



Toitū Te Whenua
Land Information
New Zealand

Maritime Digital Transformation

New Zealand Hydrographic Authority

22 November 2023

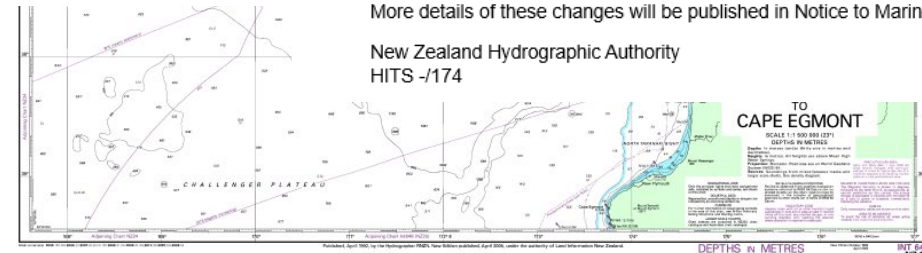
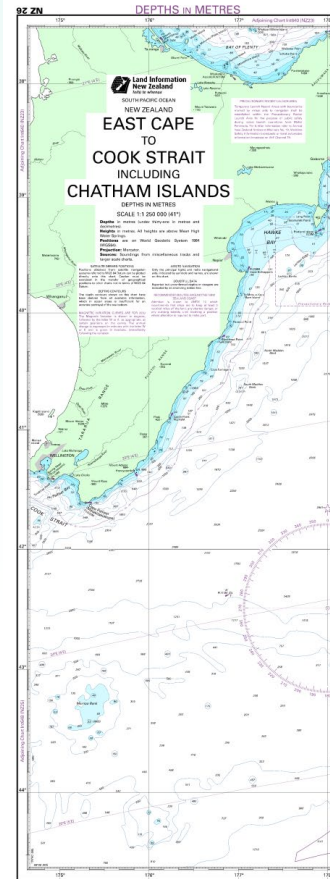
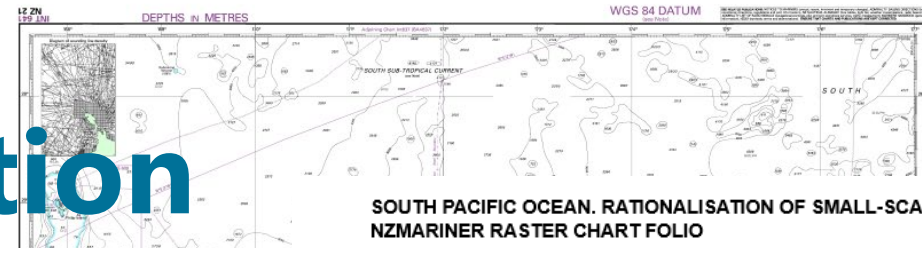
Outline

1. Product Rationalisation
2. MDT- NZ Journey toward S-100
 - Paper Charts
 - S-101
3. What is next?

Product Rationalisation

In preparation for this digital future, LINZ as New Zealand Hydrographic Authority are withdrawing some navigational products and services. This will free resources needed to create and maintain the ENC products, make improvements to those products and prepare for the S-100 implementation.

Product Rationalisation



Withdraw 10 small scale paper charts

- Raised in NZ national report and ICCWG report at SWPHC 20
- 6 national charts at 1 : 1,250,000
- 4 INT charts at 1:1,500,000

Withdraw NZMariner

- New Zealand's official raster navigational charts (RNC) folio

General Notice – NtM Editions

- Initially published October 13th 2023
- Withdrawal December 8th 2023

SOUTH PACIFIC OCEAN. RATIONALISATION OF SMALL-SCALE PAPER CHARTS AND WITHDRAWAL OF NZMARINER RASTER CHART FOLIO

Toitū Te Whenua, LINZ the New Zealand Hydrographic Authority (NZHA), is responsible for the rollout of a new Universal Hydrographic Data Model – known as the S-100 standard.

