

# SOUTH WEST PACIFIC HYDROGRAPHIC COMMISSION

## INTERNATIONAL CHARTING COORDINATION WORKING GROUP

(SWPHC ICCWG)

Report for SWPHC 20

22nd – 24<sup>th</sup> Feb 2023, Wellington



Coordinator: Mr Robert Cario  
Australian Hydrographic Office

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## 1. Background

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 on paper Charts at 1:500,000 and smaller and ENC Nav Purpose 1 and 2 coverage.

The group operates as a correspondence group.

## 2. Current SWPHC ICCWG Members

Australia (chair) Robert Cario – [robert.cario@defence.gov.au](mailto:robert.cario@defence.gov.au)

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 (NGA) - Sarah.E.Orantes - [Sarah.E.Orantes@nga.mil](mailto:Sarah.E.Orantes@nga.mil)

Fiji – James Jason Morrell - [jamesjasonmorrell@gmail.com](mailto:jamesjasonmorrell@gmail.com)

## 3. SWP Countries and their Charting Producer Nations

### SWPHC nations

### Primary Charting Authority (PCA)

#### SWPHC Members:

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

#### Associate Members:

Cook Islands	New Zealand
Indonesia	Indonesia
Kiribati	UK
Nauru	UK
Niue	New Zealand
Palau	USA

#### SWPHC Observer:

New Caledonia	France
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#### Intergovernmental Observer Organization:

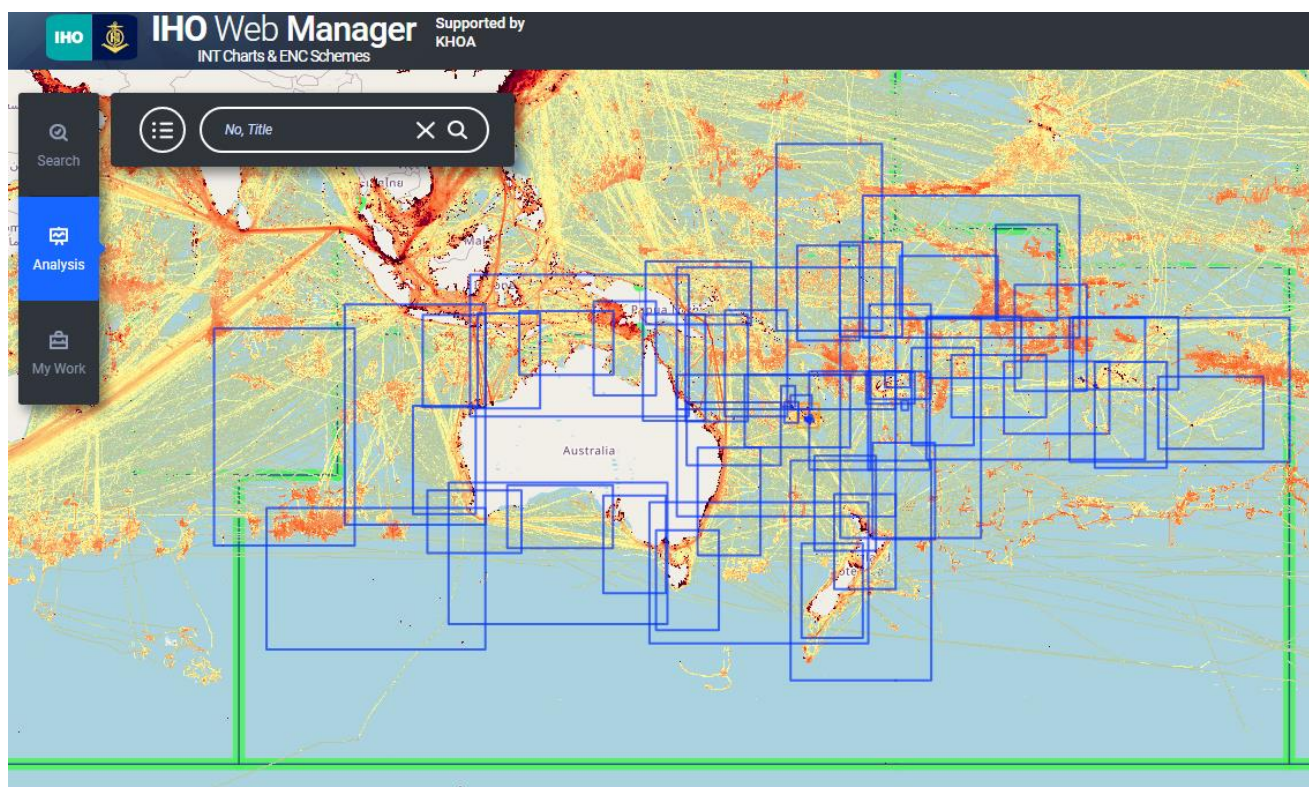
Secretariat of the Pacific Community (SPC)

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

#### 4. SWPHC INT Scheme

##### S-11 Part B, Region L updates

Updates are managed through IHO Web Manager.  
See link [IHO Web Catalogue](#).



*Figure 1: SWPHC INT paper chart Scheme*

There are currently 60 INT Charts in Region L.

##### **Paper INT charts produced since the last conference:**

##### **UKHO**

7 New Editions of INT charts previously adopted from Australia (AHO).

3 New Editions of INT charts previously adopted from France (SHOM).

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

## **SHOM**

SHOM has produced the following new editions.

