

**13TH MEETING OF THE WORLDWIDE ENC DATABASE WORKING GROUP (WENDWG),
Aalborg, Denmark, 21 – 23 February**

Contribution to the IHO Work Programme 2023	
Task 3.4.1	Organize, prepare and report annual meetings of the WEND Working Group - Foster the implementation of the WEND principles including WEND100 principles). Monitor progress and report to IRCC. WEND100-IGIF Matrix

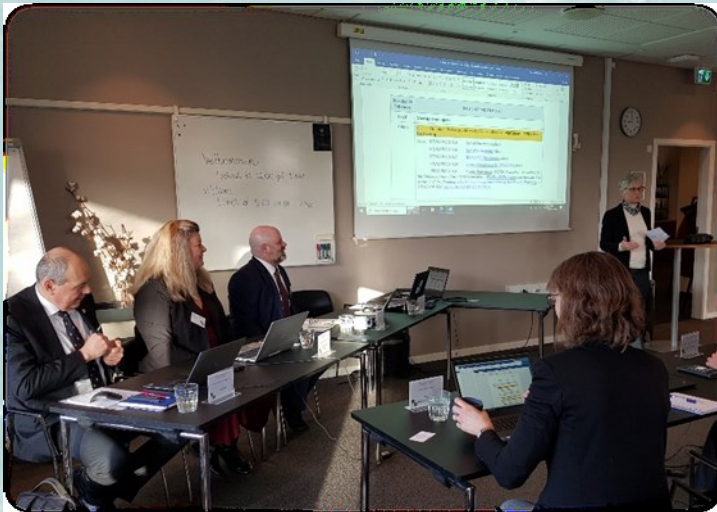
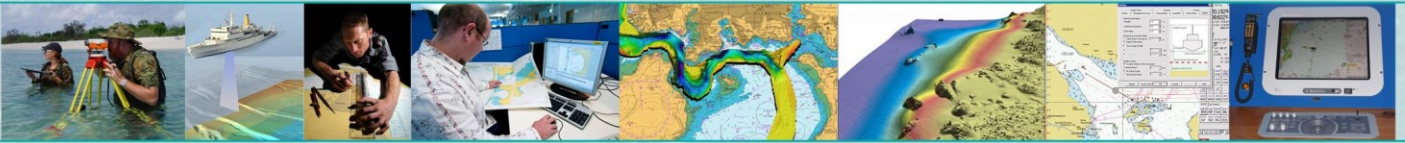
The 13th meeting of the Worldwide ENC Database Working Group (WENDWG), was held from 21 to 23 February 2023 in Aalborg, Denmark, hosted by the Danish Geodata Agency (DGA).

The meeting was chaired by Dr John Nyberg (United States of America), seconded by Ms Annika Kindeberg-Axne, Vice Chair (Sweden). Thirty delegates from 17 Member States (Australia, Brazil, Canada, China, Croatia, Denmark, Finland, France, Germany¹, Italy, Japan, Norway, Republic of Korea, Spain, Sweden, United Kingdom and United States²)³ representing 8+1 Regional Hydrographic Commissions (ARHC, BSHC, EAHC, EAthC, NSHC, SWAtHC, SWPHC, USCHC and the HCA), the director and manager of the RENCs (IC-ENC, PRIMAR, and the EAHC-RECC) attended the meeting. Director Luigi Sinapi and Assistant Director Yves Guillam (Secretary) represented the IHO Secretariat.



WENDWG13 participants

1 Including the Chair of the IRCC.
2 Including the Chair of the S-100WG.
3 Apologies received from Greece, India, and South Africa.



In their opening speeches, Ms Pia Dahl Højgaard, Director General of DGA and IHO Director Luigi Sinapi highlighted the increasing importance of the WENDWG in the new S-100 era as well as the need to raise awareness of the RHCs in the development of a harmonized coordination in support of the S-100 Implementation Roadmap.

The Chair provided a short report on the most important accomplishments of the WENDWG since 2019, despite the pandemic.

Opening address by the Director General of DGA

Reviewing the objectives and the agenda of the meeting, all participants, and representatives of the RHCs in particular, were briefed on the urgent need to accelerate the preparation of the S-100 coordination process in their regions, due to the very short time left before 2026, the year when the S-100 ECDIS becomes a reality for the International Maritime Community.

