



14th Meeting of the WENDWG Report of the South West Pacific Hydrographic Commission (SWPHC)

WENDWG14, Virginia, United States of America –20 –22 February 2024



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South West Pacific Hydrographic Commission



Allocation of Production Responsibilities, Coordination

| Nations | Primary Charting Authority |
|--|----------------------------|
| <u>SWPHC Members:</u> | |
| Australia | Australia |
| Fiji | UK |
| France | France |
| New Zealand | New Zealand |
| Papua New Guinea | Australia |
| Samoa | New Zealand |
| Solomon Islands | Australia |
| Tonga | New Zealand |
| UK | UK |
| USA | USA |
| Vanuatu | UK |
| <u>SWPHC Associate Members:</u> | |
| Cook Islands | New Zealand |
| Indonesia | Indonesia |
| Kiribati | UK |
| Nauru | UK |
| Niue | New Zealand |
| Palau | USA |

| Nations | Primary Charting Authority |
|--|----------------------------|
| <u>SWPHC Observer:</u> | |
| New Caledonia | France |
| <u>Intergovernmental Observer Organization:</u> | |
| Secretariat of the Pacific Community (SPC) | |
| Fed States of Micronesia | USA |
| Marshall Islands | USA |
| American Samoa | USA |
| Pitcairn Islands | UK |
| Guam | USA |
| French Polynesia | France |
| Northern Mariana Islands | USA |
| Tokelau | New Zealand |
| Tuvalu | UK |
| Wallis and Futuna | France |



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SWPHC 20 Actions - ICCWG

| No | Action | Responsible | Deadline and Status |
|----|--|-------------|--|
| 35 | Assign the role of the Charting Regional Coordinator for the implementation of the S-100 Implementation Roadmap to the ICCWG | ICCWG | Complete – Circular letter emailed 8 th Nov 2023 confirming Verena Bosselmann-Borsos as SWPHC S-100 Coordinator. |
| 36 | SWPHC to coordinate the efforts on the implementation of S-100, promote the cooperation and exchange of experiences, and identify CB requirements. | ICCWG | Ongoing agenda item – S100 Annual meetings, CB Coordinator informed, exchange of ideas with other RHC S100 experience. E.g. SAIHC, HCA. |
| 37 | SWPHC to consider the role of regional charting coordinator to include S-1xx Products as RHC WEND Coordinator | ICCWG | Ongoing - standing agenda item. ICCWG Chair presented SWPHC ENC coordination report to WENDWG Feb meeting 24. |
| 38 | ICCWG to review ToR with respect to the role of regional charting coordinator and circulate. | ICCWG | Get redline version ready for ICCWG Jan meeting. Final Draft version to be presented at SWPHC pre meeting VTC. ToR final draft to be sent for Approval at SWPHC21. |



Paper INT charts produced since the last conference

There are currently 56 INT Charts in Region L

UKHO

- 2 New Editions of INT charts previously adopted from France (SHOM).
- No further new editions of GB INT charts produced since last conference

Australia (AHO)

No New editions of AUS INT charts within SWPHC

France (SHOM)

| FR Chart Number | Title | Published | ENC |
|-----------------|--|----------------------------|----------|
| 6686 (INT6843) | Nouvelle-Calédonie (partie Sud-Est) - Iles Loyauté | 07 st July 2023 | FR366860 |

New Zealand

| New Editions Feb 2023 - Feb 2024 | Area | Published |
|-------------------------------------|---|---------------|
| NZ 14600 (INT 600) | New Zealand Including Norfolk Island and Campbell Island / Motu Ihupuku | December 2023 |



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Nav Purpose 1 & 2 ENC produced since the last conference

| New Editions Feb 2023 - Feb 2024 | Area | Published |
|---|--|------------|
| Australia | | |
| AU130120 | Australia - Northern Approaches | 15/06/2023 |
| AU160120 | Australia - Southern Approaches | 30/11/2023 |
| AU210140 | Ward Hunt Strait to Torres Strait | 02/03/2023 |
| AU220120 | Timor Sea | 19/10/2023 |
| AU220130 | Gulf of Carpentaria to Bathurst Island | 18/05/2023 |
| AU220140 | Coral Sea (North West) | 11/05/2023 |
| AU220150 | Coral Sea (North East) | 12/10/2023 |
| AU230140 | Coral Sea (South West) | 12/10/2023 |
| AU230150 | Coral Sea (South East) | 05/10/2023 |
| AU240130 | Head of Great Australian Bight to Cape Jaffa | 19/10/2023 |
| AU240140 | Cape Martin to Cape Howe | 30/11/2023 |
| AU240150 | Bermagui to Coffs Harbour | 28/09/2023 |
| AU250140 | Tasmania to South Tasman Rise | 09/11/2023 |
| France | | |
| FR272680 | Nouvelle-Calédonie | 11/01/2023 |
| New Zealand | | |
| NZ14600E | South Pacific Ocean - New Zealand including Norfolk Island and Campbell Island / Motu Ihupuku - East | 01/12/2023 |
| UK | | |
| No New ENC Cells produced since last conference | | |
| USA | | |
| No New ENC Cells produced since last conference | | |



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INT Charts update

US - NOAA

Paper INT Chart Update:

NOAA is completing a five-year program to end all raster and paper nautical chart production by 2025. Production of all NOAA paper nautical charts (including paper INT charts), raster navigational charts (NOAA RNC®), and related products will cease in December 2024.

For a list of latest editions and pending chart cancellations, visit:

<https://www.charts.noaa.gov/MCD/Dole.shtml>

France

On French waters around New Caledonia, SHOM is producing a chain at scale 1:300000. FR6768 (INT6844) - Nouvelle-Calédonie (partie Sud) - Ile des Pins - expected to be published in 2026.

The SHOM project “Unified Cartographic Source” will review methodology (included automation) to produce French charts with a data-centric approach and the principle of “single charting scale per area”. This project will include a homogenisation of chart scales by Usage Band and a review of all the French charts to eliminate discontinuities between products: SHOM plans to start its production (by France) with this new method mid-2024. The southwest Pacific should be reviewed after 2028.