<b>FR Chart Number</b>	<b>Title</b>	<b>Published</b>	<b>ENC</b>
7371(INT654)	De Tahiti aux Îles Marquises	07 <sup>st</sup> March 2022	FR273710
7347 (INT656)	Des Îles Tuamotu aux Îles Australes	07 <sup>st</sup> March 2022	FR273470
7644 (INT6899)	Accès au Port de Nouméa	23 <sup>th</sup> November 2022	FR576440

On French waters around New Caledonia, SHOM is producing a chain at scale 1:300000. FR6686 (INT6843) Nouvelle-Calédonie (partie Sud-Est) - Iles Loyauté and FR6768 (INT6844) - Nouvelle-Calédonie (partie Sud) - Ile des Pins - expected to be published in 2023 and 2024.

SHOM plan to produce :

- new FR272680 (based on paper chart FR7268) and reduce FR273210;

## **AHO**

New editions of AUS INT charts:

<b>Chart Number</b>	<b>Title</b>	<b>Published</b>	<b>ENC</b>
4601 (INT 601)	New Zealand to South East Australia	16 <sup>th</sup> Sep 2022	AU160120 AU160150
4622 (INT 622)	Admiralty Islands to Solomon Islands	5 <sup>th</sup> Aug 2022	AU130120 AU130150

See Annex A for SWPHC INT Paper Chart Scheme.

## Nav Purpose 1 and 2 ENC produced since last conference:

LINZ

Nil

AHO

New Editions Feb 2022 - Feb 2023	Area	Published
AU130150	Australia - North East Approaches	30/06/2022
AU210120	Flinders Shoal to Dili	28/04/2022
AU210130	Arafura Sea	09/06/2022
AU210140	Ward Hunt Strait to Torres Strait	16/06/2022
AU210160	Solomon Islands - North East Approaches	05/05/2022
AU220130	Gulf of Carpentaria to Bathurst Island	09/06/2022
AU220140	Coral Sea (North West)	12/05/2022
AU220150	Coral Sea (North East)	09/06/2022
AU220160	South East Approaches	16/06/2022
AU230140	Coral Sea (South West)	05/05/2022
AU230150	Coral Sea (South East)	28/04/2022

UKHO

New Cells Feb 2022 - Jan 2023	Area	Week No.
GB400991	Pitcairn – Pitcairn Island	9_22
GB40991C	Pitcairn – Oeno Island	20_22
GB40991D	Pitcairn – Ducie Island	52_22
GB300991	Pitcairn – Henderson Island	52_22

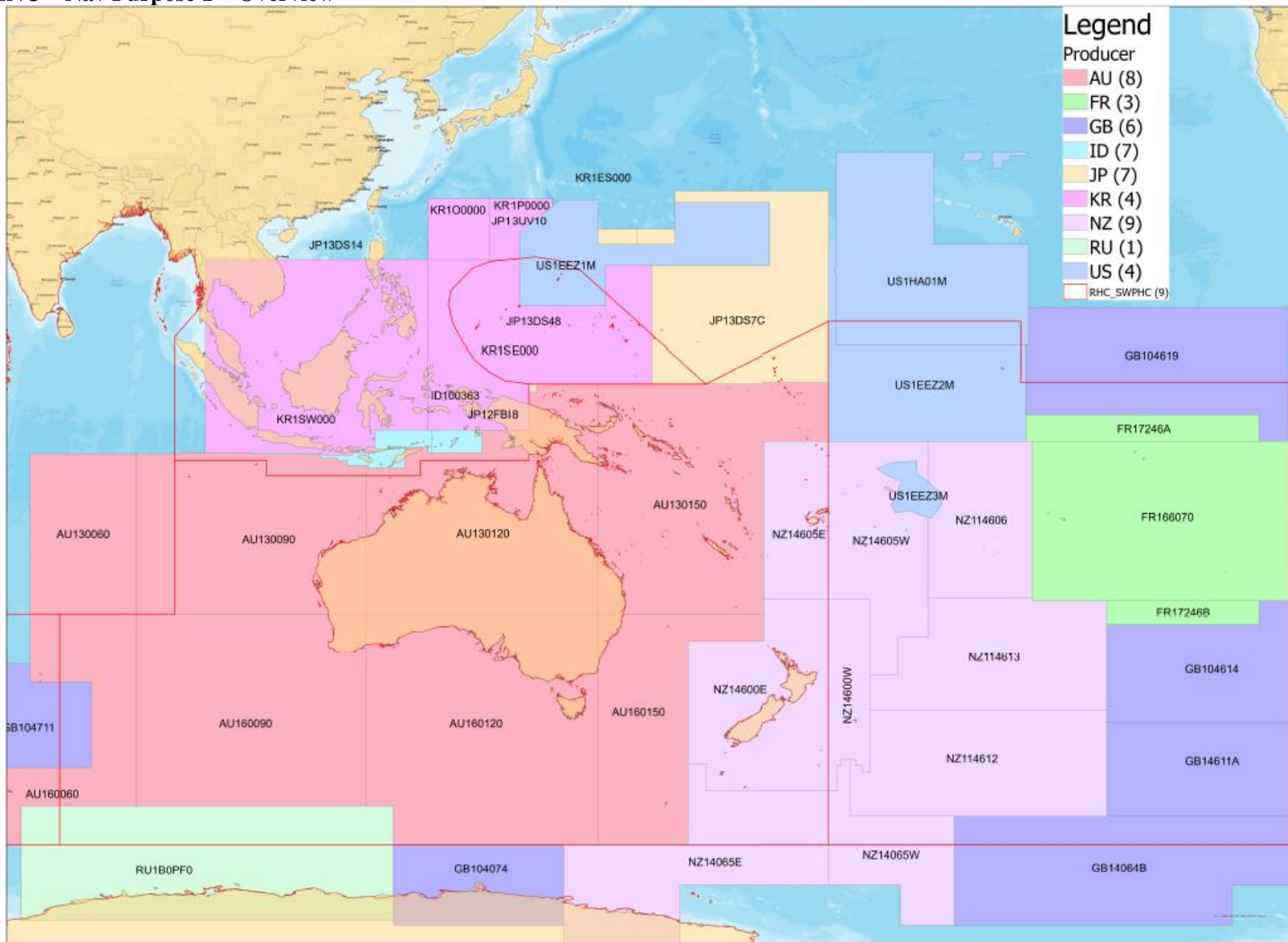
SHOM

New Cells	Area	Published
FR17246A	Polynésie Française partie nord	21/01/2022
FR17246B	Polynésie Française partie sud	21/01/2022

See Annex B for Status of ENC Coverage across all usage bands- Region L.



