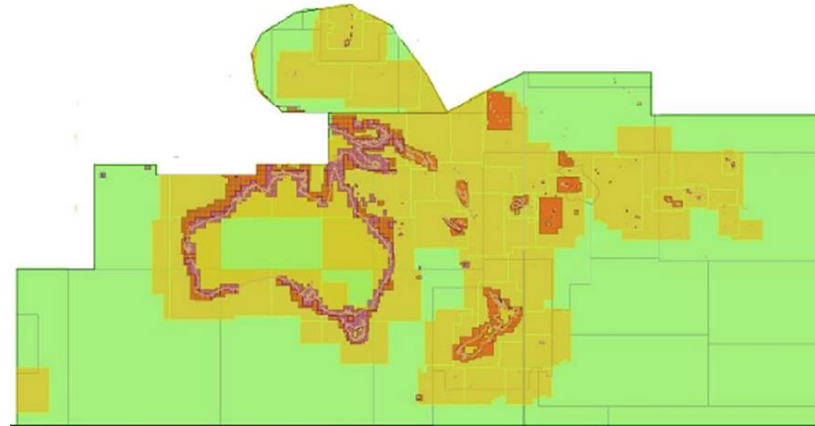


## 22<sup>nd</sup> Meeting of the SWPHC

### **Report of the International Charting Coordination Working Group (SWPHC ICCWG)**



### **Agenda Item 24**

SWPHC22, Koror, Palau – 1<sup>st</sup> to 3<sup>rd</sup> March 2025



**IHO**

## **BACKGROUND**

International  
Hydrographic  
Organization

- ❑ The SWPHC ICCWG was established in 2012 as a subsidiary of the SWPHC. It is made up of Producer Nations who publish Paper chart and ENC's in the SWPHC geographic area.
- ❑ Its main responsibility is for the coordination of Nautical Charting in the region, ensuring the Paper Chart INT series is comprehensive and current and the ENC coverage is appropriate.
- ❑ The main focus is to oversee issues related to nautical charting, specifically coordinating INT charts and manage the harmonisation of ENC's (S-57 and S-101) and provide guidance on IHO charting regulations, standards and S-100 Coordination.
- ❑ SWPHC is a fairly stable region in terms of INT Chart scheming. Current standards and procedures work for the countries involved.
- ❑ The group operates by correspondence and VTC.



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# **SWPHC ICCWG MEMBERS**

International  
Hydrographic  
Organization

## Current SWPHC ICCWG Members

- Australia - Robert Cario – [robert.cario@defence.gov.au](mailto:robert.cario@defence.gov.au) (INT/S-57/S-101 Coordinator)
- NZ- Verena Bosselmann-Borsos – S-100X Coordinator [vbosselmann-borsos@linz.govt.nz](mailto:vbosselmann-borsos@linz.govt.nz)
- France - Nicolas David - [nicolas.david@shom.fr](mailto:nicolas.david@shom.fr)
- New Zealand - Alison Cantrill - [ACantrill@linz.govt.nz](mailto:ACantrill@linz.govt.nz)
- UK - Daniel Miners - [Daniel.Miners@UKHO.gov.uk](mailto:Daniel.Miners@UKHO.gov.uk)
- USA (NOAA) - Karl Wagner - [karl.wagner@noaa.gov](mailto:karl.wagner@noaa.gov)
- USA (NOAA) - Laura Pagano - [laura.pagano@noaa.gov](mailto:laura.pagano@noaa.gov)
- USA (NGA) – Caitlin Johnson - [Caitlin.S.Johnson@nga.mil](mailto:Caitlin.S.Johnson@nga.mil)
- Fiji - Sulueti Savou - [s.savou3@gmail.com](mailto:s.savou3@gmail.com)



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# SWPHC MEMBERSHIP

International  
Hydrographic  
Organization

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

Nations	Primary Charting Authority
<b><u>SWPHC Observer:</u></b>	
New Caledonia	France
<b><u>Intergovernmental Observer Organization:</u></b>	
Secretariat of the Pacific Community (SPC)	
Fed States of Micronesia	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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# **ICCWG MEETINGS AND ACTIONS**

International  
Hydrographic  
Organization

## ICCWG Meetings

The SWPHC in March 2024 approved the new TORs of the SWPHC ICCWG which were updated to include the role and duties of the S-100 Coordinator and development of S-100 products.

- ☐ SWPHC S-100 Workshop – Benefits of S-100 – (21<sup>st</sup> May 2024)
- ☐ Region G ICCWG meeting (VTC - 9<sup>th</sup> October 2024)
  - Reviewed actions from SWPHC21.
  - S-100 Coordination Baseline report
  - INToGIS III testing update.
  - S-100 gridding update.
  - Feedback/Additions to SWPHC Work Plan.
- ☐ S-100 Coordination Baseline sent to ICCWG members – (9<sup>th</sup> October 2024)
- ☐ Provided SWPHC Report to WENDWG 17<sup>th</sup> Feb 2025



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# **CURRENT INT CHART SCHEME**