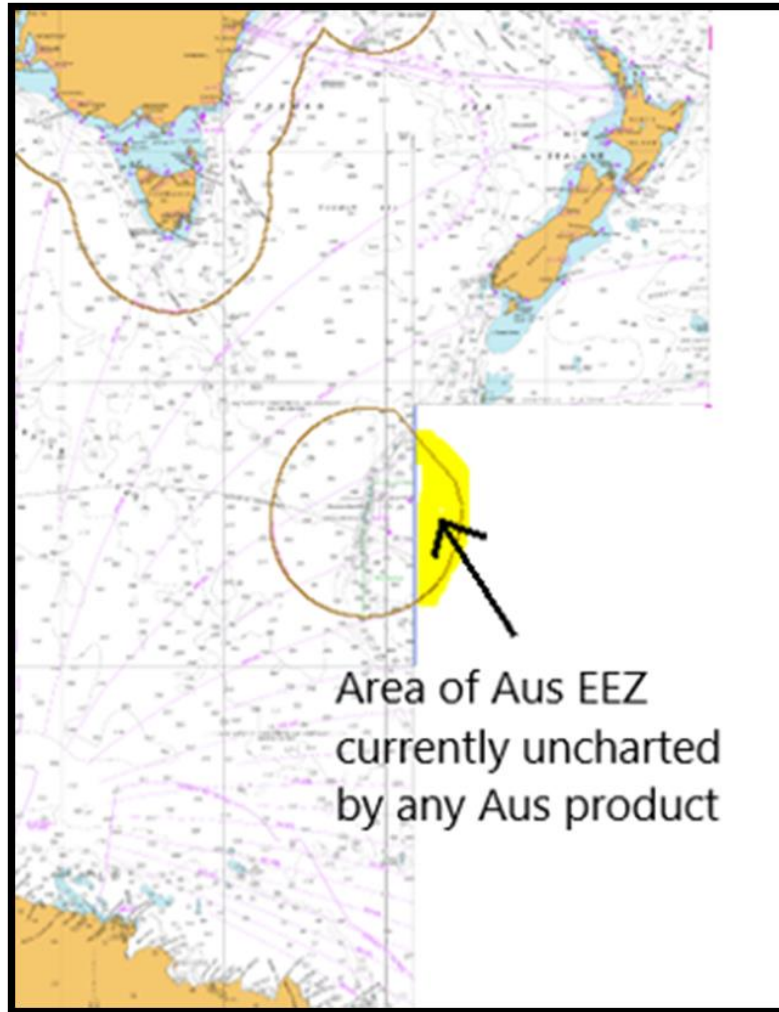


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Paper INT charts & Nav Purpose ENC underway



Australia

The AHO proposes extending an area of its ENC Usage 1 coverage east of Macquarie Island allowing Australia full coverage of its EEZ limit.

Australia is liaising with LINZ with proposals to harmonise the UB1 cells with Australia extending its AU1 to cover its EEZ and retract data to the north so that New Zealand can extend its NZ UB1 ENCs to completely cover its EEZ.



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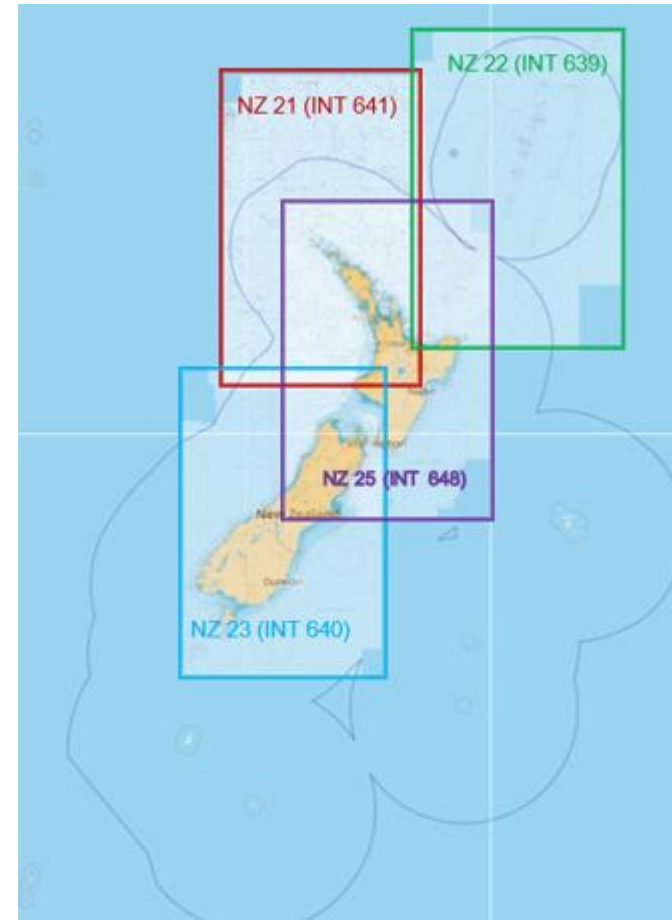
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Paper INT charts & Nav Purpose ENC underway

New Zealand (LINZ)

- The work to withdraw the four identified INT charts, NZ 21 (INT 641), NZ 22 (INT 639), NZ 25 (INT 648) and NZ 23 (INT 640) was completed 8th December 2023.
- LINZ will also be working with the AHO to amend the coverage around Macquarie Island as part of the proposal put forward by the AHO



Gridded Scheme update - USA

US - NOAA

Nav Purpose 1 and 2 ENC Updates:

NOAA's Office of Coast Survey is in the process of rescheming its ENC suite. Current ENC boundaries are based on the paper nautical chart extents but will transition to a rectangular grid following latitude and longitude lines. Additionally, reschemed ENCs will have a standardized size with two scales per usage band.

| NOAA Usage Band | Navigational Purpose | Cell Height | Cell Width | Reschemed NOAA ENC Scale |
|-----------------|----------------------|-------------|------------|-----------------------------|
| 1 | Overview | 19.2° | 19.2° | 1:10,000,000 1:3,500,000 |
| 2 | General | 4.8° | 4.8° | 1:1,500,000 1:700,000 |

