

Activities of WENDWG

WENDWG12, 22-24 February 2022

Outcome, Actions and Decisions that may affect MBSHC

Doc: MBSHC23-05.2 (España/ Spain)



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Activities of WENDWG

- WENDWG12 meeting was in hybrid mode, and was held in Monaco from February 22 to 24.



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WORLDWIDE ENC DATABASE WORKING GROUP DISCUSSES THE FUTURE OF COVERAGE

Link to the WENDWG12: <https://iho.int/en/wendwg12-2022>

and

IHO news: <https://iho.int/en/worldwide-enc-database-working-group-discusses-the-future-of-coverage>



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"This meeting provided a much needed opportunity to make progress on the guidelines for the implementation of the WEND-100 Principles, to consider challenges and accomplishments from the regional chart coordinators, but also to discuss how to coordinate S-1xx products and services through partners like the RENCs and new tools like the ever-evolving INTToGIS online catalogue, an IHO interoperable web service which will allow users to view the IHO catalogue of S-1xx products."

Dr John Nyberg, USA, WENDWG Chair



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Activities of WENDWG: highlights

1. Overlap of information between neighbouring countries or areas and the key role the RHC must play for harmonized production and distribution of future S-100.

2. Transition from S-57 ENC's to S-101 ENC's (dual standards that will coexist for a while until mariners use S-100 ECDIS only).

“dual-fuel concept governance document” that will be presented officially at the next meeting of the HSSC in May.



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AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 24 Feb 2022)
3. Review of the Matters arising from WENDWG-11 Meeting, IRCC-13, A-2 and C-5					
	HD ENC's	WENDWG12/06	WENDWG Chair to report at IRCC with the following recommendations: <ul style="list-style-type: none"> - to acknowledge the important user needs for improved safety contour usability. - to invite Member States to consider the role that HD ENC's can play in doing this before S-100 ECDIS becomes widely available as well as S-102. 	IRCC-14 (-7 weeks)	

Efforts , sources/ means in HD ENC's or in S-102?



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AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 24 Feb 2022)
4. S-100 Implementation Strategy – WEND100 Principles –Dual Fuel Governance					
4.1 Impact of WEND-100 Principles on the S-100 Implementation Strategy					
	Roadmap for S-100 Implementation Decade	WENDWG12/08	WENDWG Chair to report to IRCC that a set of amendments to the Roadmap focussing on Dual Fuel Governance, Guidelines on the Implementation of WEND-100 Principles and Cataloguing (INToGIS III) will be considered at the next WENDWG meeting.	IRCC-14 / WENDWG-13	Decision
4.2 Follow-up Action WENDWG11/06- S-101 ENC Scheming Guidelines					
	S-101 ENC Scheming Guidelines	WENDWG12/12	Noting the outcome of the discussion on a possible long-term strategy for a Global Common Grid Scheme (which still needs to be considered), RHCs Reps (to be tasked by IRCC) to share their agreed strategy at regional level on S-101 ENC Scheming/Production (not excluding other S-1xx products) and report on user needs, shortfalls,... at the next WENDWG meeting.	WENDWG-13	



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Interim Report on the development of S-101 ENC Scheming Guidelines

1. drafting group was established at WENDWG11 (Feb. 2021): Colombia, Finland, France, Germany, Italy, Japan (Lead), UK, US
2. Objective:
 - a. to consider technical options that might enable much better coordination, seamless coverage, harmonized production, elimination of significant overlaps under the S-100 framework, seamless coverage, harmonized production
 - b. to develop S-101 Scheming Guidelines as Annex to WEND-100 Principles toward WENDWG12
3. VTC meeting of the drafting group was held on 13th October
4. Consensus has not reached yet.




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GLOBAL COMMON GRID SCHEME (GCGS) (1)

- “Global Common Grid Scheme” (GCGS) could be an appropriate solution against the prioritized key drivers

Global	Simple grid system does not always solve <u>overlapping</u> issues if each country establishes its own scheme.
Common	Users can simply choose which cell to purchase and then harm of <u>overlapping</u> data on ECDIS will be reduced (as the previous slide says).
Grid Scheme	Flexibility is required to achieve <u>interoperability</u> with S-1XX products.

The grid scheme is ideal, but a lot of cost (time, budget for HO and etc.) is required for transition.