International  
Hydrographic  
Organization

## **SWPHC INT Coverage**

AU - 10 charts

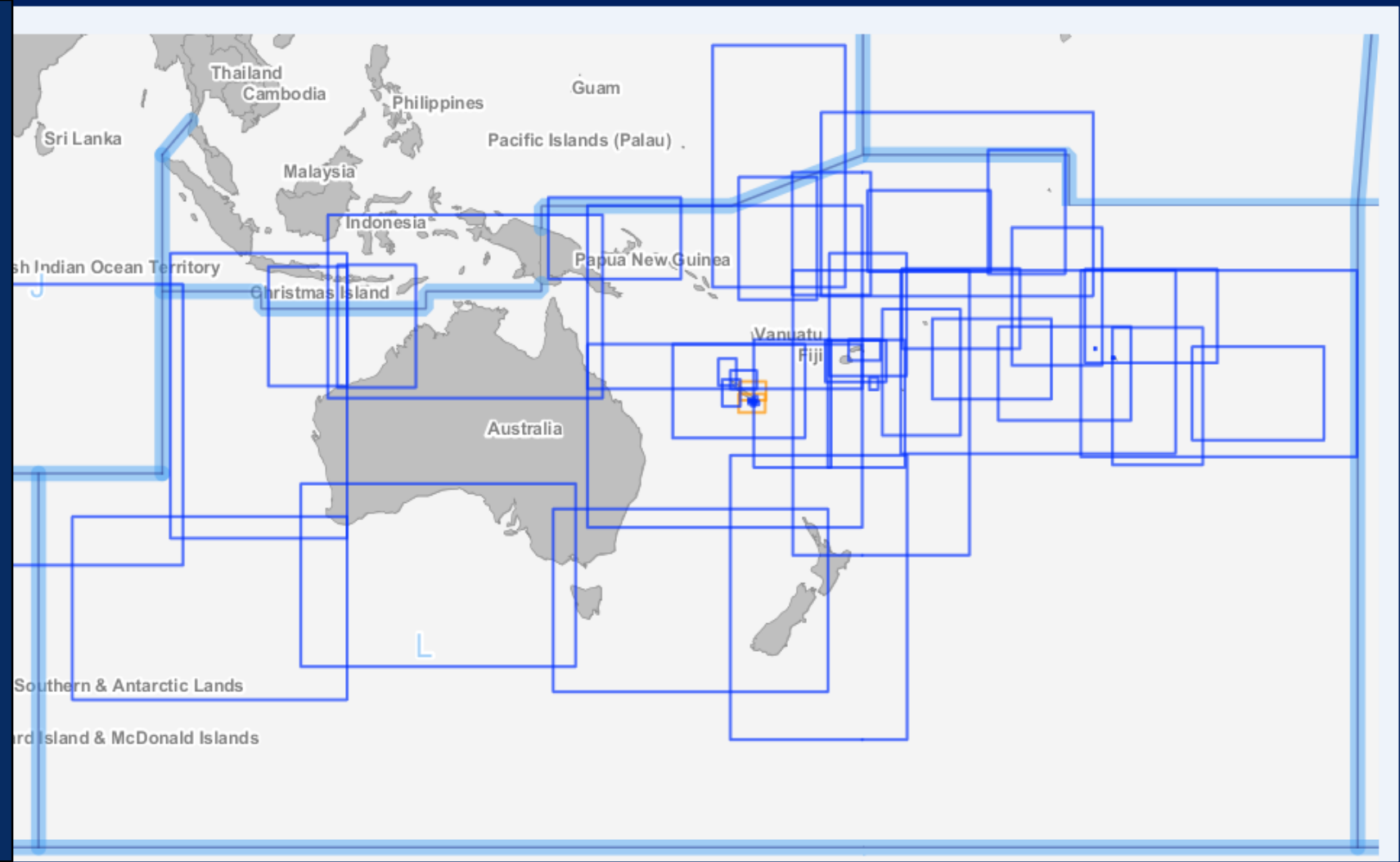
NZ - 8 charts

US - 1 charts

FR - 22 charts (26  
panels)

GB - 9 charts (10  
panels)