NOAA Nav Purpose 1 & 2
ENC Grid

| NGA Usage Band | Navigational Purpose | Cell Height | Cell Width | Reschemed NOAA ENC Scale |
|----------------|----------------------|-------------|------------|--|
| 1 | Overview | 30° | 30° | 1:10,000,000 1:3,500,000 1:1,500,000 |
| 2 | General | 10° | 10° | 1:1,000,000 1:700,000 1:520,000 1:350,000 |

NGA's Maritime Safety Office is in the process of transitioning its DNC coverage into a worldwide ENC grid following the standardized grid and sizes in the table above



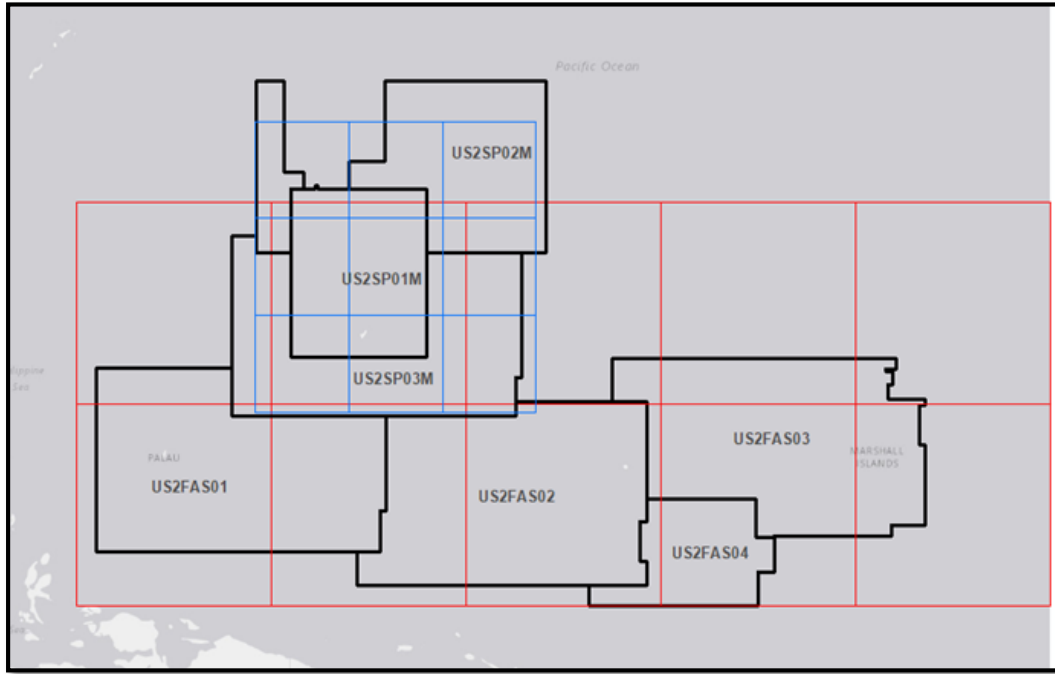
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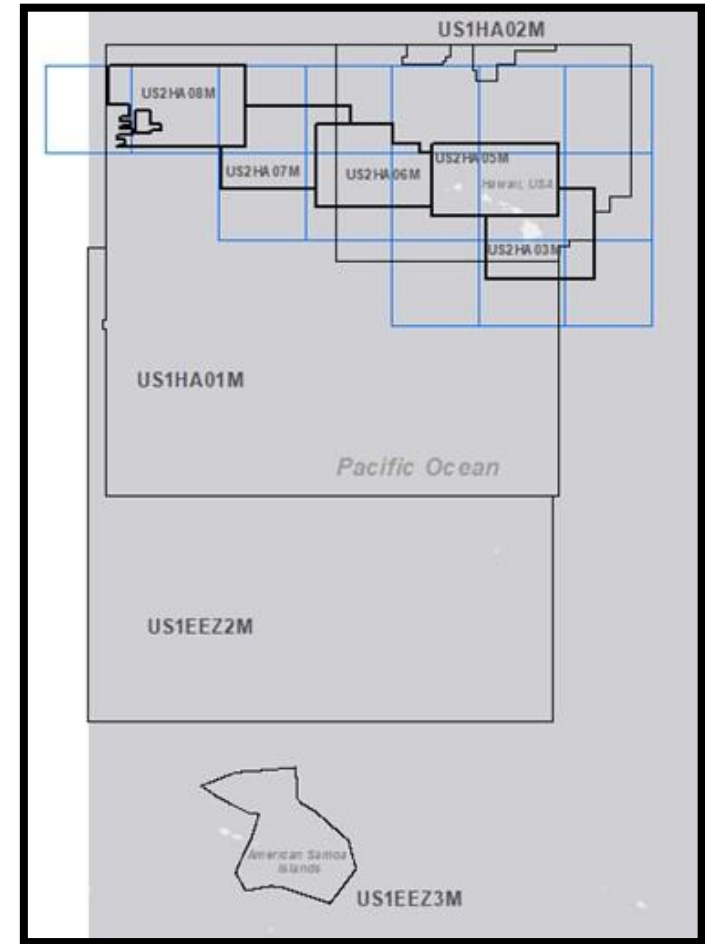


Gridded Scheme update - USA

NOAA - current NOAA and NGA ENC boundaries



US current ENC boundaries (outlined in black) with planned Nav Purpose 2 reschemed ENC boundaries (outlined in blue and red)



