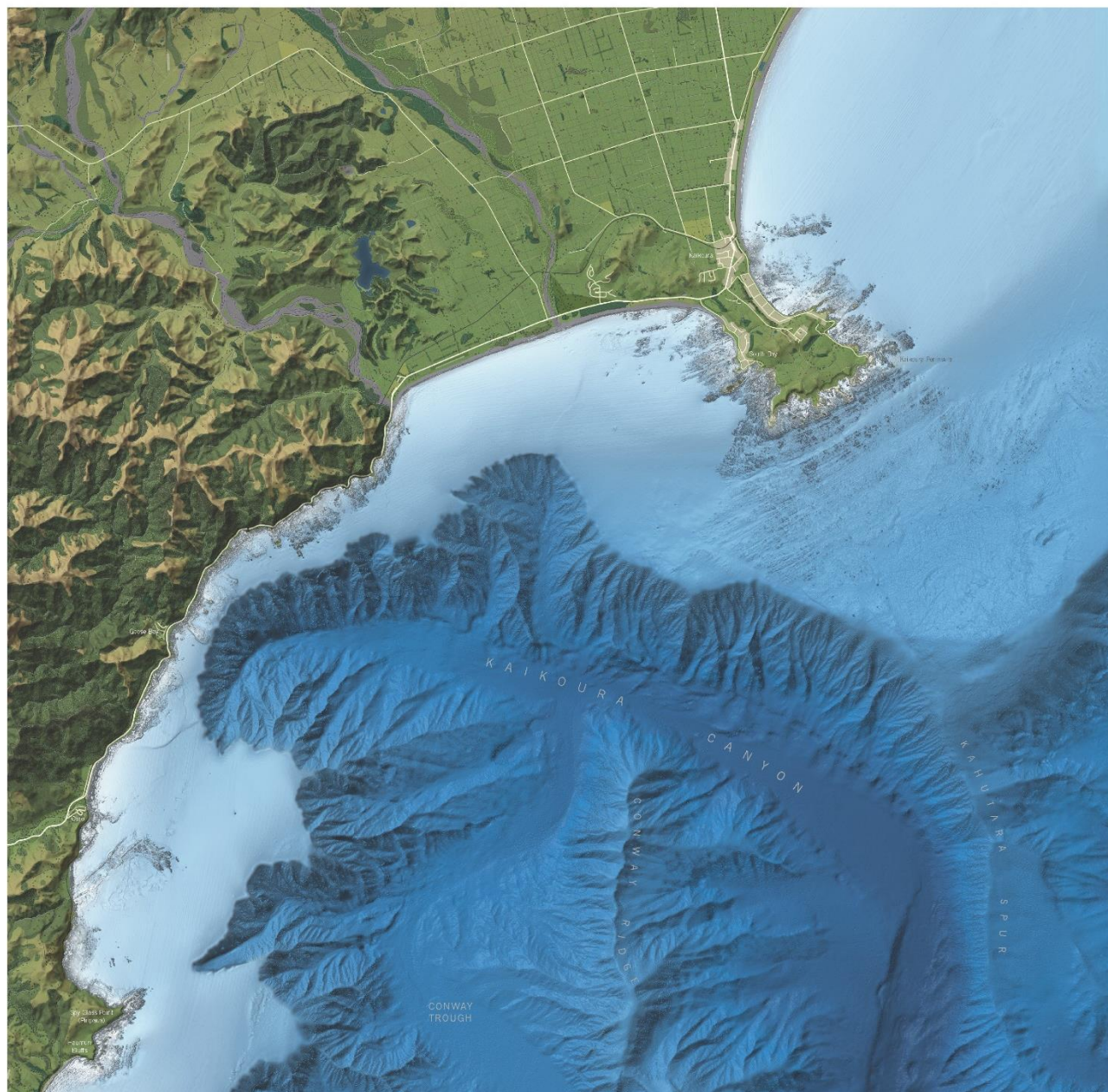


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Thank you!