## Current ENC – Nav Purpose 1 – Overview



**Legend**

**Producer**

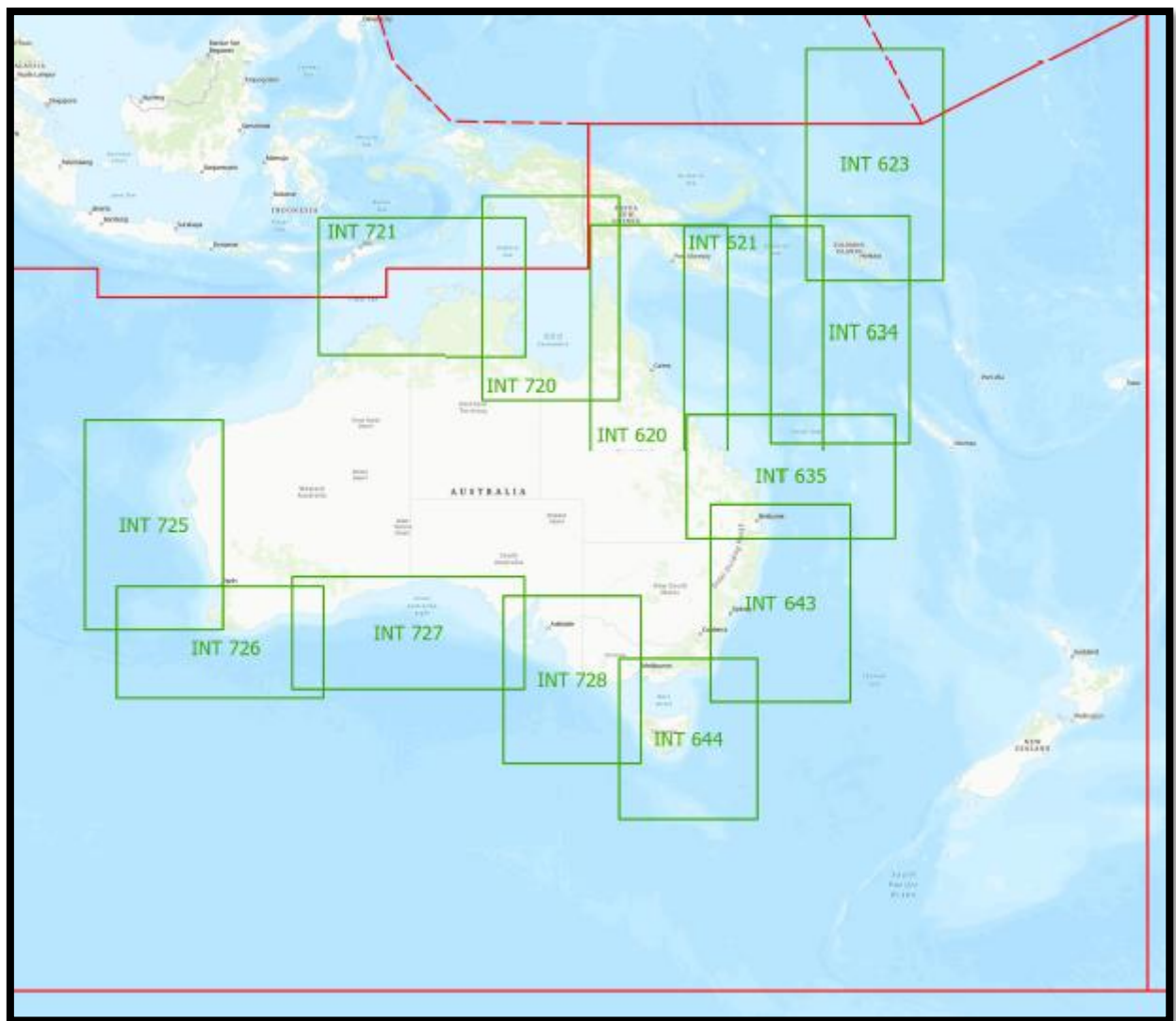
- AU (27)
- FR (4)
- GB (8)
- ID (3)
- JP (1)
- NZ (10)
- US (6)