* Some parts are already discussed at WENDWG11

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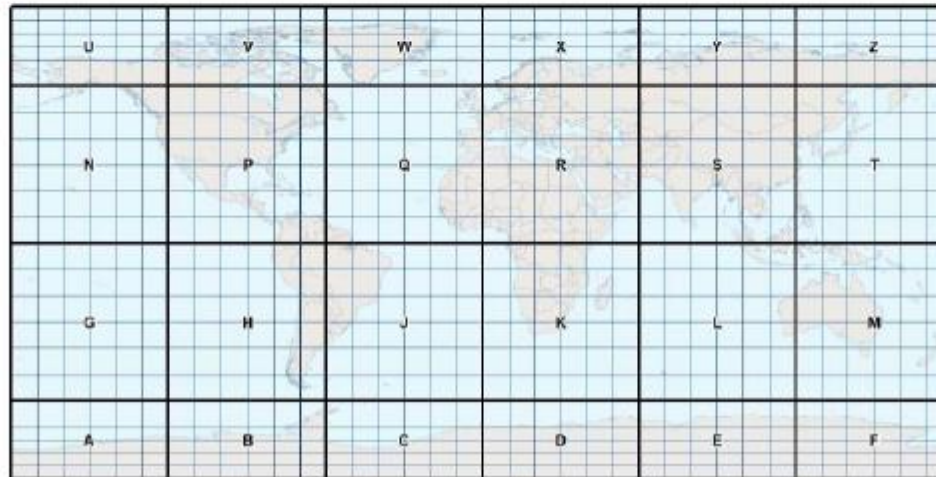


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GCGS (2); EXAMPLE - NGA ENC GRID SYSTEM

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- NGA ENC grid divides world into 24 lettered regions
- Mid-latitude regions contain thirty-six $10^\circ \times 10^\circ$ cells
- High-latitude regions contain six $10^\circ \times 10^\circ$ cells and twenty-four $10^\circ \times 5^\circ$ cells
 - All cells in polar regions ($>70^\circ$ N/S) are condensed vertically to avoid distortion issues near poles
- Subdivisions are 10° , 5° , 1° , $1/2^\circ$, $1/4^\circ$



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GCGS (3); EXAMPLE - S-57 VER. 2

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- S-57 Version 2 Annex D (published in 1992) defines the cell sizes.
- Cell sizes are 8°, 4°, 1°, 1/2°(30'), 1/4°(15'), 1/8°(7.5')

Scale Coding

Each cell must only hold data of one scale level.

Scale		Cell Size	Chart Category
Code	Chart Scale		
A	< 1:2,250,000	8°	World
B	1:300,001 - 1:2,250,000	4°	General Nautical
C	1:80,001 - 1:300,000	1°	Coastal
D	1:40,001 - 1:80,000	30'	Approach
E		15°	Approach (SE 15°)
F		15°	Approach (SW 15°)
G		15°	Approach (NE 15°)
H		15°	Approach (NW 15°)
I	1:10,000 - 1:40,000	15°	Harbour
J		7.5°	Harbour (SE 7.5°)
K		7.5°	Harbour (SW 7.5°)
L		7.5°	Harbour (NE 7.5°)
M		7.5°	Harbour (NW 7.5°)
N	> 1:10,000	15°	Plan
O		7.5°	Plan (SE quad 7.5°)
P		7.5°	Plan (SW quad 7.5°)
Q		7.5°	Plan (NE quad 7.5°)
R		7.5°	Plan (NW quad 7.5°)

Scale codes E to H and J to M are optional and are only used when the density of data in cells of scale codes D and I respectively is too great.



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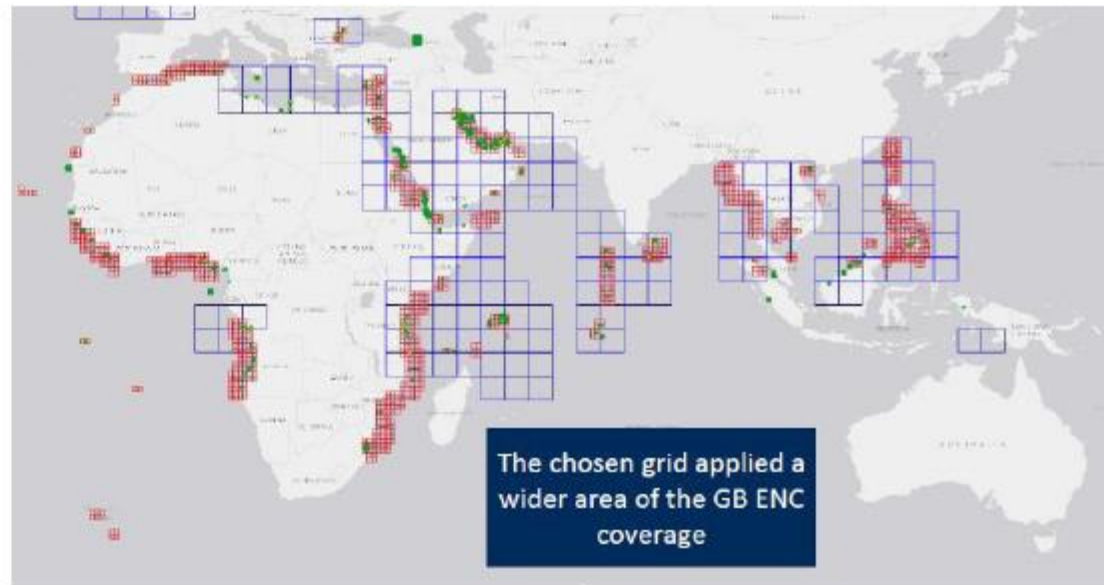