Commencing in 2026, S-100 products will be gradually phased in across the maritime community by 2030. Timings will align with those set by the International Hydrographic Organisation (IHO) to meet the update of the International Maritime Organisation (IMO) SOLAS S-100 ECDIS Performance standard.

In preparation for this digital future, the NZHA will be withdrawing some navigational products and services. This will free resources needed to create and maintain improvements to the ENC product and prepare for the S-100 implementation.

Rationalisation of New Zealand Paper Nautical Charts

There has been a significant shift in demand from paper nautical charts to Electronic Navigation Charts (ENC). The NZHA will therefore be rationalising the New Zealand paper chart portfolio to permit a greater focus on new editions of ENC. Note that equivalent ENC coverage will remain in place. The following New Zealand small scale paper charts will be withdrawn by December 2023:

Chart Number	Chart Title	Scale
NZ 21 (INT 641)	Norfolk Island to Cape Egmont	1:1,500,000
NZ 22 (INT 639)	Kermadec Islands to East Cape	1:1,500,000
NZ 23 (INT 640)	North Island	1:1,500,000
NZ 24	Western Approaches to South Island	1:1,250,000
NZ 25 (INT 648)	South Island	1:1,500,000
NZ 26	East Cape to Cook Strait including Chatham Islands	1:1,250,000
NZ 27	Chatham Islands to Bounty Islands	1:1,250,000
NZ 28	Stewart Island/Rakiura to Macquarie Island	1:1,250,000
NZ 29	Stewart Island/Rakiura to Campbell Island/Motu Ihupuku	1:1,250,000
NZ 31	Bounty and Antipodes Islands and part of the Southern Ocean	1:1,250,000

These charts have been assessed to be fully covered by other scales and withdrawal will not impact navigation safety.

NZMariner (RNC) service to be permanently withdrawn

The NZHA intends to withdraw its NZMariner service by December 2023. The NZMariner service has been replaced by the NZ ENC Service as Electronic Navigational Charts (ENC) must be used as the primary means of navigation in ECDIS. NZ ENCs are distributed globally through [IC-ENC](#) Value Added Resellers delivering comprehensive end-user services for use in ECDIS, and locally through the [NZ ENC Service](#). Georeferenced raster chart TIFF images (GeoTIFFs) are also available on the [LINZ Data Service](#) for non-navigation use.