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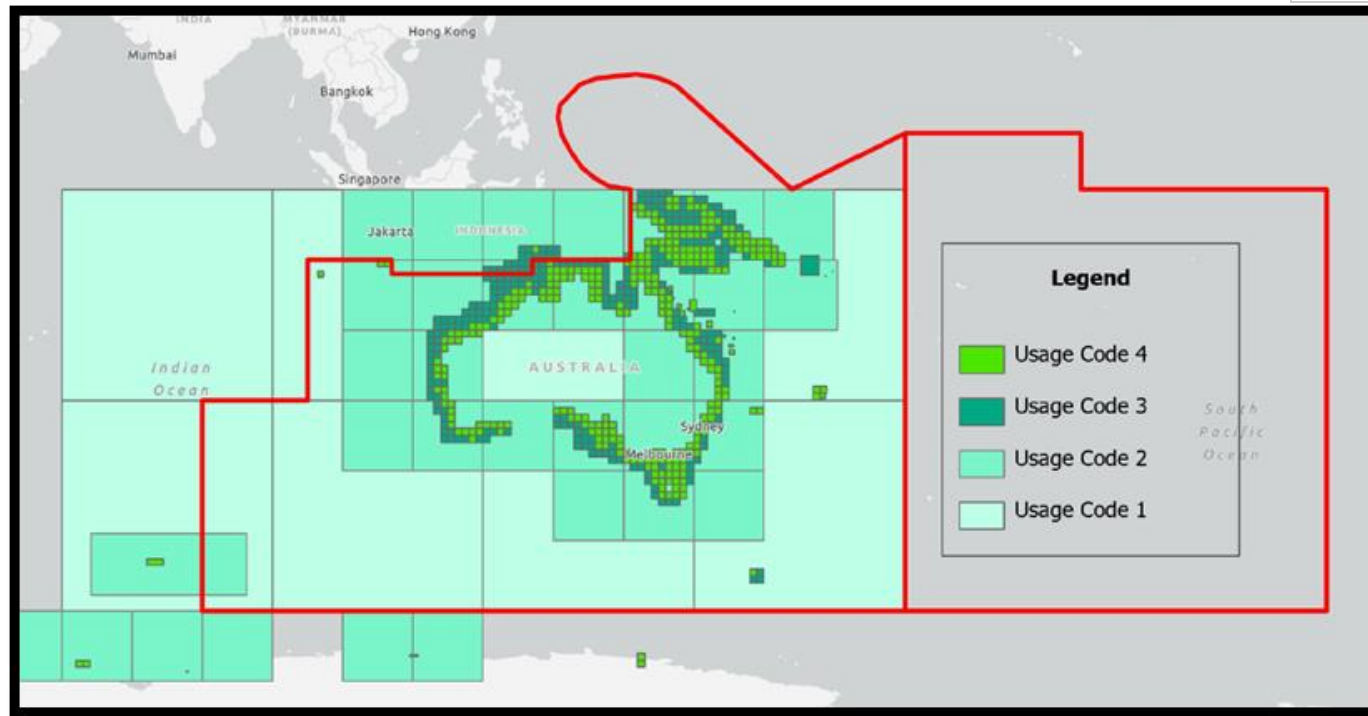


Gridded Scheme update - Australia

Australia (AHO)

Australia's current ENC scheme is gridded scheme as set out in the table below. The proposed S-101 scheme will correlate with the current S-57 Gridded scheme as shown in image below.

| Navigation Purpose Code | Usage | Area (as produced by AHO) |
|-------------------------|----------|--|
| 1 | Overview | 30° x 30° |
| 2 | General | 10° x 10° |
| 3 | Coastal | 1° x 1° |
| 4 | Approach | 1° x 1° |
| 5 | Harbour | Customised to cover port and pilotage areas. |
| 6 | Berthing | Customised to cover channels and manoeuvring areas |

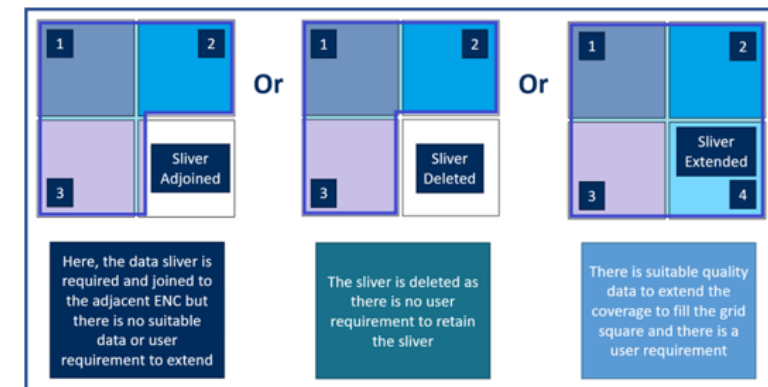
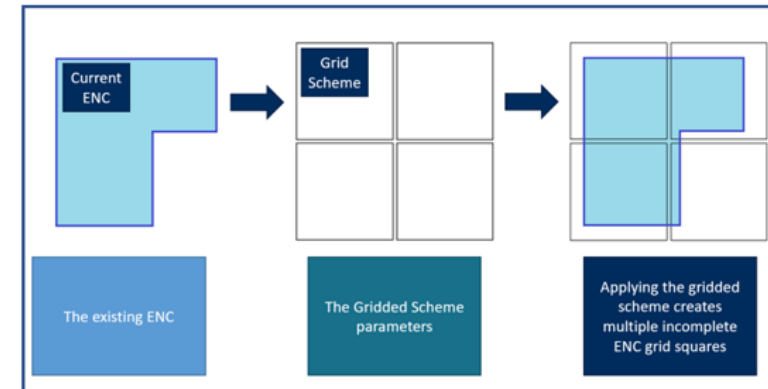