**Total : 50 Charts (55  
panels)**



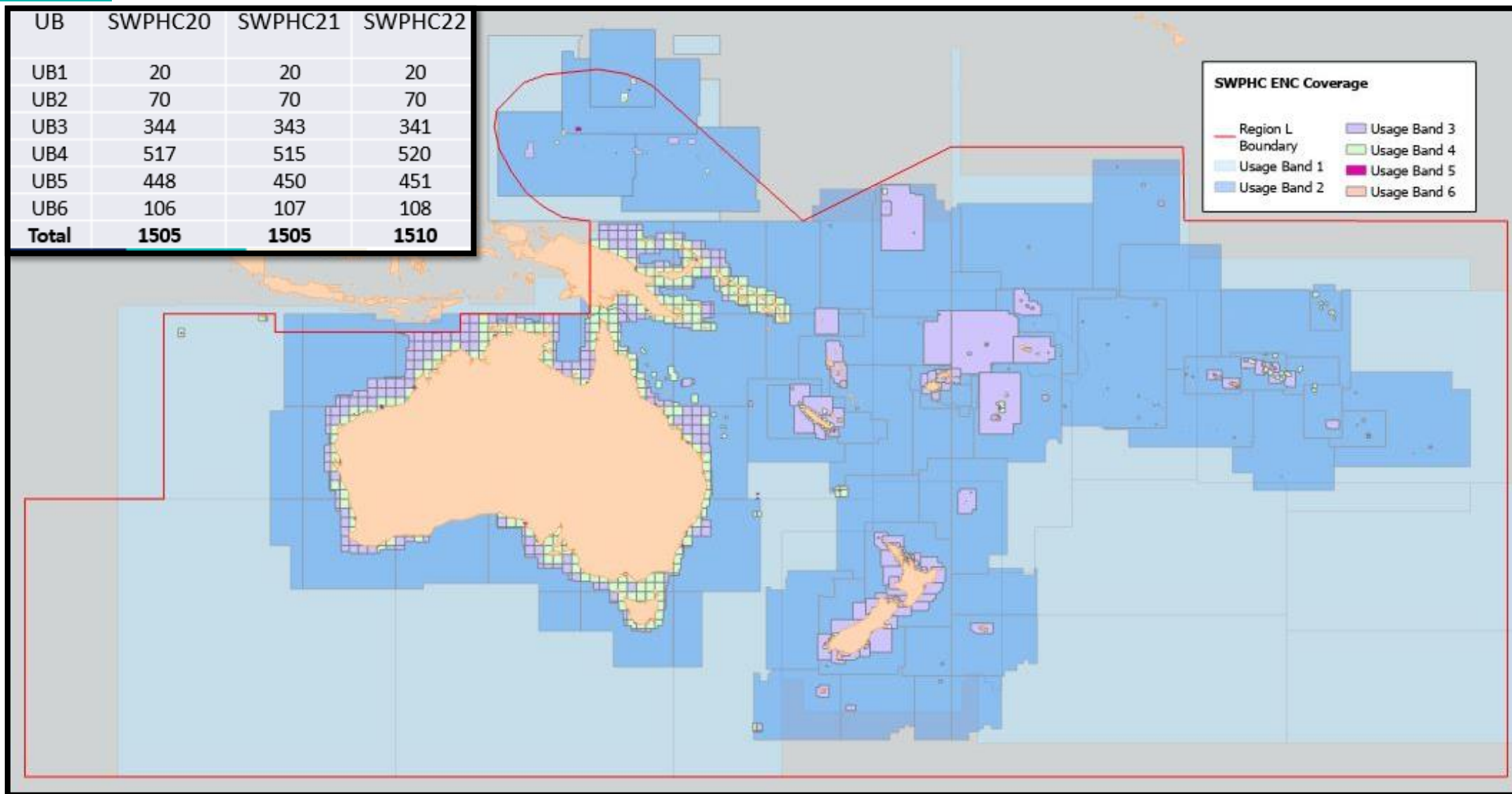


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# CURRENT SWPHC ENC COVERAGE

International  
Hydrographic  
Organization

UB	SWPHC20	SWPHC21	SWPHC22
UB1	20	20	20
UB2	70	70	70
UB3	344	343	341
UB4	517	515	520
UB5	448	450	451
UB6	106	107	108
<b>Total</b>	<b>1505</b>	<b>1505</b>	<b>1510</b>





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# INT CHARTS PRODUCED SINCE LAST MEETING

International  
Hydrographic  
Organization

## UKHO

No further new editions of GB produced INT charts since last meeting.

4 New Editions of INT Charts previously adopted from Australia (AHO)

1 New Edition of INT Charts previously adopted from New Zealand (LINZ)

1 New Edition of INT Charts previously adopted from France (SHOM).

## U.S.A (NOAA/NGA)

No further new editions of US produced INT charts since last meeting.

## New Zealand (LINZ)

No further new editions of NZ produced INT charts since last meeting.

LINZ will also be working with the AHO to amend the coverage around Macquarie Island

## France (SHOM)

SHOM has produced the following New Editions

FR Chart Number	Title	Published	ENC
6933 (INT6881)	Nouvelle-Calédonie - De l'Île Ouen à l'Île des Pins	Dec. 2024	FR469330
6827 (INT6882)	Nouvelle-Calédonie - Du Mont Dore à Port-Boisé	Dec. 2024	FR56827A FR468270
6687 (INT6883)	Nouvelle-Calédonie - Abords de Nouméa - Passes de Boulari et de Dumbéa	Feb. 2024	FR466870
7645 (INT6898)	Nouvelle-Calédonie - Canal de la Havannah et Canal Woodin	Sep. 2024	FR67645A FR576450
7460 (INT6940)	Polynésie Française (Tahiti) - De la Passe de Taapuna à la passe d'Arue	Sep. 2024	FR674601 FR674602

On French waters around New Caledonia, SHOM is producing a chain at scale 1:300000. The last chart, FR6768 (INT6844) - Nouvelle-Calédonie (partie Sud) - Ile des Pins - expected to be published in 2027.

## Australia (AHO)

New Editions Feb 2024 - Feb 2025	Area	Published
AUS 449 (INT 9035)	Magnet Bay to Cape Rouse	Dec 2024
AUS 4722 (INT 722)	Adele Island to Dampier including Adjacent Waters	Dec 2024
AUS 4723 (INT 723)	Java to North West Cape	Nov 2024
AUS 4622 (INT 622)	Admiralty Islands to Solomon Islands	Jun 2024
AUS 597 (INT 7746)	Approaches to Heard Island	Aug 2024
AUS 4603 (INT 603)	North Coast and Adjacent Waters	Dec 2024





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# ENC PRODUCED SINCE LAST MEETING

International  
Hydrographic  
Organization

## UKHO

UKHO has published 33 ENC New Editions and updates since the last meeting. Including:

- 1 New ENC cell in Fiji (UB4)
- 2 New ENC cells in Kiribati (UB4) as part of Kiribati Outer Islands Transport Infrastructure Investment Project (KOITIIP)
- 1 New ENC cell of Nauru (UB4)

## U.S.A (NOAA/NGA)

The U.S. published the following usage band 1 and 2 ENC New Editions since the last meeting.

New Editions Feb 2024 - Jan 2025	Area	Published
US1HA01M	Hawaiian Islands	April 2024
US2FAS02	Micronesia	July 2024
US2FAS04	Southeast Micronesia	July 2024

## France (SHOM)

SHOM has produced the following New Editions

New Cells	Area	Published
FR66525A	Polynésie Française (Tahiti) – Passae Havae – Site de Teahupoo	03/07/24

## New Zealand (LINZ)

No further new editions of NZ Nav Purpose 1 & 2 since last meeting.