The meeting was structured to facilitate open discussions on three major topics:

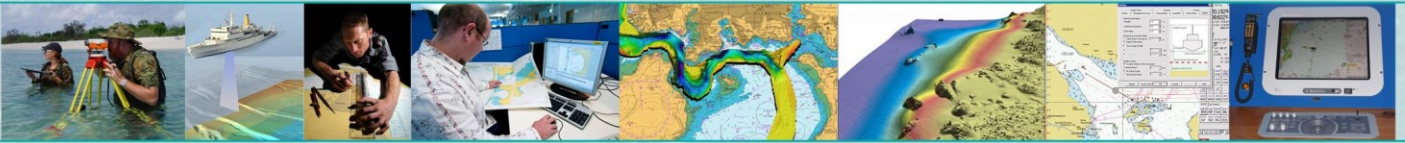
- The S-100 coordination in place at national and regional levels and subsequently the readiness status⁴ of the RHCs in the light of their preliminary assessment based on the use of version 1.0 of the WEND100-IGIF⁵ matrix distributed in August 2022, once the principles were approved at IRCC-14;
- The variety of options adopted by ENC Producers for the definition of S-101 ENCs Scheming Principles;
- Considerations on the operational service implications of S-128 – *Catalogue of Nautical Products*.

On the first item, the WENDWG noted that only a few RHCs had provided a report on the S-100 implementation approach in their region. Thanks to those RHCs who did provide a status report⁶, the S-100 Coordination process (national and regional levels) was assessed. However, some RHCs have started to establish S-100 Coordination Working Groups and their TORs are planned, in a first phase, to be published on the WENDWG webpage > WENDWG Repository for sharing the best existing practices. In a second phase, the WENDWG will submit a new work item to the IRCC for approval (HSSC informed) on the

⁴ One of the Strategic Performance Indicator (SPI 1.3.1).

⁵ Integrated Geospatial Information Framework (IGIF): <https://ggim.un.org/IGIF/>

⁶ BSHC, USCHC, EAHC, HCA, SAIHC, SWAHC, MBSHC, EAHC, NSHC, MACHC, SWPHC, ARHC.

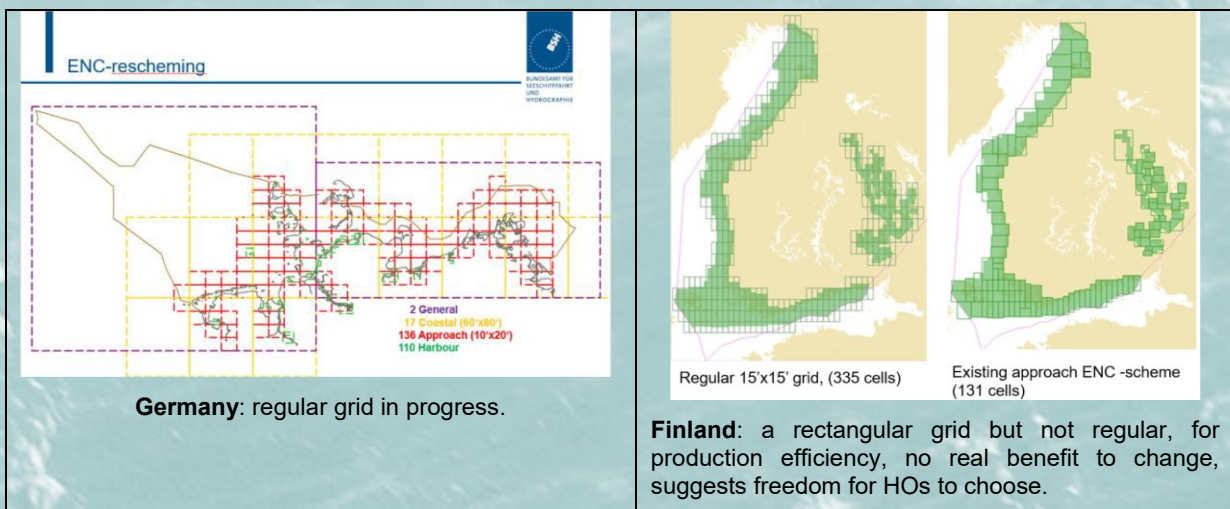


development of a new Section 300⁷ to the existing Publication S-11 Part A, the title of which could be: *Guidelines for the Coordination and Management of the Development of S-100 Data Services in RHCs.*

Since it was agreed that the IHO must establish the adequate environment and procedures to be in a position to report in the next couple of years to the IMO on the situation around the world for the predicted coverage, from 2026 to 2029, of S-101 ENC's and the other top priority S-100 products for Route Monitoring, the Chair of the IRCC was invited to consider the possibility to provide an update on the current heterogeneous situation with regard to S-100 between Member States and RHCs at the 3rd Session of the Assembly in May and at IRCC-15 in June.