Gridded Scheme update - UKHO

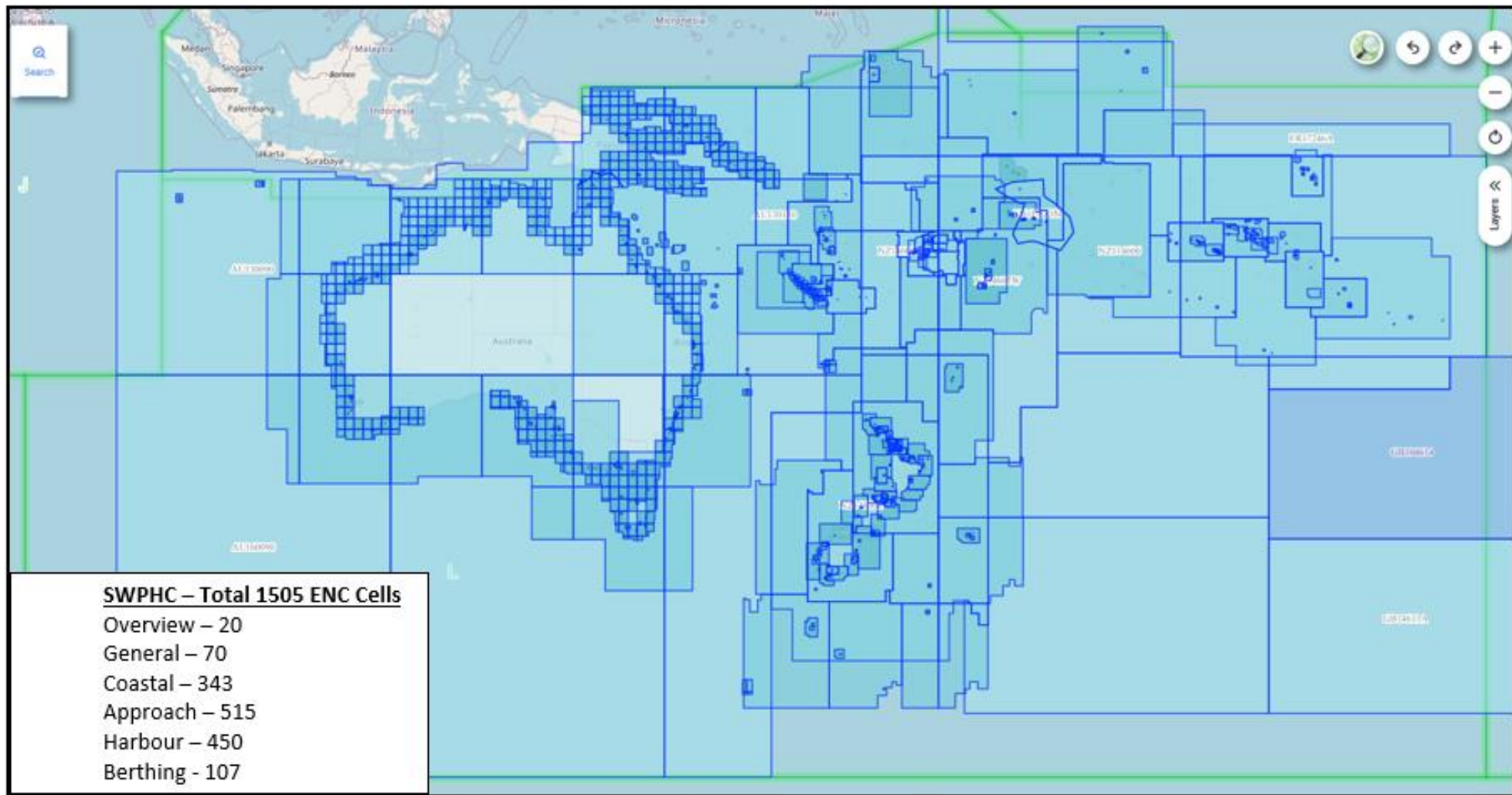
- UKHO is in the process of rescheming their ENC portfolio. Started around the UK, but plan to apply their “model grid” to GB ENCs in other regions in due course.
- Grid Size
 - Six different options of grid sizes were trialled and tested. Concluded that the grid parameters in the table below were the best fit for UKHO portfolio, taking into consideration number of ENCs created and how the grid fits with navigational data and scale of source data.

| Navigation Purpose Code | Usage | Area |
|-------------------------|----------|---------------|
| 1 | Overview | 20° x 20° |
| 2 | General | 4° x 4° |
| 3 | Coastal | 0.8° x 0.8° |
| 4 | Approach | 0.2° x 0.2° |
| 5 | Harbour | 0.1° x 0.1° |
| 6 | Berthing | 0.05° x 0.05° |

UKHO Plan to “aggregate” grid squares, where appropriate, within the Usage Band 4 and 5 scheme to improve depiction of navigational data. Examples below show how the scheme may be “fine tuned” to avoid creating multiple incomplete ENC grid squares.