## Australia (AHO)

Australia has published 260 New Editions and updates since the last meeting. Including:

- Solomon Islands - 3 Updates (UB 3 & 4)
- PNG - 3 Updates (UB 5)
- Australia - 254 NE & Updates (UB1-13, UB2- 25, UB3- 25, UB4- 103, UB5- 73, UB6- 15)



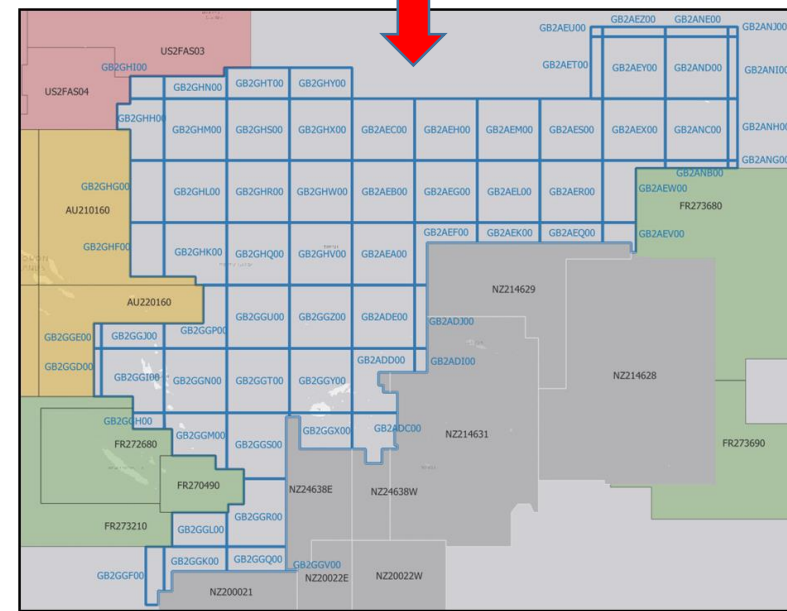
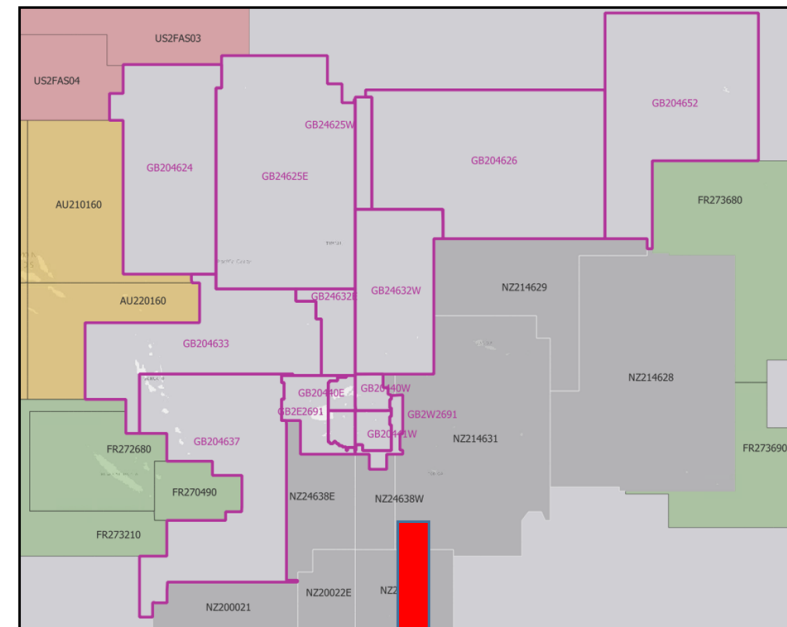
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# S-100 IMPLEMENTATION PROGRESS – UNITED KINGDOM

International  
Hydrographic  
Organization

- UKHO will produce S-100 Phase 1 (Route Monitoring) products from January 2026. Timeline for wider roll out of UKHO S-100 products will depend on user demand and expected availability of type-approved S-100 ECDIS.
- 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.
- UKHO have started to migrate GB usage Band 2 ENCs to the new gridded schema. Other usage bands will follow in due course.
- 15 Existing GB Band 2 ENCs will be cancelled and replaced by the gridded **68** New GB Band 2 ENCs.

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°





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# S-100 IMPLEMENTATION PROGRESS – U.S.A

International  
Hydrographic  
Organization

- NOAA will begin transitioning its ENC production system to accommodate dual-fuel S-57/S-101 production by January 2026, focusing initially in a few major U.S. mainland port areas before expanding and moving to the South West Pacific region by 2029.
- NGA will begin building out its S-101 and S-124 coverage in the region starting in 2026.
- While a broader U.S. inter-agency S-100 data strategy is still being developed, S-104 and S-111 are anticipated in the region by 2029 and 2027 respectively.
- NOAA 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.

