



New Zealand National Report

13th IHO Hydrographic Commission on Antarctica (HCA)

Cadiz, Spain

3rd – 5th December 2013

1. Land Information New Zealand (LINZ)

1.1 In September 2012 a new CE, Peter Merci, was appointed.

1.2 The National Hydrographer (Adam Greenland) and Manager Hydrography (Andrea McDonald) lead the New Zealand Hydrographic Authority (NZHA) in partnership. Both positions report to the General Manager Customer Services, Jan Pierce.

1.3 The Hydrographic Leadership Team was established in September 2012 and the Team Leads are for Survey (Stuart Caie); Tides (Glen Rowe); Chart Production (Jennifer Ryan); and Hydrographic Systems (Kristian Jones). The NZHA is currently recruiting for two Nautical Cartographers.

1.4 The NZHA comprises 19 personnel, with the recent addition of a Cat-A Hydrographic Surveyor and two experienced Nautical Cartographers.

1.5 In 2011 LINZ and the Ministry of Foreign Affairs (MFAT) NZ Aid agreed an MOU to accelerate ENC production in the New Zealand area of charting coverage; and undertake a risk assessment of Pacific Island Countries to prioritise chart improvements and other safety mitigations such as aids to navigation, etc. for maritime safety.

The methodology for the Hydrography Risk Assessment and the Vanuatu proof of concept have been completed and published and are available from the IHO website at http://iho.int/mtg_docs/CB/CBA/SWPHC-Risk_Assessment.htm. The risk assessments for the Cook Islands and the Kingdom of Tonga are currently underway.

1.6 In 2005 LINZ commenced a programme of works to implement a Hydrographic Data Infrastructure (HDI) by developing the people, systems and processes to enable delivery of Hydrography for NZ to meet National and International needs. To-date the HDI Programme has delivered a number of projects:

- the implementation of a single source hydrographic production database (HPD)
- catalogue and discovery tool for hydrographic information
- the implementation of a Digital Data Repository for the storage of LINZ hydrographic survey data
- scanning of paper records i.e. Sounding Sheets, Reports of Surveys
- the implementation of a new RNC module
- production of RNCs in the unencrypted BSB file format
- the implementation of a bathymetric database
- the production and maintenance of official products (paper charts, ENCs and RNCs) from HPD.

HDI Projects in-progress:

- population of the single source hydrographic database with vector data for paper and ENC charting
- implementation of a publications module i.e. Notices to Mariners.

1.7 Since HCA12 LINZ has been involved in a number of international conferences and meetings, most notably:

- GEBSCO SCUFN-25, October 2012
- CBSC11, May/June 2013
- IRCC5, June 2013
- IBSC36, April 2013
- TSMAD23, January 2013

1.8 Adam Greenland, the National Hydrographer, is the LINZ official on the New Zealand Geographic Board and is the chair of the Undersea Feature Names Committee.

2. Surveys

2.1 There have been no new hydrographic surveys performed by LINZ in Antarctica since HCA12.

2.2 LINZ works with all key stakeholders including New Zealand Defence Force (NZDF), Maritime New Zealand (MNZ) and Ministry of Foreign Affairs & Trade (MFAT) to determine the priorities for the NZ Prioritised National Survey Plan.

3. New charts & updates

3.1 ENC's

To date LINZ has published a grand total of 186 official NZ ENC's.

Detailed information of the full NZ ENC folio can be found on the LINZ website at <http://www.linz.govt.nz/hydro/charts/digital-charts/encs/index.aspx> and in the ENC Coverage Catalogue available on the IHO website www.iho.int.

New Zealand – Ross Dependency			
Chart No.	Title	ENC Cell	Schedule
NZ 14065 (INT 65)	Ross Sea to New Zealand - East	*NZ14065E	10/2011
	Ross Sea to New Zealand - West	*NZ14065W	10/2011
NZ 14900 (INT 900)	Ross Sea - East	NZ21490E	05/2012
	Ross Sea - West	NZ21490W	05/2012
NZ 14901 (INT 9001)	Cape Royds to Pram Point	NZ414901	Q4 2013
NZ 14902 (INT 9002)	McMurdo Station and Scott Base	NZ514902	Q4 2013
NZ 14903 (INT 9003)	Approaches to Scott Island: Scott Island	NZ414903	Q4 2013
	Scott Island	NZ514903	Q4 2013
NZ 14906 (INT 9006)	Cape Adare	NZ414961 TBC	Q4 2013
	Cape Hallett	NZ414962 TBC	Q4 2013
	Ridley Beach	NZ514961 TBC	Q4 2013
	SeeBee Hook	NZ514962 TBC	Q4 2013
NZ 14907 (INT 9007)	Possession Islands	NZ414907	Q4 2013
NZ 14908 (INT 9008)	Cape Adare to Cape Daniell	NZ314908	Q4 2013
NZ 14909 (INT 9009)	Cape Hooker to Coulman Island	NZ314909	Q4 2013
NZ 14912 (INT 9012)	Balleny Islands	NZ314912	Q4 2013
	Balleny Seamount		

*NZ14065E and NZ14065W replace GB14065E and GB14065W.