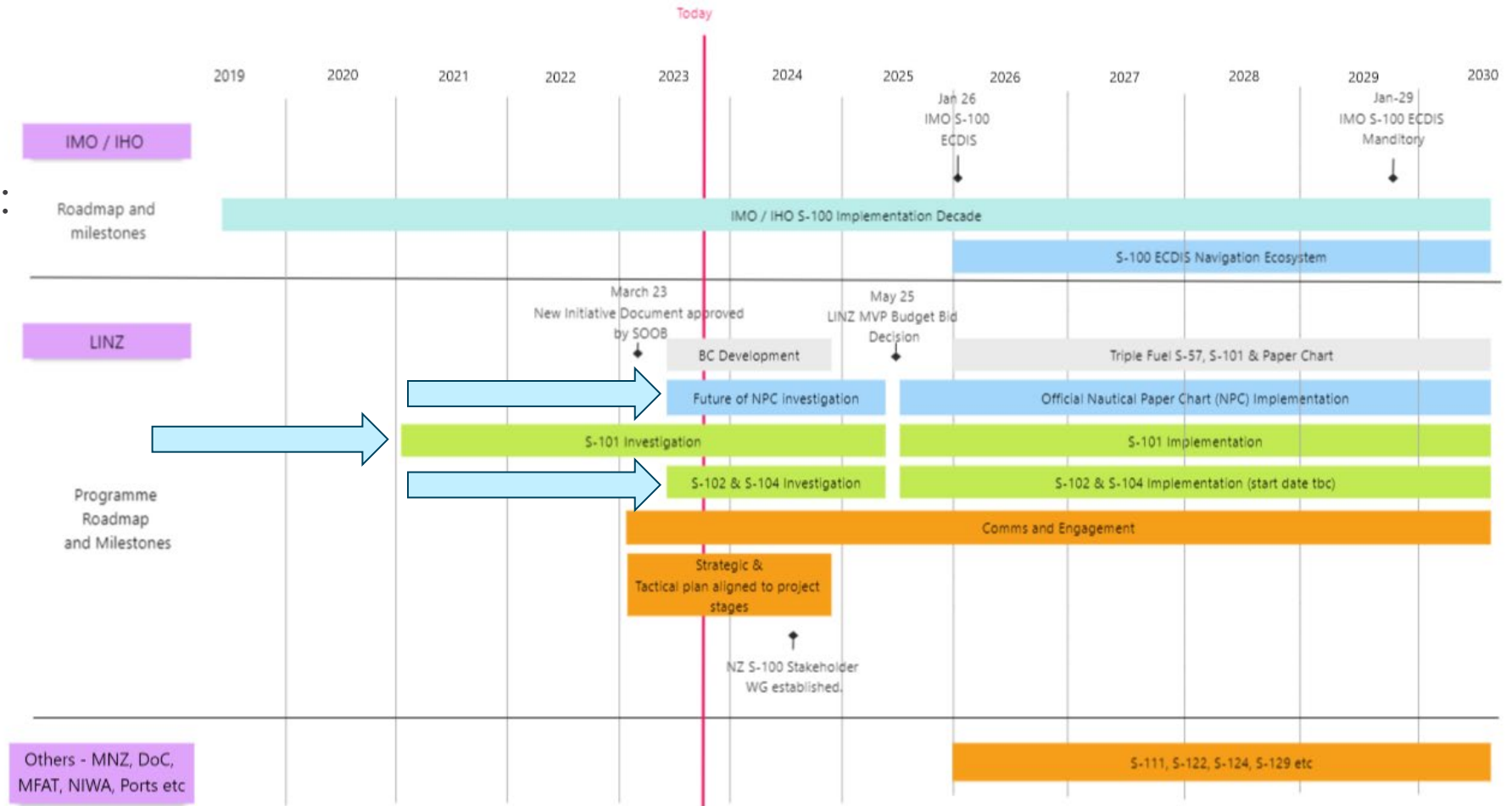
More details of these changes will be published in Notice to Mariners editions over the coming months.

New Zealand Hydrographic Authority
HITS -174

MDT - NZ journey toward S-100

Investigation in progress for:

- Future of the Official NZ Paper Chart
- S-101
- S-102 and S-104



Future of the Official NZ Paper Chart

All ships are required to carry "adequate and up-to-date charts" under SOLAS chapter V (regulation 27) to assist in navigation.

AIM: *Produce and maintain a paper chart folio that meets carriage requirements for the areas we are the Primary Charting Authority for NZ, NZ 5 and Antarctica.*

These paper chart will be:

- Derived products and not a primary product-ENC are primary products
- Involve maximum automation with minimum manual intervention
- Utilise the S4 symbols and guidelines (Regulations for International (INT) Charts and Chart Specifications of the IHO)

Future Official Paper Chart cont'd

What else needs to be considered?