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 worldwide grid – UB1 & 2*

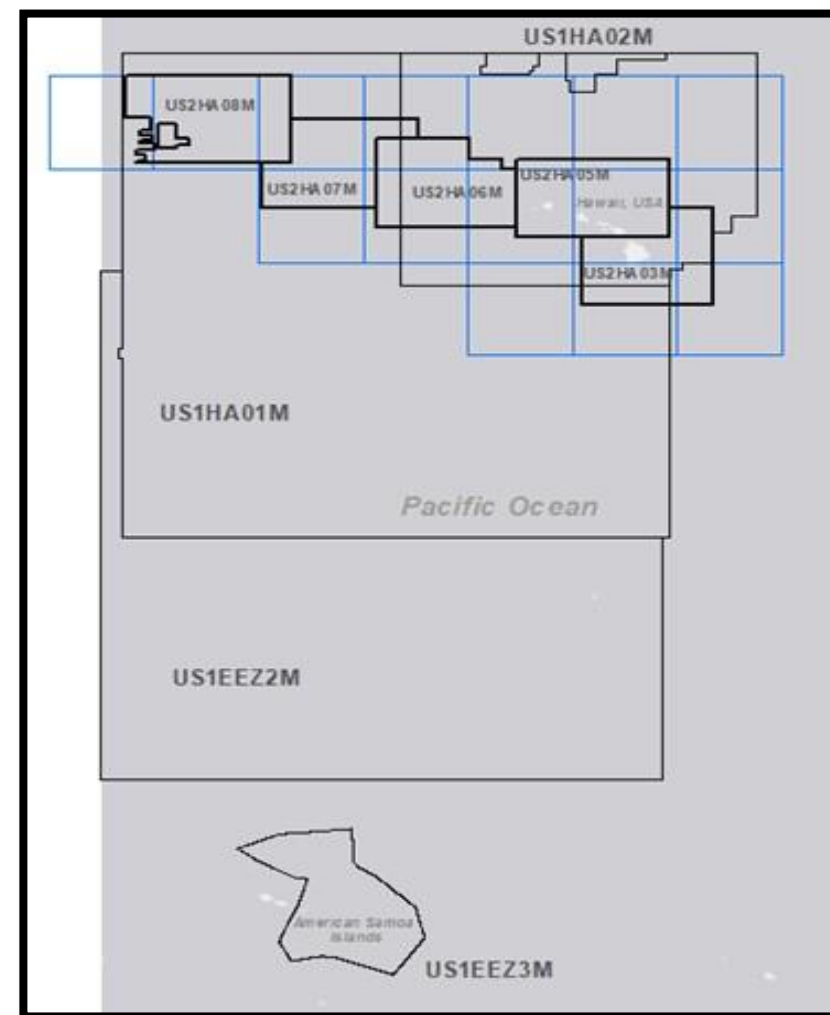
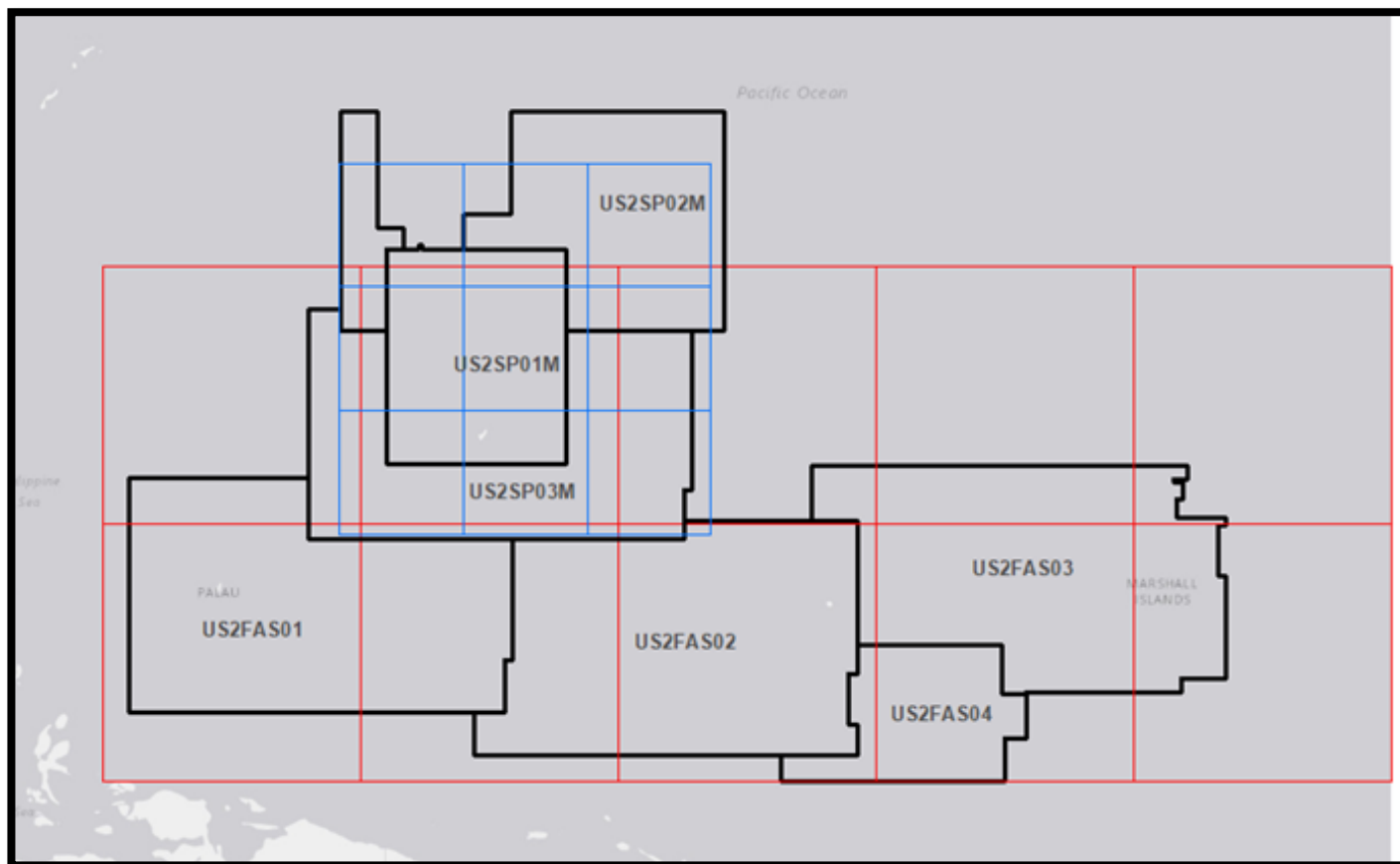


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# S-100 IMPLEMENTATION PROGRESS – U.S.A

International  
Hydrographic  
Organization

The figures below represent the current NOAA and NGA ENC boundaries (black) and future NOAA and NGA reschemed ENC boundaries (blue and red respectively) for Nav Purpose 2 in Region L.