Status of ENC Coverage - Region L

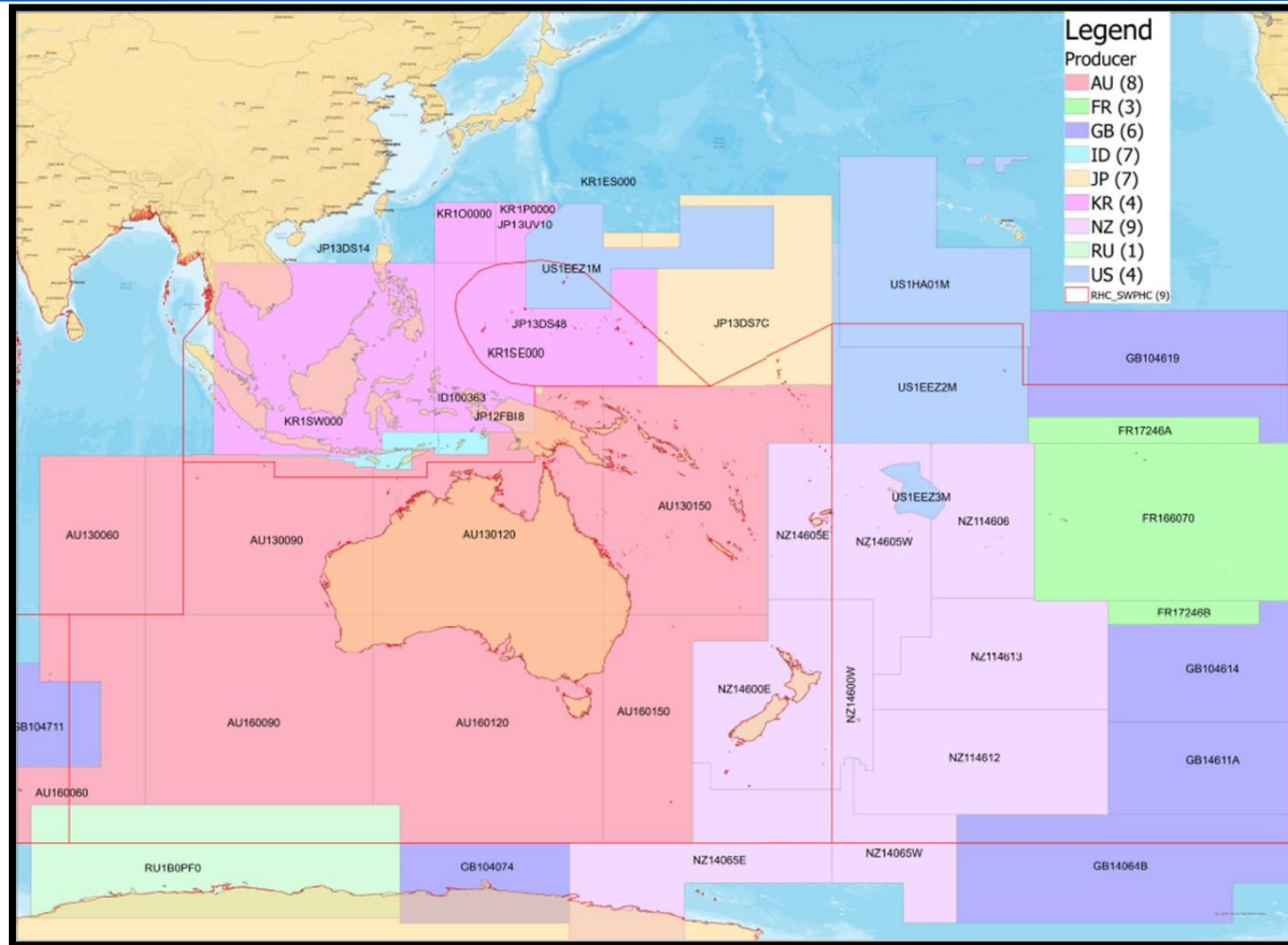


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Current ENC coverage - Nav Purpose 1 - Overview

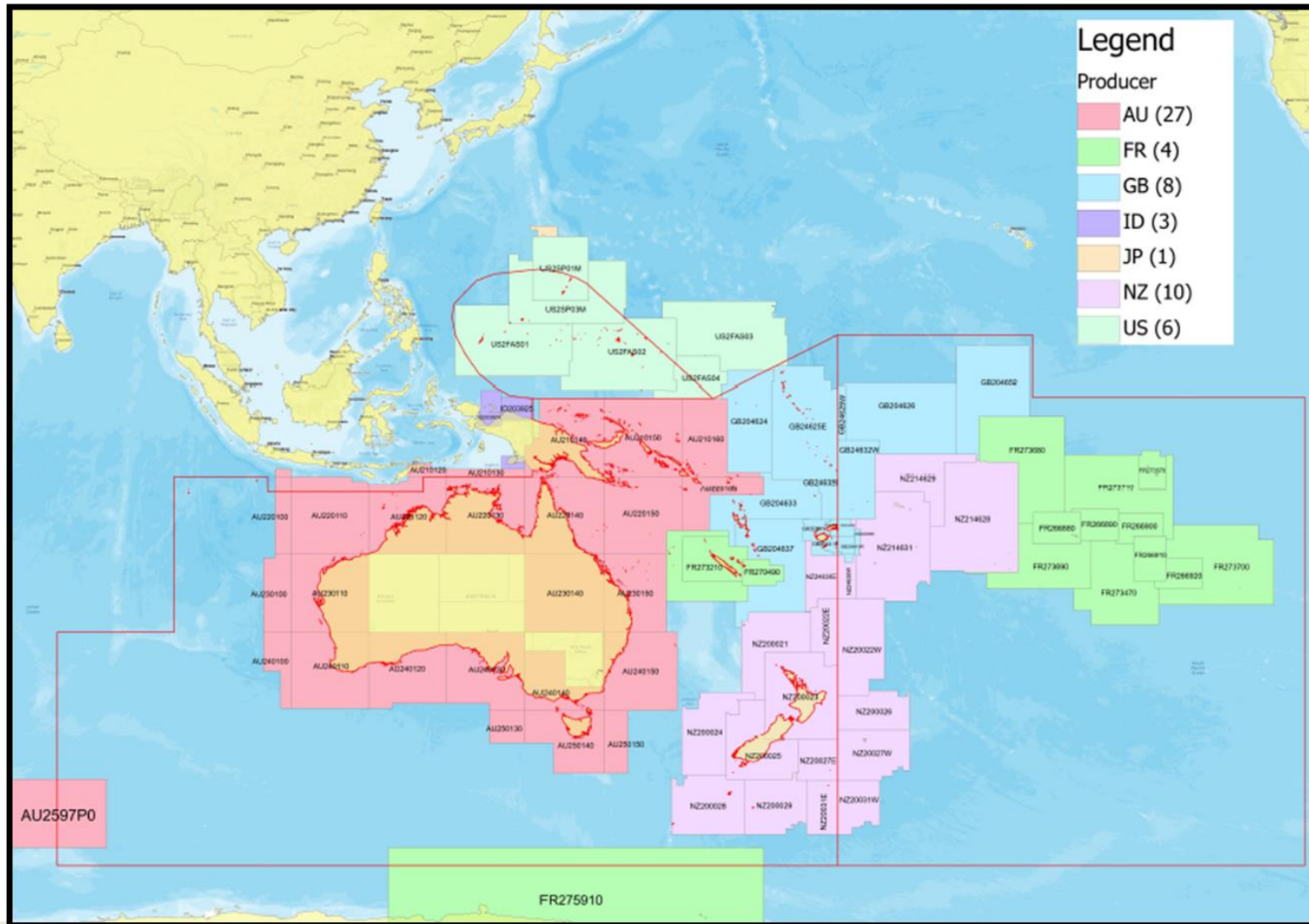


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Current ENC coverage - Nav Purpose 2 - General