The map displays the Pacific Ocean with various EEZs and fishing permits. The permits are color-coded by producer: AU (red), FR (green), GB (blue), ID (purple), JP (orange), NZ (pink), and US (light green). The map includes a legend for the producer and a list of permit numbers. The permit numbers are: AU2597P0, AU220103, AU220110, AU220120, AU220130, AU220140, AU220150, AU220160, AU220170, AU220180, AU220190, AU220200, AU220210, AU220220, AU220230, AU220240, AU220250, AU220260, AU220270, AU220280, AU220290, AU220300, AU220310, AU220320, AU220330, AU220340, AU220350, AU220360, AU220370, AU220380, AU220390, AU220400, AU220410, AU220420, AU220430, AU220440, AU220450, AU220460, AU220470, AU220480, AU220490, AU220500, AU220510, AU220520, AU220530, AU220540, AU220550, AU220560, AU220570, AU220580, AU220590, AU220600, AU220610, AU220620, AU220630, AU220640, AU220650, AU220660, AU220670, AU220680, AU220690, AU220700, AU220710, AU220720, AU220730, AU220740, AU220750, AU220760, AU220770, AU220780, AU220790, AU220800, AU220810, AU220820, AU220830, AU220840, AU220850, AU220860, AU220870, AU220880, AU220890, AU220900, AU220910, AU220920, AU220930, AU220940, AU220950, AU220960, AU220970, AU220980, AU220990, AU221000, AU221010, AU221020, AU221030, AU221040, AU221050, AU221060, AU221070, AU221080, AU221090, AU221100, AU221110, AU221120, AU221130, AU221140, AU221150, AU221160, AU221170, AU221180, AU221190, AU221200, AU221210, AU221220, AU221230, AU221240, AU221250, AU221260, AU221270, AU221280, AU221290, AU221300, AU221310, AU221320, AU221330, AU221340, AU221350, AU221360, AU221370, AU221380, AU221390, AU221400, AU221410, AU221420, AU221430, AU221440, AU221450, AU221460, AU221470, AU221480, AU221490, AU221500, AU221510, AU221520, AU221530, AU221540, AU221550, AU221560, AU221570, AU221580, AU221590, AU221600, AU221610, AU221620, AU221630, AU221640, AU221650, AU221660, AU221670, AU221680, AU221690, AU221700, AU221710, AU221720, AU221730, AU221740, AU221750, AU221760, AU221770, AU221780, AU221790, AU221800, AU221810, AU221820, AU221830, AU221840, AU221850, AU221860, AU221870, AU221880, AU221890, AU221900, AU221910, AU221920, AU221930, AU221940, AU221950, AU221960, AU221970, AU221980, AU221990, AU222000, AU222010, AU222020, AU222030, AU222040, AU222050, AU222060, AU222070, AU222080, AU222090, AU222100, AU222110, AU222120, AU222130, AU222140, AU222150, AU222160, AU222170, AU222180, AU222190, AU222200, AU222210, AU222220, AU222230, AU222240, AU222250, AU222260, AU222270, AU222280, AU222290, AU222300, AU222310, AU222320, AU222330, AU222340, AU222350, AU222360, AU222370, AU222380, AU222390, AU222400, AU222410, AU222420, AU222430, AU222440, AU222450, AU222460, AU222470, AU222480, AU222490, AU222500, AU222510, AU222520, AU222530, AU222540, AU222550, AU222560, AU222570, AU222580, AU222590, AU222600, AU222610, AU222620, AU222630, AU222640, AU222650, AU222660, AU222670, AU222680, AU222690, AU222700, AU222710, AU222720, AU222730, AU222740, AU222750, AU222760, AU222770, AU222780, AU222790, AU222800, AU222810, AU222820, AU222830, AU222840, AU222850, AU222860, AU222870, AU222880, AU222890, AU222900, AU222910, AU222920, AU222930, AU222940, AU222950, AU222960, AU222970, AU222980, AU222990, AU223000, AU223010, AU223020, AU223030, AU223040, AU223050, AU223060, AU223070, AU223080, AU223090, AU223100, AU223110, AU223120, AU223130, AU223140, AU223150, AU223160, AU223170, AU223180, AU223190, AU223200, AU223210, AU223220, AU223230, AU223240, AU223250, AU223260, AU223270, AU223280, AU223290, AU223300, AU223310, AU223320, AU223330, AU223340, AU223350, AU223360, AU223370, AU223380, AU223390, AU223400, AU223410, AU223420, AU223430, AU223440, AU223450, AU223460, AU223470, AU223480, AU223490, AU223500, AU223510, AU223520, AU223530, AU223540, AU223550, AU223560, AU223570, AU223580, AU223590, AU223600, AU223610, AU223620, AU223630, AU223640, AU223650, AU223660, AU223670, AU223680, AU223690, AU223700, AU223710, AU223720, AU223730, AU223740, AU223750, AU223760, AU223770, AU223780, AU223790, AU223800, AU223810, AU223820, AU223830, AU223840, AU223850, AU223860, AU223870, AU223880, AU223890, AU223900, AU223910, AU223920, AU223930, AU223940, AU223950, AU223960, AU223970, AU223980, AU223990, AU224000, AU224010, AU224020, AU224030, AU224040, AU224050, AU224060, AU224070, AU224080, AU224090, AU224100, AU224110, AU224120, AU224130, AU224140, AU224150, AU224160, AU224170, AU224180, AU224190, AU224200, AU224210, AU224220, AU224230, AU224240, AU224250, AU224260, AU224270, AU224280, AU224290, AU224300, AU224310, AU224320, AU224330, AU224340, AU224350, AU224360, AU224370, AU224380, AU224390, AU224400, AU224410, AU224420, AU224430, AU224440, AU224450, AU224460, AU224470, AU224480, AU224490, AU224500, AU224510, AU224520, AU224530, AU224540, AU224550, AU224560, AU224570, AU224580, AU224590, AU224600, AU224610, AU224620, AU224630, AU224640, AU224650, AU224660, AU224670, AU224680, AU224690, AU224700, AU224710, AU224720, AU224730, AU224740, AU224750, AU224760, AU224770, AU224780, AU224790, AU224800, AU224810, AU224820, AU224830, AU224840, AU224850, AU224860, AU224870, AU224880, AU224890, AU224900, AU224910, AU224920, AU224930, AU224940, AU224950, AU224960, AU2249

## INT Charts Update:

### AHO

The AHO has commenced a digital transformation program which should realise a complete digital nautical charting suite and process by 31 Dec 2025. As part of paper chart withdrawal strategy the AHO have withdrawn 13 of the 1.5 million series INT charts in September 2022 as shown in figure 2 below.