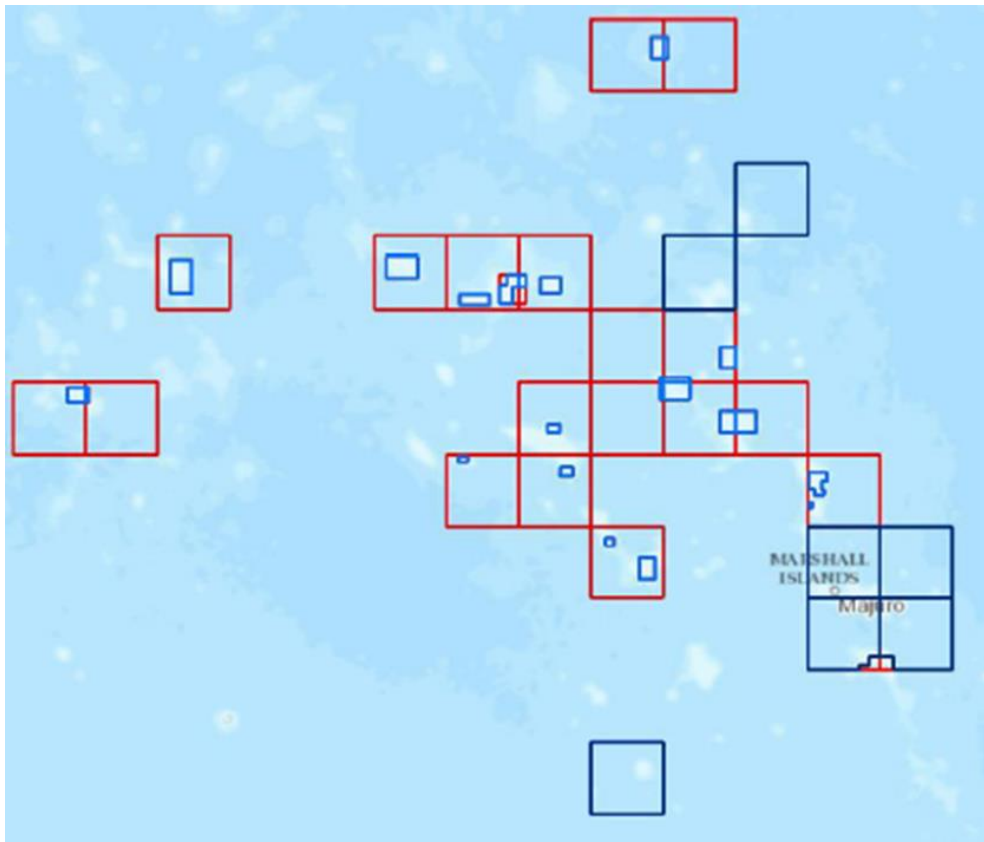


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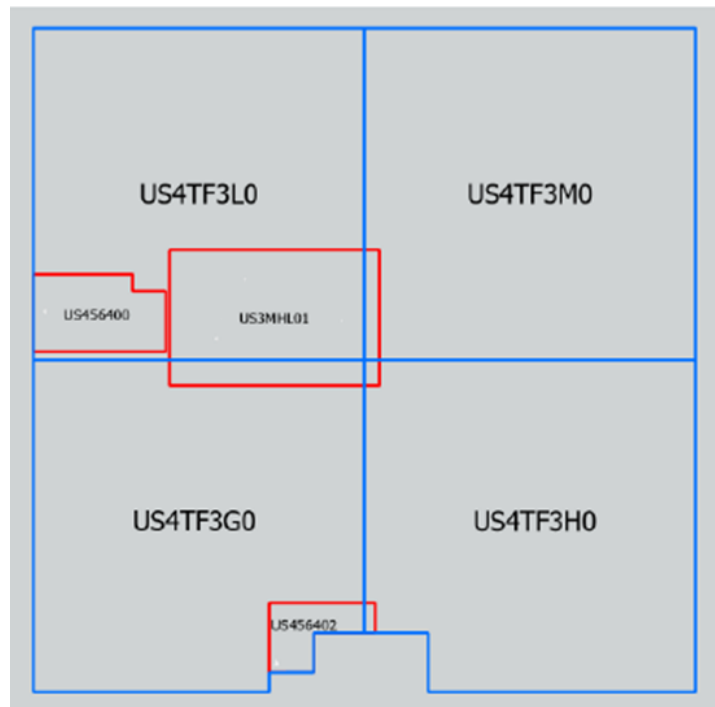
# S-100 IMPLEMENTATION PROGRESS – U.S.A

International  
Hydrographic  
Organization

The figures below represents an example of the ongoing effort to move all ENC cells to the grid in the Marshall Islands. This project is being carried out in two different manners: one rescheming and two gridding. Reschemed cells will include expanded coverage and new data where applicable, and gridding will undergo a 1:1 conversion with the creation of a no coverage area to fill the remainder of the grid until expanded coverage and data can be incorporated.



U.S. Nav Purpose 4 reschemed ENC's in the Marshall Islands with significant updates in 2024/ 2025 (Coverage area - blue, Expanded coverage - dark blue, No coverage - red)



Nav Purpose 3 and 4  
reschemed ENC's in the  
Marshall Islands  
(New reschemed cells -  
blue, Cancelled cells - red)

Cancelled Cell	New Cell 1	New Cell 2	New Cell 3	New Cell 4
US3MHL01	US4TF3L0	US4TF3M0	US4TF3G0	US4TF3H0
US456400	US4TF3L0			
US456402	US4TF3G0	US4TF3H0		
US556402	US5TF3G2			



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# S-100 IMPLEMENTATION PROGRESS – FRANCE

International  
Hydrographic  
Organization

- SHOM will produce S-100 Phase 1 (Route Monitoring) products with priority given to S-101 Electronic Navigational Chart.
- Co-production of S-57 and S-101 will start at Q4 2026 from a S-100 like database.
- S-101 in the region expected from 2026.
- Coastal and local navigational warnings compliant S-124 standard are expected for 2026 (see PING: <https://portail.ping-info-nautique.fr/>)
- SHOM project “Unified Cartographic Source” will review methodology (including 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 mainland France) with this new method in 2024. The southwest Pacific should be reviewed after 2028.
- SHOM will adopt the same grid as UKHO.