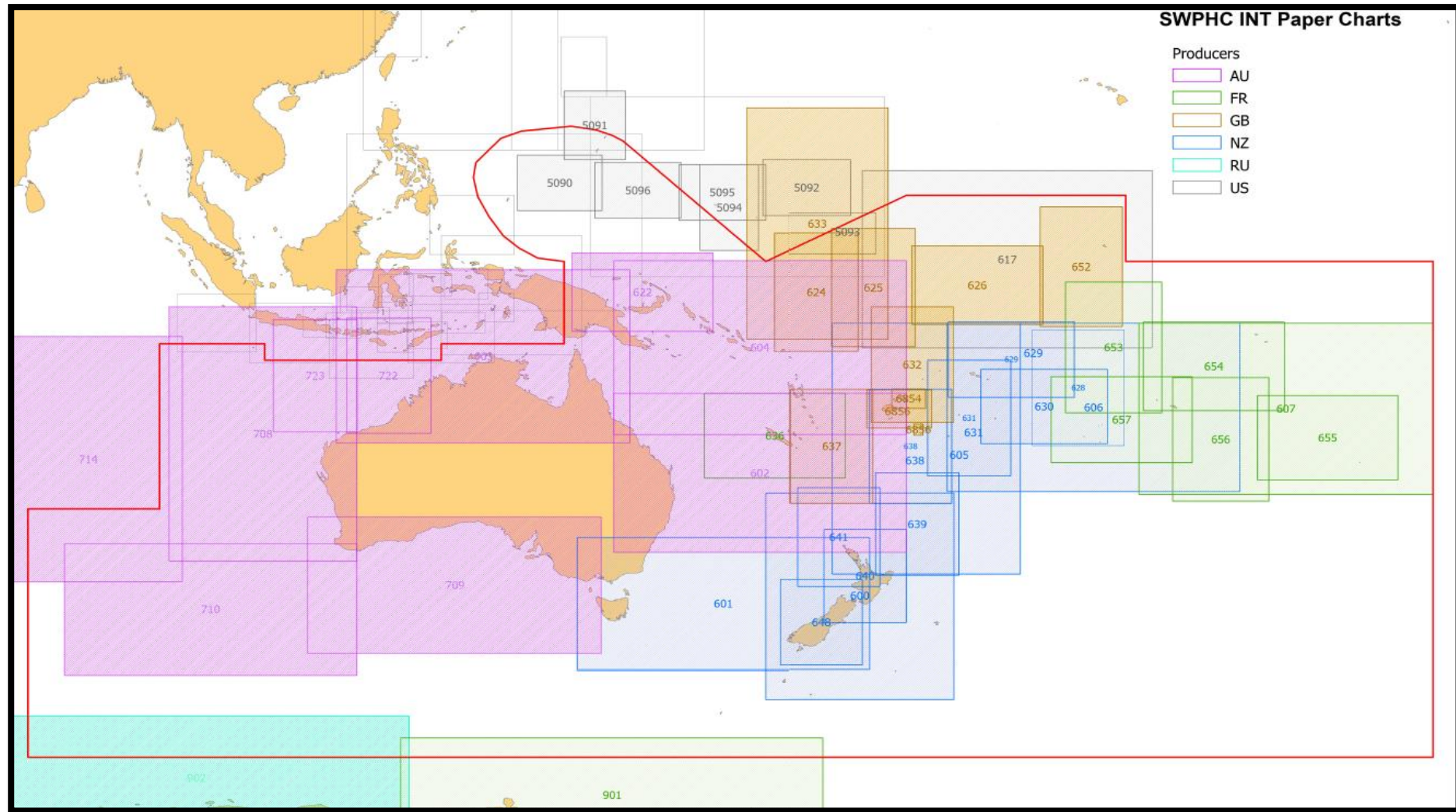


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Current INT Charts



SWPHC S-100 Workshop November 2023

The third SWPHC S-100 Workshop was conducted online on 22nd November 2023. There were a number of presentations on S-100 Implementation progress from Australia, New Zealand, USA and UK as well as an S-100 Developments presentation from IC-ENC and presentation from IIC on the Path to S-101.

Presentations and recording of the workshop can be found at [Events & recordings | IHO](#)

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Hydrographic Office

S-102 Sea Trial

- Conducted with the Port of London using SEAiQ Portable Pilot Unit (PPU).
- Understand how S-102 data can support safety of navigation in live environment.
- High resolution gridded bathymetry provided for trial.
- Findings help to understand S-102 development and feedback to IHO Working Groups.

AHO S-100 Journey
SWPHC S-100 Workshop - November 2023
Gabriela Balla
Assistant Director S-100 Coordinator

South West Pacific Hydrographic Commission
S-100 Workshop #3
22nd Nov 2023

Development & Testing Licence (PDT)

ies with access to IC-ENC Members' S-10X station and testing purposes

ChesterWorld, AIRTOP, PRIMAR, FUJURO

Members have "logged in" so far - thank you!
K, L, C, S, L, F, O, G, S, L, U, B, M, T, M, N, L, A, C, R, A, P, H, M,

id to Members so they can access other its for internal R&D purposes

| Datasets Released | Member |
|-------------------|------------------------|
| 48 | BE, ES, GB, GR, IT, NL |
| 508 | ES, GB, NL, US |
| 58 | NL, US |
| 593 | NL, US |
| 3 | NL |
| 3 | NL |
| 3 | IC-ENC, NL |
| 1,062 | |



Australia – ICSM S-100 Working Group (S-100WG)

- The S-100WG was stood up to take a leadership role in the creation, implementation and oversight of the introduction of S-100 based services in Australia by developing documentation, creating national standards and policies, defining roles, responsibilities and controls that will harmonize the Australian e-Navigation data chain.
- The S-100WG is responsible for coordinating and managing the timely and effective implementation of a broad range of S-100 products and services in Australia and New Zealand.
- On Wednesday the 2nd of November 2022 the Australian Hydrographic Office (AHO) hosted the inaugural meeting of Australia’s S-100 Working Group. The meeting was conducted virtually and it was attended by almost 50 representatives from a diverse number of state, federal and private organisations.
- The last meeting (3rd meeting) met on the 22nd of August at the Australian Maritime Safety Authority (AMSA) office in Sydney.