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GCGS (4); EXAMPLE - UKHO

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- UKHO started consideration of application of the gridded scheme to support the global coverage and the future S-1XX products.
- Cell sizes are 20° , 4° , $0.8^{\circ}(48')$, $0.2^{\circ}(12')$, $0.1^{\circ}(6')$, $0.05^{\circ}(3')$



The chosen grid applied a wider area of the GB ENC coverage



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SUMMARY OF THE CURRENT IDEAS

- Rescheming is set as a long-term goal like Strategic Performance Indicators (SPI). The timing of rescheming (with or after conversion) depends on each HO's decision in terms of “cost-effective”.
- Some key drivers should be considered for rescheming. Especially, interoperability and overlapping could be stronger among them.
- “Global Common Grid System” designed horizontally and vertically could be a possible and appropriate solution.



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SOME COMMENTS FROM MEMBERS OF DRAFTING GROUP

General

- The grid model has many disadvantages that increase the workload and slow down the processes.
- Currently we scheme our ENC's freely, based on the data we are presenting. We would call that data based scheming.
- We have not yet seen any concrete analysis that would explain or prove to us how regular grid is better compared to our current way of ENC scheming.
- No alternative options are presented for consideration.
- The transition to a regular grid scheme would be a major cost and a long-term action for HO's. Therefore, it is important to be sure of the benefits of such an operation.
- We consider it unrealistic to re-scheme during the DF period.



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SOME COMMENTS FROM MEMBERS OF DRAFTING GROUP

Overlapping

- Are both neighboring nations obligated to fill the whole cell with data even from the others territory? If they are, that would require a lot more cooperation and workload updating the data from the neighboring countries territories.
- We would like to emphasize that the extension of a data coverage of the same scale range has significance for the user, especially for mariners. The data coverage counts, more than the cell schemes of the products.

Interoperability

- We are not certain that S-1xx cell schemas could be defined according S-101 grids (e.g. the volume of the products is a constraint for the size).



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Drafting group consider the following options for the next actions (if necessary, to be considered at IRCC-14):

Option 1; Based on the current situation and various positions, no need for Guidelines, keep S-57 general framework "as is" in the transition to S-101 production, disband drafting group for now.

Option 2: RHCs (and RENCs?) Reps to report at WENDWG-13 on their views and general strategy about the transition from S-57 to S-101 (dual) production and also on their views on a long term objective for ENC re-scheming needs or not based on cost-effective analysis to speed up the implementation of the S-100 Roadmap in a consistent manner world-wide

* If option 2 is chosen, as a consequence, at WENDWG-13, reconsider the establishment of the drafting group based on outcome of option 2, to define a minimum common denominator for drafting guidelines

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4. S-100 Implementation Strategy – WEND100 Principles –Dual Fuel Governance					
4.3 Follow-up Action WENDWG11/09- S-1xx Implementation Guidelines					
	S-1xx Implementation Guidelines (Doc WENDW12-04.3A refers)	WENDWG12/16	<p>The WENDWG agreed to focus the drafting work to use case SOLAS V, (ECDIS in particular) considering S-102, S-104, and S-111 products in particular.</p> <p>However, as an outcome of the discussion on the typology of use cases categories, the WENDWG agreed that consideration should be given by the drafting group to make a distinction in the non-SOLAS use case between navigation use and other use than navigation.</p>	WENDWG-13	Decision
	S-1xx Implementation Guidelines (Doc WENDW12-04.3A refers)	WENDWG12/17	<p>The WENDWG discussed the decisions points proposed on various issues and agreed that more work is necessary (route monitoring, route planning, regional versus oceanic for S-102, S-104 and S-111, S-128 options).</p> <p>The drafting group to prepare a new draft of the Guidelines based on discussions to be submitted to the WENDWG 1st, then for WENDWG Chair to be included in the report to IRCC.</p>	IRCC-14 (- 7 weeks)	Decision



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5. Review of the matters, if any, raised by RHCs Representative and ENC Charting Regions Coordinators that may affect the WENDWG – INTOGIS II update – S-128					
5.1 Review of important matters raised by ENC Charting Regions Coordinators					
		WENDWG12/21	<p>The WENDWG to invite IRCC / RHCs Reps to consider how they anticipate the role of S-100 Services Coordinator in their future (expansion of the role of Chart Coordinators, or establishment of a new function) and whether amendment is needed for a new Section 300 in S-11 Part A (or another Standard) as it is under the custodianship of NCWG.</p> <p>RHCs Reps in WENDWG to report at the next meeting.</p>	<p>IRCC-14 (-7 weeks)</p> <p>WENDWG-13</p>	