*Figure 2: INT paper chart series withdrawn by AHO(1.5 million series)*

### LINZ

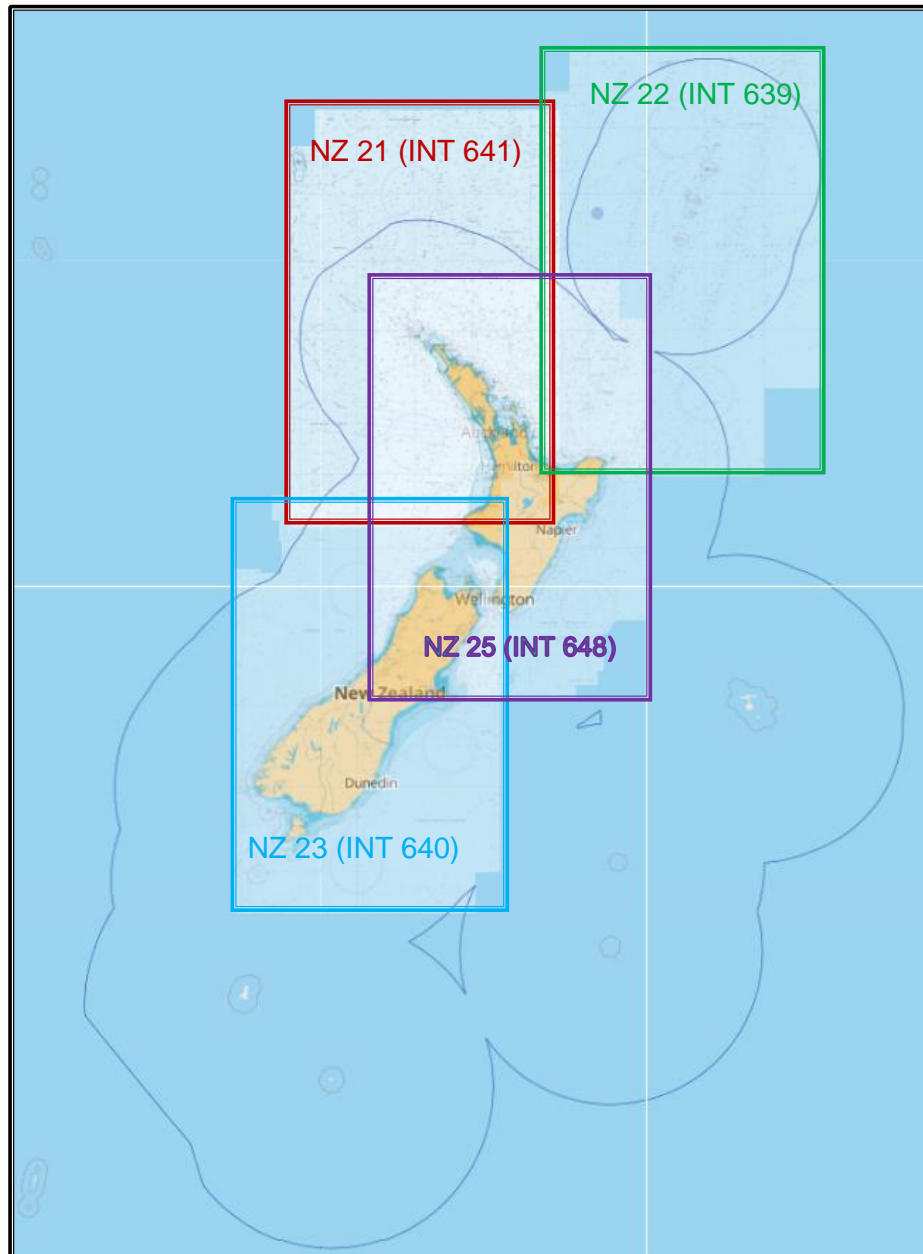
As part of a larger programme of work, LINZ is currently reviewing its paper chart portfolio, specifically the smaller charts, with the intention to adopt a “smart rationalising” process on the 1.5M and 1.25M-scale paper charts. This process will remove superfluous or duplicated paper charts which will reduce the maintenance required for these paper charts and reduce the number of paper charts overlaps in the small-scale portfolio, while still retaining adequate coverage for oceanic route



planning and overview purposes at the 1:3.5M and 1:10M scales. As part of this work, four INT charts at a scale of 1:1.5M have been identified as suitable for withdrawal without replacement.

In the longer term, the above mentioned larger programme of work may result in additional changes to the INT charts LINZ produces, as well as small scale ENC's. This will likely be a result of the move to the s100 database. Any future changes to the INT charts and usage 1 and 2 ENC's that result from, this will be included in future ICCWG reports.

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) is scheduled for completion by end of 2023.



*Figure 3:INT charts LINZ is planning on withdrawing in 2023*

## NOAA/NGA

### *Paper INT Chart Update:*

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

The following large scale raster charts in the Southwest Pacific were cancelled on May 4, 2022:

<b>RNC</b>	<b>Title</b>	<b>Scale</b>
81063	Commonwealth of the North Mariana Islands Rota	1:25,000
81086	Plans in the Mariana Islands; Faraloon de Pajaros; Sarigan Island; Farallon de Medinilla; Ascuncion Island; Agrihan; Agrihan Anchorage; Alamagan Island; Guguan; Anatahan	1:72,962
81092	Commonwealth of the Northern Mariana Islands	1:26,420
83157	Palmyra Atoll; Approaches to Palmyra Atoll	1:10,000
83153	United States Possession Kingman Reef	1:25,000

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

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

## **Region L: Gridded ENC Scheme – An update**

### AHO

The current AHO ENC scheme is gridded scheme. See table below for gridded scheme details.