3.2 ENC Distribution method

LINZ is a member of IC-ENC and distributes all NZ ENC's through the Australian Regional ENC Co-ordination Centre (IC-ENC Australia) according to the WEND principles.

View the IC-ENC World Catalogue here:

<http://websig.hidrografico.pt/website/icenc/viewer.htm>

3.4 RNC's

NZMariner is the product name of New Zealand's Official RNC folio, and is available for download at no charge from the LINZ website at

<http://www.linz.govt.nz/hydro/charts/digital-charts/nzmariner/index.aspx>

LINZ publishes NZMariner annually plus a monthly cumulative update file of corrections published in Notices to Mariners.

As part of LINZ's Hydrographic Data Infrastructure programme of works, the NZHA are migrating their current RNC portfolio to the single source database solution and will produce an unencrypted BSB file format from November 2013. The unencrypted BSB format brings a number of benefits to mariners, other chart users, software manufacturers and the NZHA.

3.5 Paper charts

Detailed information of the full NZ chart portfolio can be found on the LINZ website at <http://www.linz.govt.nz/hydro/charts/index.aspx>

4. New publications & updates

The NZ publications are available in whole or part to download from the LINZ website at: <http://www.linz.govt.nz/hydro>

The New Zealand Nautical Almanac 2013/14 Edition (NZ 204) is also available in hardcopy from chart retailers.

Publication	Title	Published:	Edition
NZ 202	New Zealand Chart Catalogue	Electronic copy only	Ed 15
NZ 204	New Zealand Nautical Almanac	June2013	2013/14

The New Zealand Chart Catalogue is available for download as a [PDF document](#)

5. Maritime Safety Information (MSI)

5.1 LINZ publishes Annual Notices to Mariners (available in the Nautical Almanac and online) and fortnightly Notices to Mariners (NtM) distributed via an email subscription service (<http://www.linz.govt.nz/hydro/ntms/subscribe>) and available online at <http://www.linz.govt.nz/hydro/ntms>. Copies of New Zealand NtMs can be obtained from LINZ, including PDF format on the LINZ website; Maritime New Zealand (MNZ); and chart retailers at the major ports of New Zealand.

A dedicated email address has been established for receipt of information pertinent to NtMs, ntm@linz.govt.nz.

5.2 LINZ is the NAVAREA XIV Coordinator navareaxiv@linz.govt.nz and MNZ is the National Coordinator for New Zealand.

NAVAREA XIV warnings in-force are available on the LINZ website <http://www.linz.govt.nz/hydro/nautical-info/navigation-area-14/index.aspx>. While every effort is made to keep the information up-to-date it may not always be possible to add and cancel warnings in real-time. The website displays the date and time of the last update.

A list of NAVAREA XIV warnings in-force is reprinted in the fortnightly editions of the New Zealand Notices to Mariners which are available from the LINZ website <http://www.linz.govt.nz/hydro/ntms/index.aspx>.

5.3 Voluntary Ship Reporting System

The New Zealand Search and Rescue Region (NZSRR) extends to 90° South and the NZ Search and Rescue Authorities have established a voluntary ship reporting system for all vessels operating in the NZSRR Area south of 60°S for the purposes of assisting RCCNZ in coordinating SAR operations in that area.

Area covered: 60°S to the southern edge of the Ross Sea bounded by 163° E to 131° W.

LINZ, as NAVAREA XIV Coordinator, broadcasts an annual NAVAREA XIV message advising all vessels to notify the authorities on entry and departure into the area and all vessels are encouraged to make daily position reports.

6. C-55 Status of Hydrographic Surveying & Nautical Charting Worldwide – NZ Update

6.1 The most recent updates to C-55 for NZ areas were submitted in October 2013 to be made available at http://iho.int/iho_pubs/CB/C-55/C-55_Eng.htm

7. Capacity Building

7.1 LINZ fully supports the IHO CBSC prime objectives and where possible, will assist, to develop future CB programmes within the region.

New Zealand is hosting the WWNWS6 meeting in August 2014, followed by MSI training, funded by the IHO CBSC.

8. Oceanographic Activities

8.1 General

LINZ is the coordinating agency of the Ocean Survey 20/20 programme, which aims to provide New Zealand with better knowledge of its ocean territory, including New Zealand's EEZ, continental shelf and the Ross Sea region.