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5. Review of the matters, if any, raised by RHCs Representative and ENC Charting Regions Coordinators that may affect the WENDWG – INTToGIS II update – S-128					
5.2 INTToGIS II update – S-128 – Towards INTToGIS III for S-1xx products					
	INTToGIS II, Traffic Density	WENDWG12/24	<p>The WENDWG thanked the US (NGA) for their update on the World Port Index database and maintenance procedure and invited them to consider the possibilities offered by the development of S-131 as a possible way forward in the future.</p> <p>The WENDWG Secretariat reminded the US (NGA) to provide a status report to the Secretariat on the worldwide coverage traffic density layer information note, before it can be officially commissioned in INTToGIS II.</p>	WENDWG-13	
	INTToGIS II, Port Index Database	WENDWG12/25	<p>The WENDWG invited the US (NGA) and KHOA to liaise for a seamless maintenance of a version-controlled database of the Port Index layer in INTToGIS II.</p>	WENDWG-13	



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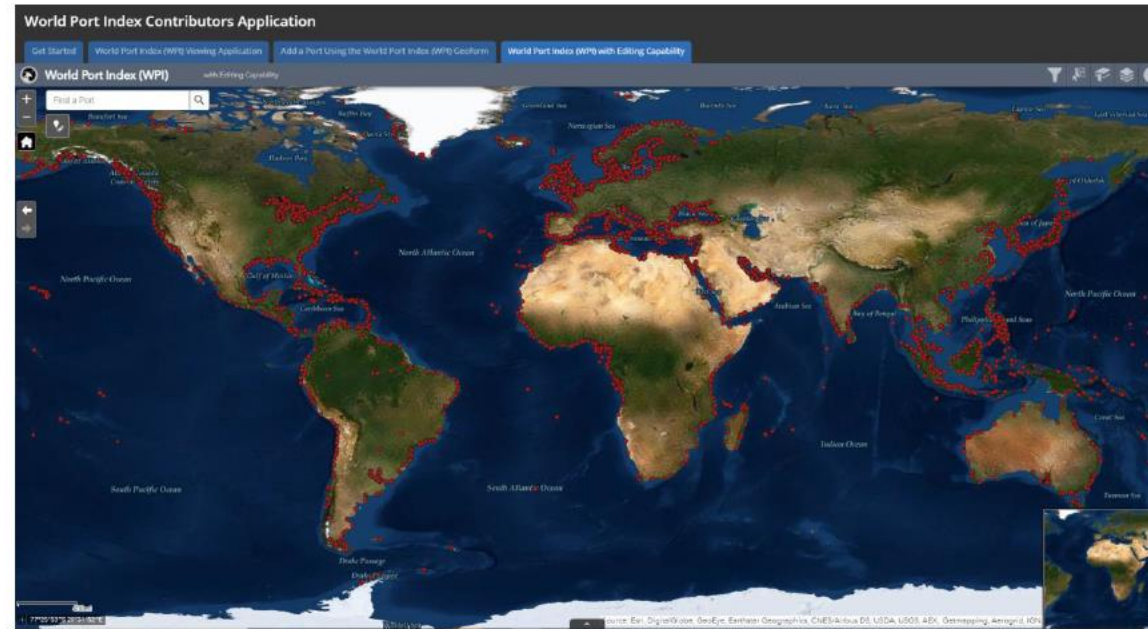
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Modernized World Port Index (WPI)

- Geospatial representation of the World Port Index (WPI) available on ArcGIS Online (AGOL) platform.
- Access AGOL platform two ways:
 - Maritime Safety Information (MSI) site: <https://msi.nga.mil/Publications/WPI>
 - Direct Link: <https://nga.maps.arcgis.com/apps/MapSeries/index.html?appid=f9515d53e3e24ae7919f02eb8f554c96>



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Data Additions and Enhancements

Scroll through and find relevant information for a port in its pop-up box.

- Tidal Ranges
- Depths
- Port Services

Additional and Enhanced Data

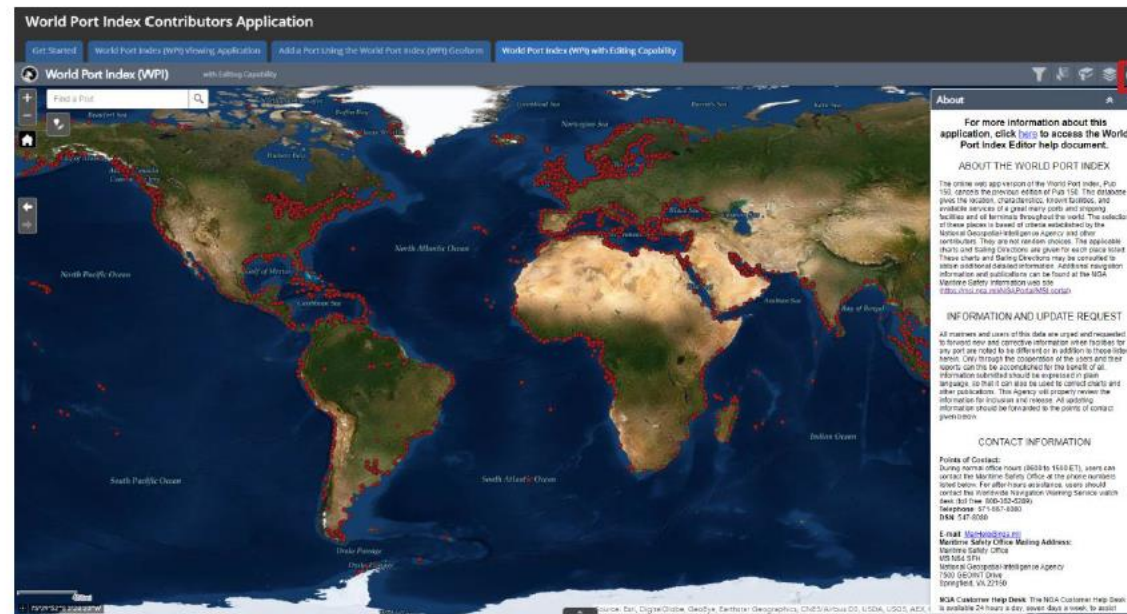
- UN LOCODE
- Actual values for depths
- Full titles of Publications
- More frequent updates