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

## 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. The table below pertains to Nav Purpose 2 reschemed ENCs.

<b>Usage Band</b>	<b>Navigational Purpose</b>	<b>Cell Height (decimal degrees)</b>	<b>Cell Width (decimal degrees)</b>	<b>Reschemed NOAA ENC Scale</b>
<b>2</b>	<b>General</b>	<b>4.8°</b>	<b>4.8°</b>	<b>1: 1,280,000</b>
				<b>1: 640,000</b>

The figure below represents the current NOAA and NGA ENC boundaries (red) and future NOAA rescheduled ENCs (blue) for Nav Purpose 2 in Region L. Additionally, NGA is in the process of creating a separate ENC grid for use in building its future ENC portfolio. NOAA plans to coordinate with other Hydrographic Offices and use a CATCOV solution to prevent ENC overlap.

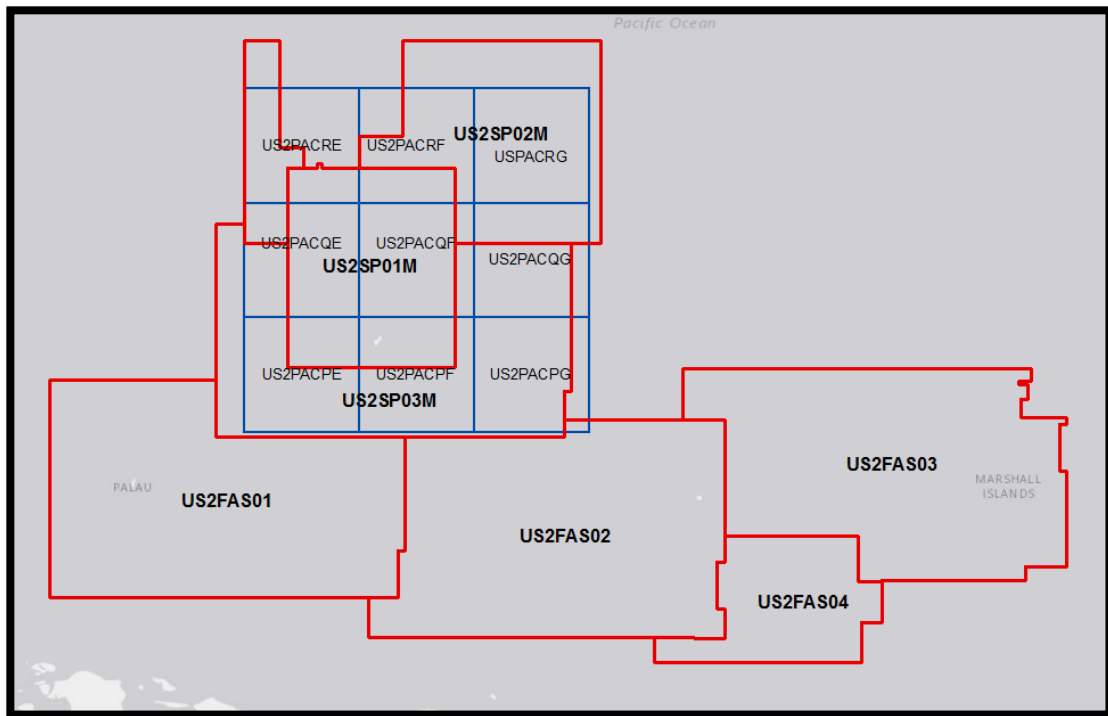


Figure 2: US current ENCs (outlined in red) with planned Nav Purpose 2 rescheduled ENCs (outlined in blue).