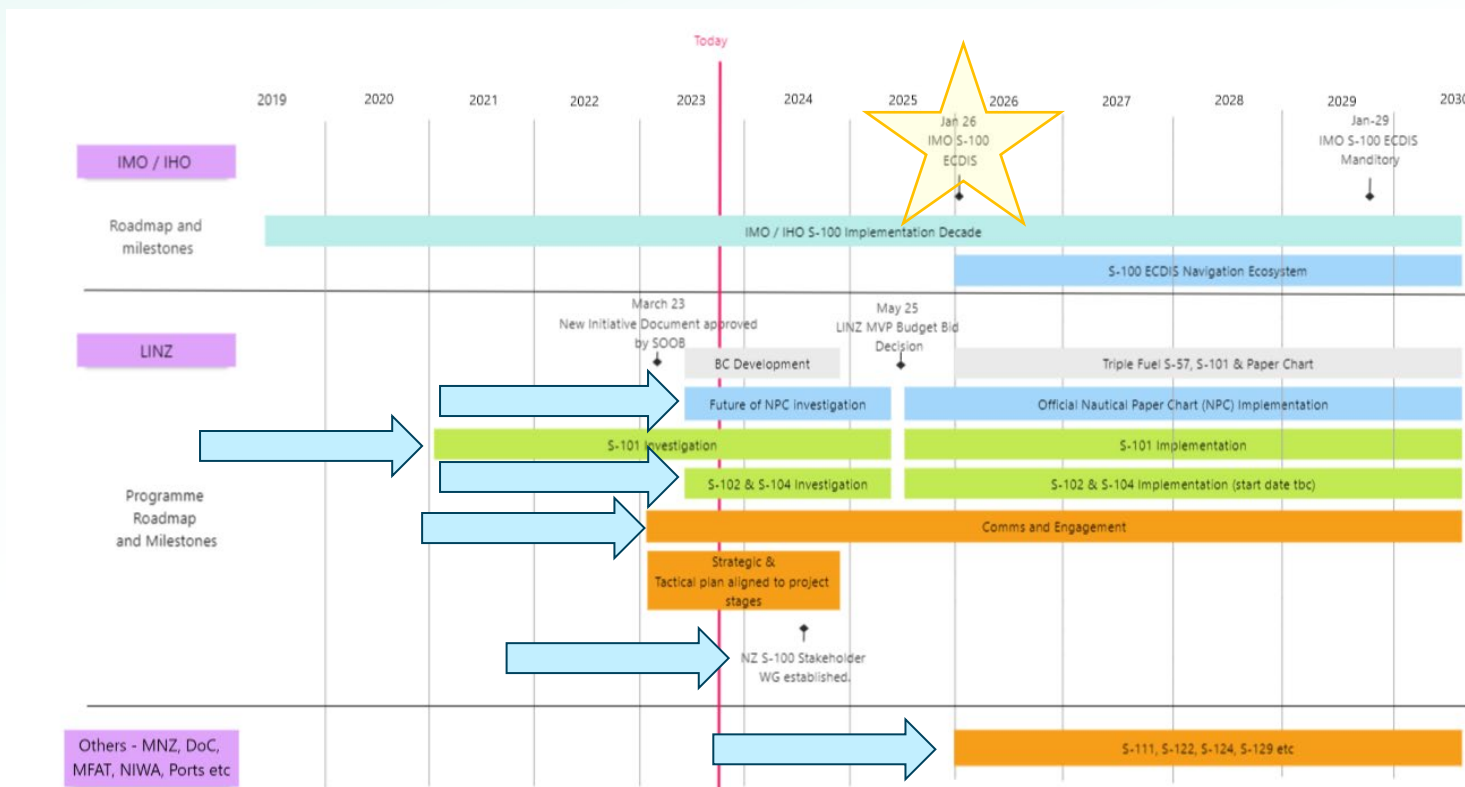
- What content is mandatory for a paper chart to meet carriage requirements?
- How will the charts be maintained.
 - What is the future of Notice to Mariners (NtMs)?
- How will we transition from the current way to the new way (impacts on users).
- What are others doing?
 - IHO Nautical Cartography Working Group (NCWG)
 - Other HOs
 - Industry

S-101 Conversion Tasks

- Investigation for the conversion of our S-57 data to S-101 as well S-101 back to S-57 ongoing.
- Reviewing possible encoding changes to improve the transformation automation with a larger success rate.
 - What needs to be amended before the conversion can take place
 - LINZ encoding is not easily converted to S-101 (eg INFORM and RESARE)
 - Dropped attributes and their impact on S-101 products.
- Challenges
 - Evolving S-101 encoding guidance (ENC Product Specification Edition 1.1.0, April 2023)
 - Resourcing

What is Next?

- Continue with the investigation of S-10X Products
 - S-101
 - S-102
 - S-104
- Progress with the future of the paper chart investigation
- Continue to engage with other HOs, Stakeholders and other industry
- 2024
 - NZ S-100 Working Group
 - NZ S-100 Testbed



Thank you!