Activities of WENDWG

Contributing to the World Port Index

- Users can update a port's information or submit new ports, based on authoritative knowledge.
 - *VISION: Crowdsourcing contributions to the WPI to provide the most up-to-date information for mariners across the globe.*
 - Help documents are available.
 - Add as much information as possible. Port name is the only required field.



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Contribution Capabilities Are Operational

NGA requests partners begin contributing data to the World Port Index.

To add a port:

1. Enter Information

1. Go to the [Add a Port Using the World Port Index \(WPI\) Geoform](#) tab.
2. Fill in information fields as completely as possible. Add any additional comments about the submission to the "Submission Comments" field.

2. Select Location

1. Using the Lat/Lon tab, enter the coordinates of the port. Click Set Location.

3. Complete Form

1. Click Submit.
2. All submissions must be accompanied by an email. Please send an email, specifying the name of the port(s), to MCDWPI@nga.mil. NGA reserves the right to review all submissions before adding them to the map.

To edit an existing port:

1. Locate the Existing Port

1. Go to the [World Port Index \(WPI\) with Editing Capability](#) tab.
2. Locate the port to edit.
3. Open the Smart Editor widget, under the Find a Port search bar.
4. On the map, click on the port to edit. The attributes of the port will appear in the widget.

2. Edit Information and Location

1. Using the Smart Editor, edit any or all of the attributes of the port. Add any additional comments about the submission to the "Submission Comments" field.
2. If necessary, edit the location by using the "Edit Geometry" function.

3. Submit Edits

1. Click Save.
2. All submissions must be accompanied by an email. Please send an email, specifying the name of the port(s), to MCDWPI@nga.mil. NGA reserves the right to review all submissions before adding them to the map.



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Links and Contact Information

- World Port Index Contributors Map direct link
 - <https://nga.maps.arcgis.com/apps/MapSeries/index.html?appid=f9515d53e3e24ae7919f02eb8f554c96>
- World Port Index page on NGA's Maritime Safety Information website
 - <https://msi.nga.mil/Publications/WPI>
- Notify for New Port Submissions or Editing Port Data:
 - MCDWPI@nga.mil
- Questions, Issues, Feedback:
 - MarHelp@nga.mil



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AGENDA ITEM/WOR K IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVEN T	STATUS (at 24 Feb 2022)
6. Review of progress made on the work items of the WENDWG Programme of Work					
6.2 RENC Harmonization and ENC Distribution					
	RENCs	WENDWG12/27	In preparation of their forthcoming conferences and ICCWG meetings, RHCs Reps in WENDWG are invited to consider the IC-ENC overlaps assessment composite report (.zip) available on the WENDWG12 webpage.	As appropriate	
	IC-ENC's Overlapping ENC Policy	WENDWG12/30	The WENDWG Members to provide comments on the new IC-ENC's Policy on Overlapping ENC's.	10 March	
	CATZOC	WENDWG12/31	For the automated implementation of some SPIs, for maintaining the CATZOC layer in INToGIS II, WENDWG Chair to request at the next IRCC meeting as part of the report that Member States re-consider their position on providing CATZOC layers and to allow the distribution of their CATZOC data to the Secretariat .	IRCC-14	