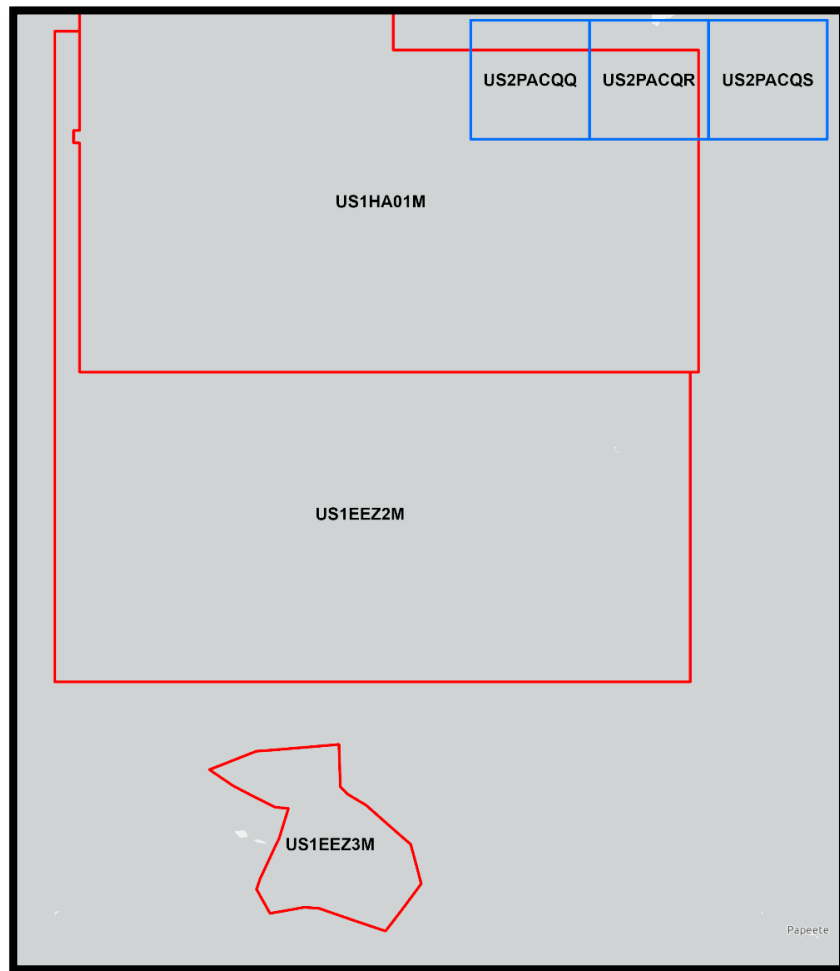


Figure 3: US current ENCs (outlined in red) with planned Nav Purpose 2 reschemed ENCs (outlined in blue).

## UKHO

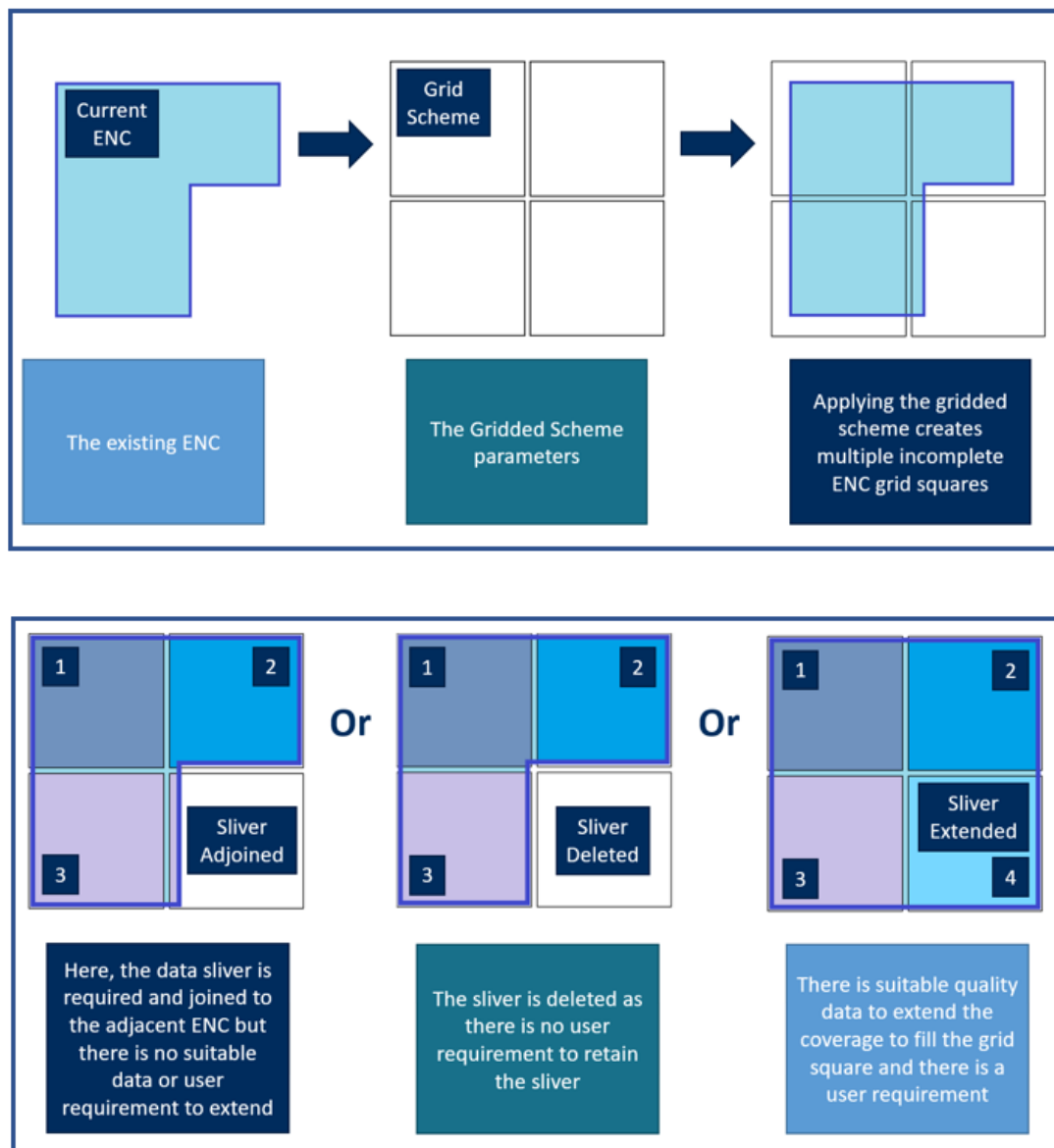
UKHO is in the process of rescheming their ENC portfolio. Started around the UK, but plan to apply their “model grid” to GB ENCs in other regions in due course.

## 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.



UKHO will continue to co-ordinate with other Hydrographic Offices and use a CATCOV solution to prevent ENC overlap.



## 5. Overlaps of Navigation Purpose 1 and 2 ENC cells in SWP

- 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.