Gamme	maximumDisplayScale S-101 (CSLC S-57 – Compilation)	minimumDisplayScale S-101
UB1	1 : 1 500 000	/
UB2	1 : 350 000	1 : 1 500 000
UB3	1 : 90 000	1 : 350 000
UB4	1 : 22 000	1 : 90 000
UB5	1 : 8 000	1 : 22 000
UB6	TBD <sup>(*)</sup>	1 : 8 000

- This new scheme will be adopted in conjunction with the review of the cartography linked to the “Unified Cartographic Source” project.





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# S-100 IMPLEMENTATION PROGRESS – NZ

International  
Hydrographic  
Organization

- Land Information New Zealand (LINZ), will produce the following S-100 Phase 1 (Route Monitoring) products: S-101, S-102, S-104, S-111, S-128. Maritime New Zealand will produce the S-124 Navigational Warnings.
- S-101 will be released iteratively over 3 years for New Zealand waters, New Zealand five (Tonga, Cook Islands, Niue, Samoa and Tokelau) and Ross Sea in Antarctica.
- The Bathymetric (S-102) and Tides (S-104) will start to be produced in 2027 for New Zealand waters.
- LINZ has not yet finalised what the gridding will look like, the current planning is:
  - Overview - 30° x 30° (1.51M – 10M)
  - Transit - 1° x 1° (101K –1.5M)
  - Port Entry Small - 1° x 1° (16K – 100K)
  - Port Entry Larger will be a localised grid.
- The New Zealand S-100 Working Group under ICSM was stood up in June 2024 to take a leadership role in collaborating with key customers of S-100 products across New Zealand, fostering engagement on the S-100 products and facilitating the testing of S-100 products within the Working Group, their quality, benefits and usage.



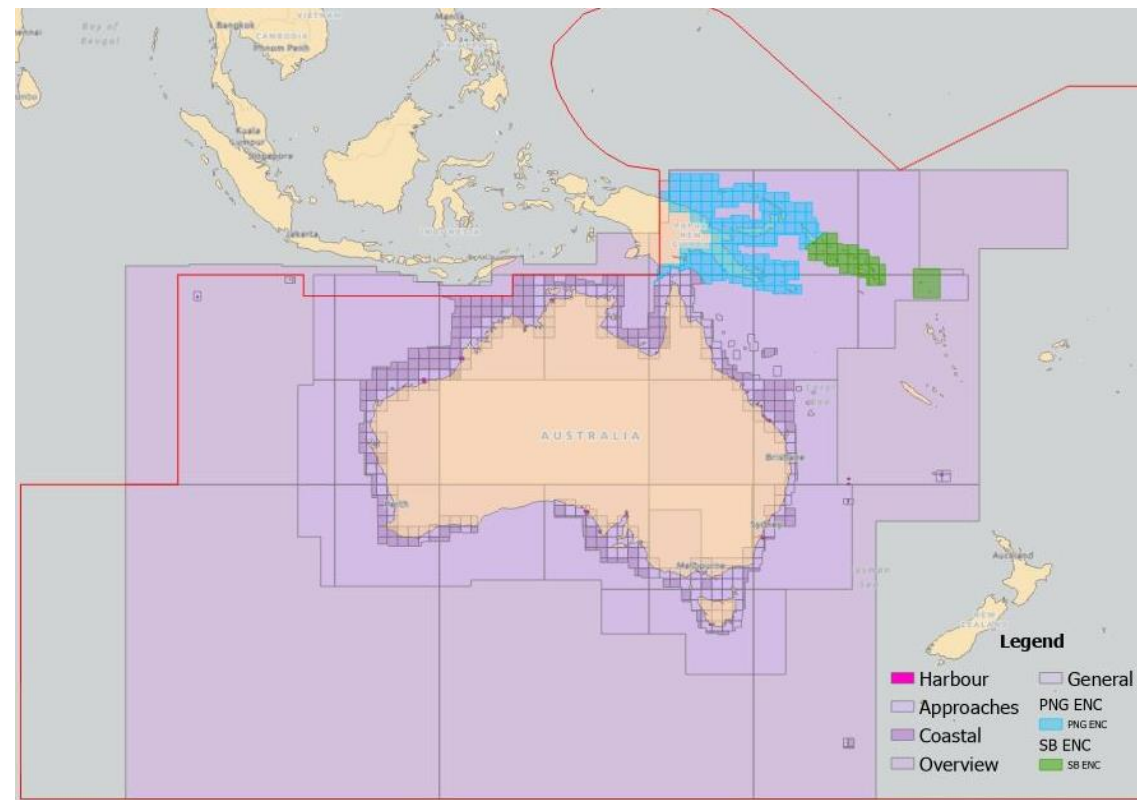


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# S-100 IMPLEMENTATION PROGRESS – AUSTRALIA

International  
Hydrographic  
Organization

- AHO will start co-producing S-57 and S-101 from Q4 2025. These products will be released initially for 21 focus areas: 18 areas around Australia, 1 focus area for Antarctica, 1 focus area for Papua New Guinea and 1 focus area for Solomon Islands.
- AHO is currently creating test datasets in the identified roll-out areas for Australia. This includes S-101 and S-102 datasets.
- The national S-100WG was stood up in 2022 to take a leadership role in creation, implementation and oversight of the introduction of S-100 based services in Australia by creating national standards and policies, defining roles, responsibilities and controls that will harmonise the Australian e-Navigation data chain.
- Australia's current ENC scheme is gridded scheme as set out in the image. The proposed S-101 scheme will correlate with the current S-57 gridded scheme as shown.