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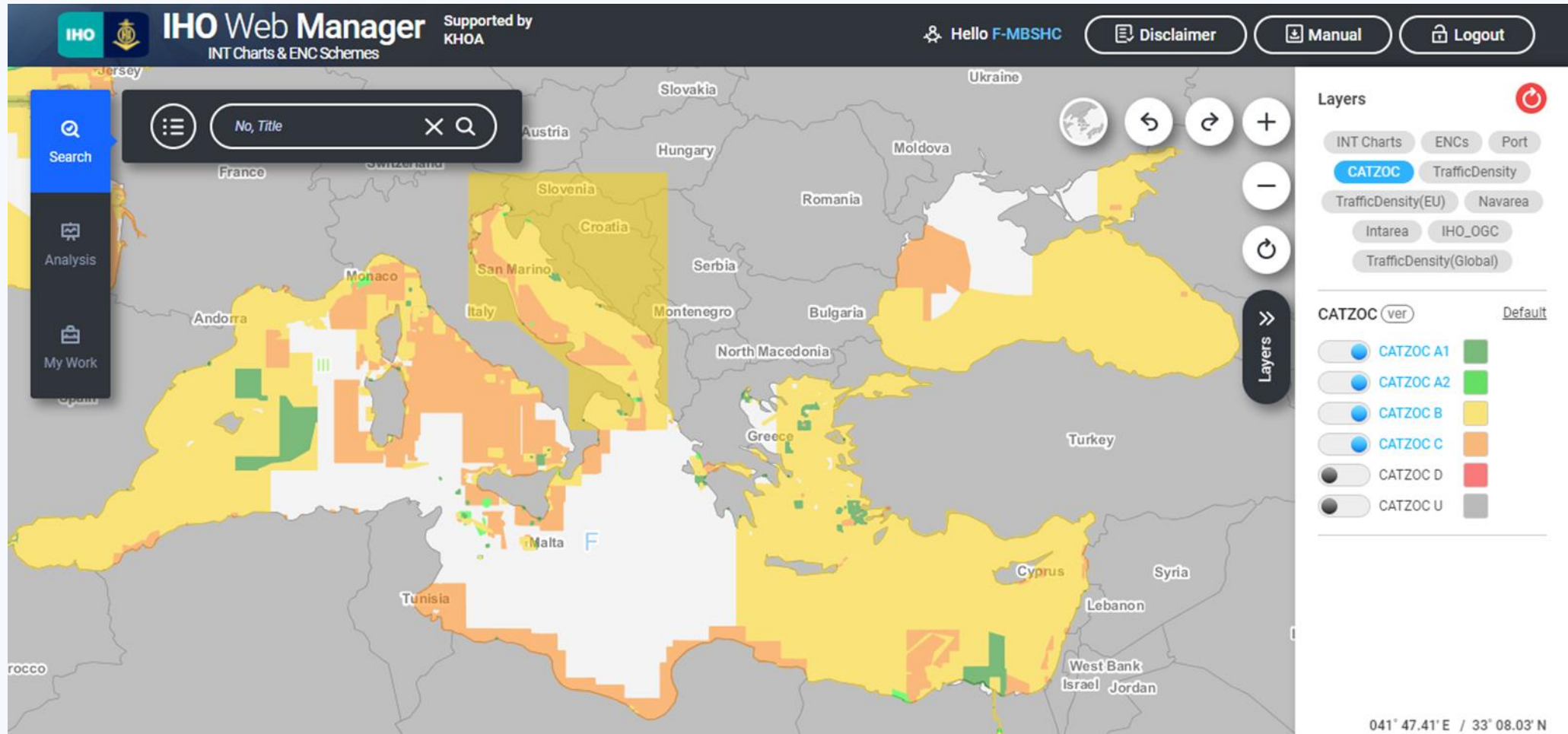
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Overlap impact assessment	Comments
Low	<p>The overlapping data content is sufficiently aligned to support safe navigation if either of the ENC's is chosen for display by the ECDIS algorithm. In other words, the data is mostly consistent between the two cells, with only minor (if any) misalignment between (any) significant content.</p> <p>Both HO's should continue to work towards resolving these. The justification for HO's to resolve 'Low' overlaps is to prevent the chance of content becoming misaligned in the future.</p> <p>Note 1: An Overview (Band 1) case will always be 'Low' noting the purpose of the ENC (planning). Note 2: If the overlap is over land, this will be 'accept'.</p>
Medium	<p>The overlapping data content contains some inconsistencies which have the potential to impact negatively on the user and safe navigation.</p> <p>There may be several objects captured inconsistently or missing from either cell which require correction as soon as practicable, e.g. caution areas, submarine cables, pipelines, lights, buoys, beacons.</p> <ul style="list-style-type: none"> i.e. If the same inconsistency of data was identified during IC-ENC's vertical consistency check between two cells in neighbouring usage bands, the validation categorisation would be: HO SHOULD CORRECT <p>A conclusion of Medium could apply to any cells in Usage Band 2-6, dependent on the severity of the issues presented.</p> <p>IC-ENC will track the resolution of the overlap to its conclusion. Both HO's should continue to work towards resolving these cases.</p>
High	<p>The overlapping data content presents a definite negative impact on the user and undermines the safety of navigation.</p> <p>There may be important objects captured inconsistently or missing from either cell which require immediate action, e.g. Traffic Separation Schemes, wrecks, depth contours, depth areas, missing obstructions in critical locations relevant to chart purpose</p> <ul style="list-style-type: none"> i.e. If the same inconsistency of data was identified during IC-ENC's vertical consistency check between two cells in neighbouring usage bands, the validation categorisation would be: HO MUST CORRECT <p>IC-ENC will proactively track and facilitate resolution of the overlap to its conclusion. IC-ENC will issue such warnings as it thinks fit in the circumstances of the case, and shall bring such warnings to the attention of relevant stakeholders.</p> <p>A conclusion of High could apply to any cells in Usage Band 2-6, dependent on the severity of the inconsistencies identified.</p>