IC-ENC REGIONAL HYDROGRAPHIC COMMISSION OVERLAP REPORT - SOUTH WEST PACIFIC RHC - FEBRUARY 2023														
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
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	5	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
193	LIVE	IC-ENC - NON RENC	SWPHC	US1EEZ1M	JP13DS48	1	3000000	3000000	7	21	410Km x 4Km 20Km x17Km	UNABLE	IC-ENC does not have access NON RENC ENC to conduct assessment	HOs to discuss and resolve overlaps

## 6. SWPHC19 Actions

No	Action	Responsible	Remarks
15	SWPHC to consider extending the role of the Charting Regional Coordinator for the implementation of the S-100 Implementation Roadmap	ICCWG	ICCWG ToR to be updated 2023.
16	SWPHC to coordinate the efforts on the implementation of S-100, promote the cooperation and exchange of experiences, and identify CB requirements..	ICCWG	Ongoing
19	SWPHC to consider role of regional charting coordinator to include S-1xx Products as RHC WEND Coordinator.	ICCWG	Email sent out 27 <sup>th</sup> Jan 2023 by SWPHC Chair calling for nominations for an SWPHC S-100 Coordinator.

## **7. Engagement with Non Producer Nations in SWP**

Within the South West Pacific, the Producer Nations of New Zealand, UK, France and Australia have reported good working relationships with the Hydrographic Offices / National Maritime jurisdictions and/or Governments of the countries they chart.

## **8. Adherence to WEND principles**

ENCs are distributed worldwide via the following mechanisms:

<b>Producer nation</b>	<b>Mechanism</b>
France	PRIMAR RENC
Australia	IC-ENC RENC
New Zealand	IC-ENC RENC
UK	IC-ENC RENC
US	IC-ENC RENC

## **9. SWPHC S-100 Workshop**

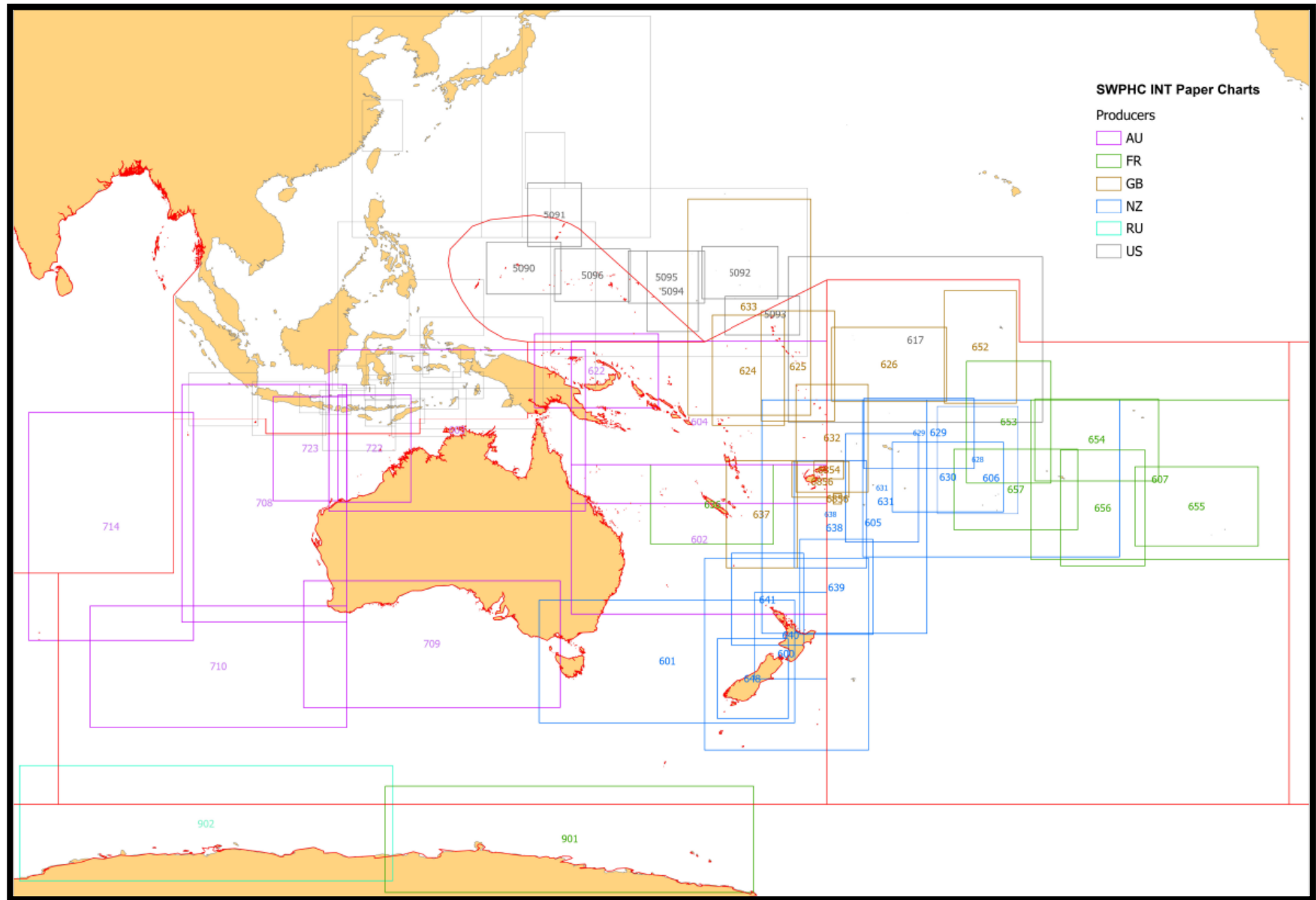
The second SWPHC S-100 Workshop was conducted online on 12<sup>th</sup> October 2022. There were a number of presentations on S-100 Implementation updates and S-100 Value Proposition from Australia, New Zealand, France, USA, France and Singapore.

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

## **10. Recommendations for discussion at SWPHC 19**

1. Members of the SWPHC note this report.

## 11. Annexe A – INT Paper Chart Scheme in SWPHC



## 12. Annexe B – Status of ENC Coverage - Region L