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





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# SWPHC S-100 WORKSHOPS

International  
Hydrographic  
Organization

- ❑ The fourth SWPHC S-100 Workshop was conducted online on 21<sup>st</sup> May 2024. There were a number of presentations on Benefits of S-100. Shom provided presentation on S-100 across the channel with test area of route from Southampton to Saint Melo. Electronic Chart Centre (ECC) Norway presented on S-100 Demonstrator Project and presentation from KRISO on expected benefits of S-100 products. Presentations and recording of the workshop can be found at [Events & recordings | IHO](#)



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# S-100 READINESS – SWPHC MEMBERS

International  
Hydrographic  
Organization

<i>Producer</i>	<i>S-101 (ENC)</i>	<i>S-102 (Bathymetric Surface)</i>	<i>S-104 (Water Level Information)</i>	<i>S-111 (Surface Currents)</i>	<i>S-124 (Navigational Warnings)</i>	<i>S-129 (UKCM)</i>	<i>Comments</i>
<b>Australia</b>	<b>2025 (Q4)</b> (Initial rollout for 20 focus areas)	<b>2025 (Q4)</b> (Initial rollout for areas currently covered by HDbENC)	<b>2026</b> (S-104 products will be generated for areas covered by HDbENC)	<b>2026</b> (AHO will create S-111 for 8 locations around the country. Wider rollout to be advised from 2027)	<b>2027</b> (Will be created by Australian Maritime Safety Authority (AMSA))	<b>2027</b> (Collaboration between AMSA & OMC)	<b>S-128</b> (To coincide with S-101 production).
<b>Fiji</b>	<b>2026</b>	<b>2026</b> (As demand is identified)	<b>2026</b> (As demand is identified)	<b>2026</b> (As demand is identified)	Not planned, assumption that Nav warnings will continue to be coordinated through NAVAREA Coordinator	Not planned	
<b>France</b>	<b>2026</b> (Database conversions S100 like)	Not planned as yet	Not planned as yet	Not planned as yet	<b>2026</b> expected		<b>S-128</b> Based on RENC capability
<b>Kiribati</b>	<b>2026</b>	<b>2026</b> (As demand is identified)	<b>2026</b> (As demand is identified)	<b>2026</b> (As demand is identified)	Nav warnings will continue to be coordinated through NAVAREA Coordinator	Not planned	
<b>New Zealand</b>	<b>2026</b> (Region by region from 2026)	<b>2026</b> (Will replace HDbENC)	<b>2027</b> (Align with S-102 coverage)	<b>2027</b>	<b>2026</b>		
<b>Papua New Guinea</b>	<b>2026</b>	(As demand is identified)	(As demand is identified)	(As demand is identified)	<b>2027</b>	Not planned	
<b>Samoa</b>	<b>2026</b>	TBD	TBD	TBD	NAVAREA Coordinator		
<b>Solomon Islands</b>	<b>2026</b>	(As demand is identified)	(As demand is identified)	(As demand is identified)	<b>2027</b>	Not planned	
<b>Tonga</b>	<b>2027</b>	Not planned as yet	Not planned as yet	Not planned as yet	NAVAREA Coordinator		
<b>UK</b>	<b>2026</b> (Region by region from 2026)	<b>2026</b> (Initially focussed on UK trial ports)	<b>2026</b> (Initial focus on UK trial ports)	<b>2026</b> (Initial focus on UK trial ports)	<b>2026/2027</b> (Planned to have capability to issue Nav Warnings in S124 format where UK are NAVAREA coordinator.		
<b>USA</b>	<b>2026</b>	<b>2029 TBD</b>	<b>2029</b>	<b>2027</b>	<b>2026</b>		<b>TBD</b>
<b>Vanuatu</b>	<b>2026</b> (Region by region from 2026)	(As demand is identified)	<b>2026</b> (As demand is identified)	<b>2026</b> (As demand is identified)	Nav warnings will continue to be coordinated through NAVAREA Coordinator		

**IHO**

# ENC OVERLAP REPORT

International  
Hydrographic  
Organization

The following is an extract from a report received from IC-ENC regarding overlaps of ENC in the SWP as of 1<sup>st</sup> Feb 2025. Further details can be provided by contacting the ICCWG Chart Coordinator.

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

IC-ENC REGIONAL HYDROGRAPHIC COMMISSION OVERLAP REPORT - SOUTH WEST PACIFIC RHC - FEBRUARY 2025													
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
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
LIVE	IC-ENC	SWPHC/HCA	RU1B0PF0	AU160090	1	3000000	3500000	1	6	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
LIVE	IC-ENC	SWPHC/HCA	RU1B0PF0	AU160120	1	3000000	3500000	1	8	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
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
LIVE	IC-ENC - NON RENC	EAHC/SWPHC	ID100363	JP13DS48	1	700000	3000000	9	21		UNABLE	IC-ENC does not have access to NON RENC ENC to conduct assessment	Producers to liaise
LIVE	IC-ENC - NON RENC	EAHC/SWPHC	ID100363	KR1SE000	1	700000	2000000	9	11		UNABLE	IC-ENC does not have access to NON RENC ENC to conduct assessment	Producers to liaise



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## **NEXT STEPS**

International  
Hydrographic  
Organization

- S-101 roll out plan
- S-101 Harmonisation
- S-100 coordination - at both the regional and national level.
- INTToGIS III
- S-100 workshops
- Progress ICCWG actions from SWPHC Work Plan.



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# **ACTIONS TO BE CONSIDERED BY SWPHC**

International  
Hydrographic  
Organization

## Recommendations for discussion at SWPHC 22

1. SWPHC is invited to note this report.