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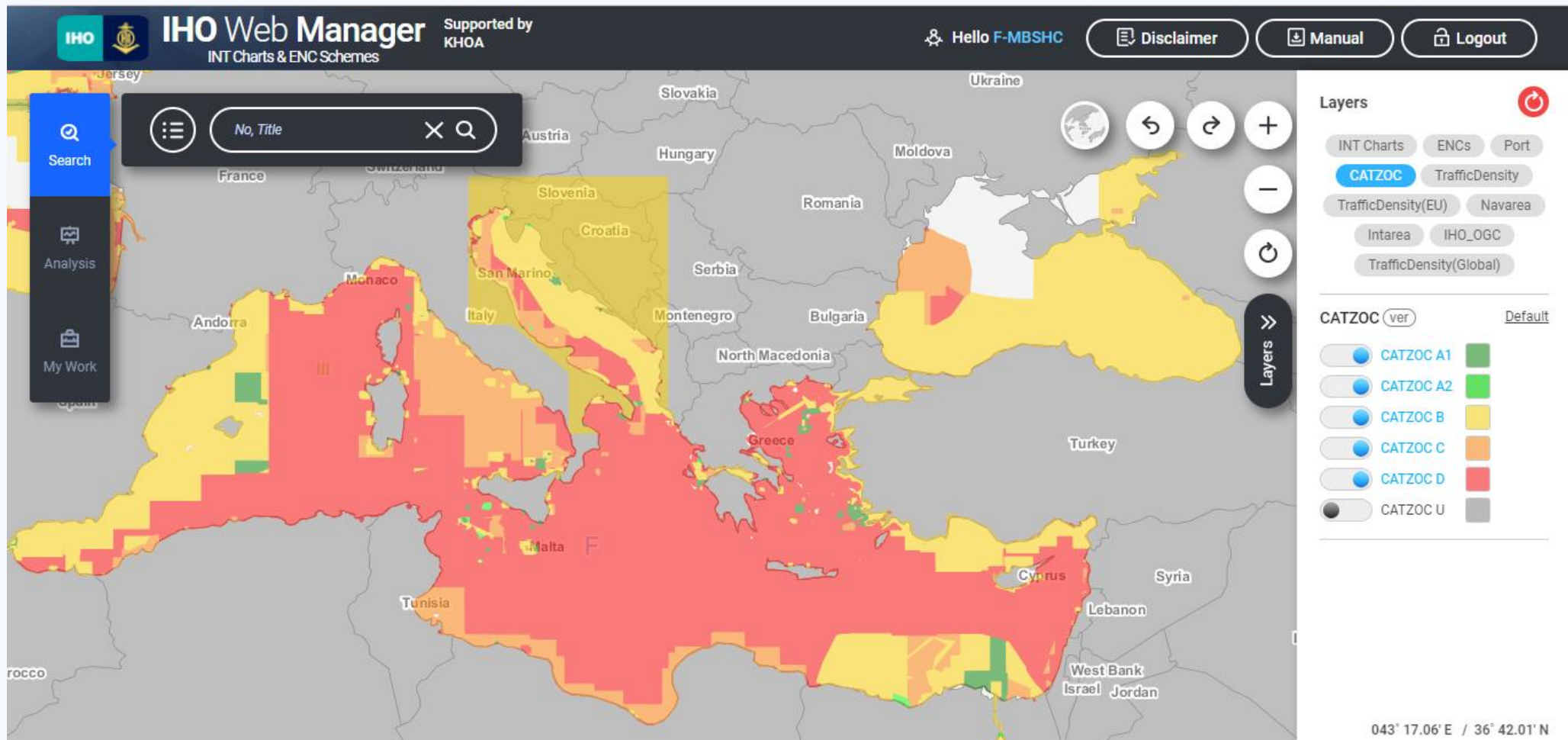
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7. Any Other Business					
	Roadmap on the S-100 Implementation Decade	WENDWG12/33	<p>WENDWG Chair to recommend in his report to IRCC, that RHCs include a standing agenda item in their forthcoming Conferences/Meetings, by which they engage in the development of a regional organizational pathway (UN-GGIM compliant - Integrated Geospatial Information Framework (IGIF)) for every S-1xx top priority products.</p> <p>The WENDWG agreed that the combined effort (nomination of S-100 Coordinator by RHCs + development of IGIF / per RHCs / per S-1-xx Product) is an important way forward to be proposed by the WENDWG Chair at the next IRCC-14 meeting for endorsement, and implementation by RHCs.</p> <p>Based on a IGIF (Integrated Geospatial Information Framework) template to be prepared by Chair/Secretary, status Reports by RHCs Reps expected at the next meeting.</p>	<p>IRCC-14</p> <p>IRCC-14</p> <p>End of March 2022 / WENDWG-13</p>	Decision



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“In the 2000’s, the IHO succeeded in its efforts to establish mandatory carriage requirements for ECDIS by the IMO, for one major reason: by committing to an adequate worldwide coverage of ENC’s to be available in the short-term! How can we get the lessons learned from this outstanding experience and use them in the S-100 world? How can we ensure an adequate worldwide coverage of at least the most important S-1xx products for route monitoring in the near future? This is the question at stake now, which needs to be tackled by every Regional Hydrographic Commission and their Member States.”