Roles of the S-100 WG Members:

- Participate in meaningful discussions and consultations to drive the harmonized implementation and maintenance of S-100 based services;
- Facilitate and coordinate S-100 products’ generation, their quality and usage; ensuring the alignment of these products with the S100WG goals set in the S100WG Work Plan;
- Work collaboratively to ensure that product management activities are in alignment with the established priorities of the affected organisations to enable sound decision making;
- Facilitate cooperation in international engagement with S-100 relevant international bodies and provide a forum for evaluation of international work and its impact on Australia.



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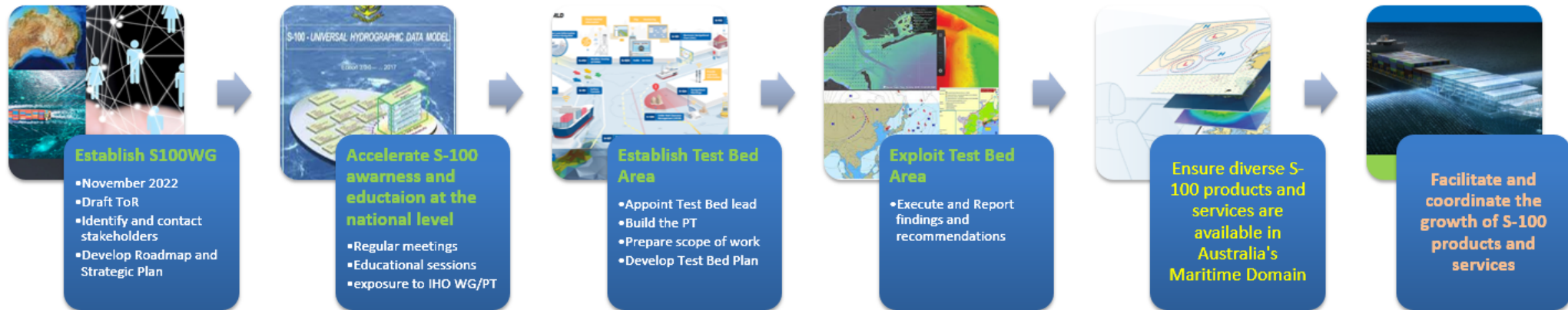
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Australia - S-100 Working Group (S-100WG) - ROADMAP

S100WG Roadmap

Planning our route for an efficient navigation



[S-100 Working Group | Intergovernmental Committee on Surveying and Mapping \(icsm.gov.au\)](https://icsm.gov.au)



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ENC Overlaps & WEND principles

The following is an extract from a report received from IC-ENC regarding overlaps of ENC in the SWP. Further details can be provided by contacting the ICCWG Chair

Several low severity ENC overlaps exist - PCAs are working to resolve.

| IC-ENC REGIONAL HYDROGRAPHIC COMMISSION OVERLAP REPORT - SOUTH WEST PACIFIC RHC - JANUARY 2024 | | | | | | | | | | | | | | |
|--|--------|-----------------|-------------|----------|----------|------------|-------------|-------------|-----------|-----------|--------------------------------------|-------------------|--|---|
| ID | STATUS | RENC Membership | RHC | ENC 1 | ENC 2 | Usage Band | ENC 1 Scale | ENC 2 Scale | ENC 1 Edn | ENC 2 Edn | Overlap extent (Kmxkm) (m/square NM) | Impact Assessment | Justification | Action requested |
| 1183 | LIVE | IC-ENC | SWPHC | NZ214628 | NZ214629 | 2 | 1500000 | 1500000 | 1 | 1 | 3.7ms | LOW | overlap is consistent and in deep waters | |
| 126 | LIVE | IC-ENC | SWPHC/SAIHC | RU1B0PF0 | AU160060 | 1 | 3000000 | 3500000 | 1 | 4 | 840Km x 558Km 135600 sq. NM | LOW | Overlap is located in the Antarctica, it charts very deep waters. There is a 119m shoal depth which is captured on AU160000 which is not captured on RU1B0PF0. Little traffic as expected. | HOs to discuss and resolve overlaps |
| 127 | LIVE | IC-ENC | SWPHC/HCA | RU1B0PF0 | AU160090 | 1 | 3000000 | 3500000 | 1 | 4 | 560Km x 1700Km 273008 sq. NM | LOW | Overlap is located in the Antarctica, it charts very deep waters. Little traffic as expected. | HOs to discuss and resolve overlaps |
| 128 | LIVE | IC-ENC | SWPHC/HCA | RU1B0PF0 | AU160120 | 1 | 3000000 | 3500000 | 1 | 7 | 560Km x 195Km 31605 sq. NM | LOW | Overlap is located in the Antarctica, it charts very deep waters. Little traffic as expected. | HOs to discuss and resolve overlaps |
| 1103 | ACCEPT | IC-ENC | SWPHC | GB24632W | NZ214631 | 2 | 1500000 | 1500000 | 6 | 1 | 3mxXKM | ACCEPT | 3m Overlap is acceptable | |
| 401 | ACCEPT | IC-ENC | SWPHC | NZ406152 | NZ461532 | 4 | 45000 | 22000 | 2 | 5 | 1.7 sq km (.6 sq NM) | ACCEPT | Small Overlaps concerning COALNE. These do cause display issues in TRANSAS 3000/4000 with both COALNEs displayed at the same time. Assumed low traffic area | LINZ Identified and requested withdrawal and resubmission of cell |

Adherence to WEND principles

ENCs are distributed worldwide via the following mechanisms:

Producer nation

France
Australia
New Zealand
UK
US

Mechanism

PRIMAR RENC
IC-ENC RENC
IC-ENC RENC
IC-ENC RENC
IC-ENC RENC



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ACTIONS TO BE CONSIDERED BY THE WENDWG

1. WENDWG is invited to note the report from SWPHC



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