The vision of Ocean Survey 20/20 is to provide New Zealand with the knowledge of its ocean territory to:

- demonstrate our stewardship and exercise our sovereign rights
- conserve, protect, manage and sustainably utilise our ocean resources, and
- facilitate safe navigation and enjoyment of the oceans around New Zealand.

Details of recent projects can be found at <http://www.os2020.org.nz>

Within New Zealand, there are two Crown Research Institutes involved in oceanographic studies: NIWA, the National Institute of Water and Atmospheric <http://www.niwa.co.nz/>; and GNS Science <http://www.gns.cri.nz/>.

GNS Science operate a data portal (<http://data.gns.cri.nz/dataportal/>) allowing users to discover and access a wide range of geoscience data across New Zealand.

8.2 GEBCO

LINZ is responsible for distribution of bathymetric data within NZ area of charting responsibility to GEBCO.

8.3 Tide Gauge Network

LINZ personnel undertake annual calibration checks of the sea level recorders installed at Cape Roberts and Scott Base.

LINZ is responsible for the Cape Roberts station and data is freely available from the LINZ web-site <http://www.linz.govt.nz/hydro/tidal-info/gauges/sea-level-data-downloads>. The site at Scott Base is part of the GLOSS core network and is operated by the National Institute of Water and Atmospheric Research Ltd (NIWA). A pressure sensor is used at Cape Roberts whilst the Scott Base station is a bubbler system.

9. Other Activities

9.1 Protocol for Undersea Feature Naming

The New Zealand Geographic Board Ngā Pou Taunaha o Aotearoa (NZGB) has responsibility for assigning, approving, altering, discontinuing names for undersea features

within its area of interest; that is the continental shelf of New Zealand and over the continental shelf of the Ross Dependency of Antarctica. In August 2012 the Protocol for Undersea Feature Naming was produced in collaboration with MFAT which requests other nations consult with the NZGB before naming undersea features within the area of interest and before submitting them to SCUFN.

The Protocol was tabled at SCUFN-25, October 2012 and SCUFN were requested to recognise and support the Protocol, and use it to inform future decisions on the naming of undersea features within the NZGB's area of interest. The protocol is available from the NZGB website <http://www.linz.govt.nz/placenames/propose-a-name/undersea-features>.

9.2 Participation in IHO Working Groups

Working Groups since HCA12 Meeting	Date
GEBCO SCUFN-25	October 2012
IBSC36	April 2013
CBSC11	May/June 2013
IRCC5	June 2013
TSMAD23	January 2013

Future Activities Include:	
HCA13	November 2013
CSPCWG 10	January 2014
IMO Basic Hydrography Training Course	February 2014
IBSC37	April 2014
WWNWS6	August 2014

9.3 Co-operation and Partnerships

LINZ has ongoing discussions with Antarctica New Zealand, MFAT and New Zealand Defence Force on future opportunities to collaborate on the collection and rendering of hydrographic data. In line with Routine Action HCA/3 LINZ met with MFAT, the ATCM national delegate, prior to the ATCM XXXVI meeting and provided a briefing on the importance of improving hydrography and nautical charting in Antarctica.

9.4 New technologies

Airborne Laser Bathymetry

LINZ, in collaboration with Waikato Regional Council are investigating recent developments in Airborne Laser Bathymetry (ALB) and how this technology can be used for the National Hydrographic Survey Programme; and assisting with improving existing hydrodynamic models for inundation modelling.

The chosen study areas have recent multi-beam surveys. ALB fieldwork was completed in May 2013 and complete data deliverables received November 2013.

Smartphone Mobile Apps

In July 2013 LINZ launched the *HNote* smartphone application ([Android](#) or [Apple](#)) which allows the user to photograph a hazard, make a record of the location manually or using GPS, and send the information directly to the New Zealand Hydrographic Authority.

In August 2013 LINZ contributed to the launch of the *MarineMate* smartphone application ([Apple](#), Android to follow) which allows users to receive maritime information pertinent to their area of interest, including Notices to Mariners.

10. Conclusion

Many areas within the Ross Sea Region are not adequately surveyed or charted. There is much work ahead to survey and chart these remote and hostile areas to modern standards.

LINZ is committed to hydrography in the Southern Ocean and Ross Sea Region through the ongoing work of the IHO HCA.

11. Contact details

Land Information New Zealand
New Zealand Hydrographic Authority
155 The Terrace
Private Box 5501
Wellington 6145
New Zealand

LINZ, NZHA
<http://www.linz.govt.nz/hydro/index.aspx>
NtM Subscription
<http://www.linz.govt.nz/hydro/ntms/subscribe/index.aspx>
NtM email: ntm@linz.govt.nz
NAVAREA XIV Coordinator navareaxiv@linz.govt.nz
NAVAREA XIV Warnings In-Force
<http://www.linz.govt.nz/hydro/nautical-info/navigation-area-14>