Yves Guillam, IHO Secretariat & WEND Working Group Secretary



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Action Required of the MBSHC

- a. note this report
- b. Agree a strategy at MBSHC level on S-101 ENC Scheming/Production (not excluding other S-1xx products) and report to next WENDWG or MBSHC meeting. WENDWG task.
- c. Consider how they anticipate the role of S-100 Services Coordinator in their future (expansion of the role of Chart Coordinators, or establishment of a new function). IRCC task.

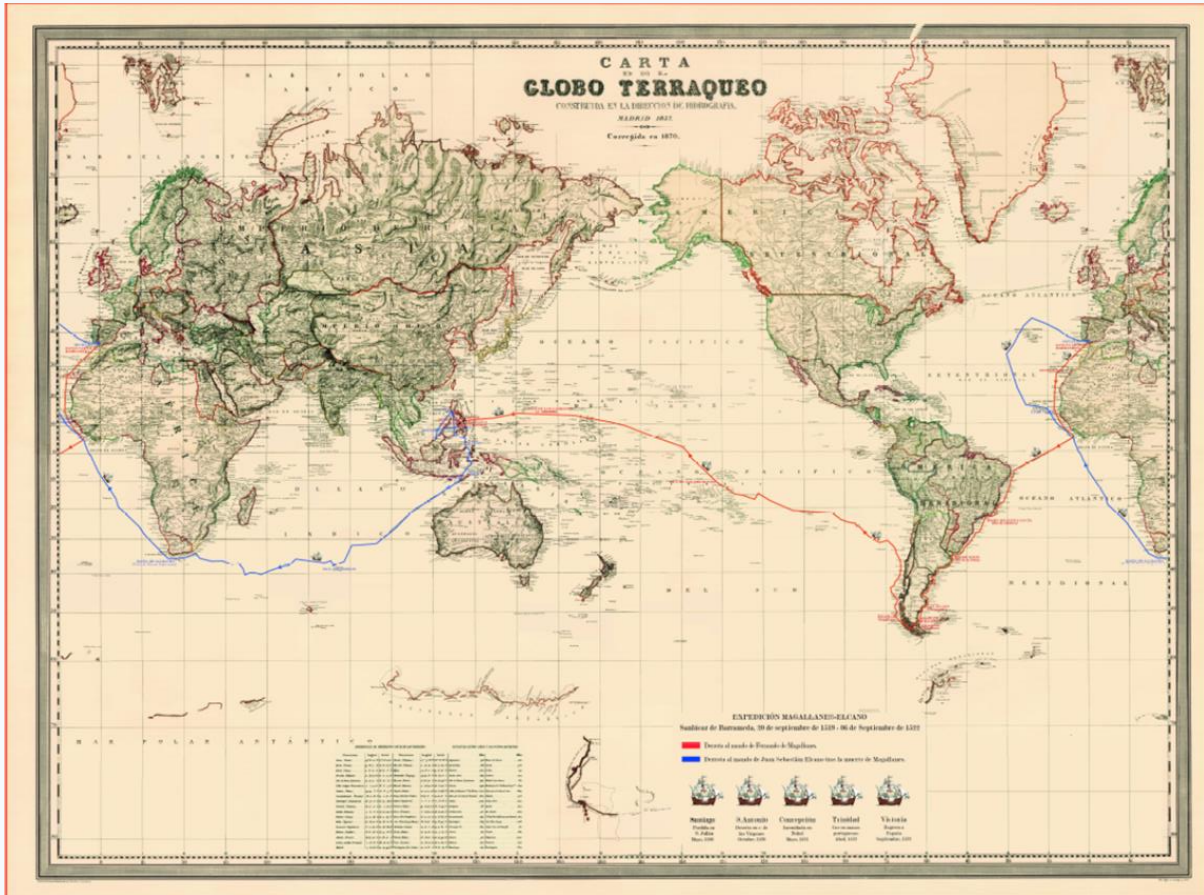


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This year we celebrate the 500th anniversary of the completion of the first sail around the world (1518-1522) carried out by Juan Sebastián de Elcano, for many the greatest maritime, geographical and scientific feat of all time. A milestone that forever changed maritime history and the geographical conception of the world we inhabit.

We also celebrate the 225th anniversary of the creation of the Spanish Hydrographic Office as a modern scientific institution (1797-2022) to replace the old Casa de la Contratación (1503-1790) or House of trade of the Indies