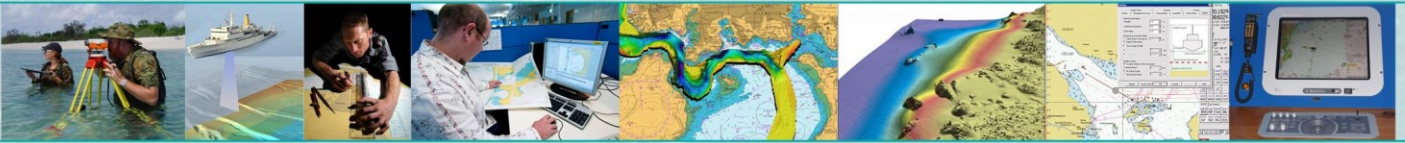
Despite difficulties in understanding the WEND100-IGIF matrix for some RHCs and Member States, this tool was proven to be very useful to get an estimate of the readiness level (SPI 1.3.1 of the Strategic Plan refers). With the lessons learned from the first round since August 2022, additional guidelines to fill⁸ the matrix and especially use it at RHC level, need to be developed in 2023.



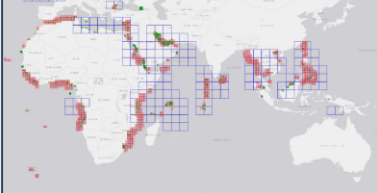
On the second item, it has become clear from now on that there will be no global common grid for S-101 ENC's and other S-100 products as such. Fruitful opposite experiences were shared at the meeting on this matter and it is now obvious that Member States will develop their own approach, their own grid, hoping that the end result will be seamless and harmonized for end-users...which remains to be demonstrated!



⁷ S-11 Part A, Current Edition 3.1.0: Section 100 *Guidance for the Preparation and Maintenance of International (INT) Chart Schemes*, Section 200 *Guidance for the Preparation and Maintenance of ENC Schemes*.

⁸ Which is not an end in itself!



 <p>IHO PROGRESS ON S-100 IMPLEMENTATION AND COORDINATION (1)</p> <ul style="list-style-type: none"> Moving to new ENC gridded schema is a foundational move to prepare for S-100. CA and US have chosen different grid implementations Both agencies rationalized (reduced) the number of standard scales These standard scales will be used for all S-100 in CA The status of the NOAA gridding can be found here The S-57 ENC Trans-boundary agreements will have to be reviewed for S-101 and extended for other S-100 products and services. 	 <p>Developing a Global Gridded Scheme:</p>  <p>Define a grid which is flexible enough to support the global coverage of 1,800 GB ENCs at all scale bands for current and future S-1XX Products</p> <p>Many Coastal States use a gridded scheme, they are all different from one another and are only applied on a country (not global) scale.</p>
<p>US-Canada: good progress but still some important trans-boundary and harmonization issues to be fixed.</p>	<p>United Kingdom: a global gridded scheme for data improvement and scale harmonization.</p>
<p><i>Different opinions and strategies on the benefits of grid schemes, depending on national situations, geographic specificities, etc....to be monitored by the WENDWG</i></p>	

On the third item, it is now duly acknowledged by the WENDWG that INTOGIS III (still under development by KHOA) is to become a one-stop-shop IHO useful tool for Member States and the RHCs for planning and scheming S-100 data services, then for the IHO Secretariat to report to the IMO. It was also well understood that the support to be performed by the RENCs on behalf of their Members for producing their S-128 datasets will be a critical component of the S-100 eco-system. Very enlightening considerations on the operational use of S-128 and to clarify the vision on how S-128 will be utilized by stakeholders (data producers, RENCs, End-user service providers, Port State Control) were shared by the S-100WG Chair, also on behalf of NIPWG. They cover a wide-range of strategic questions⁹, including communication and education.

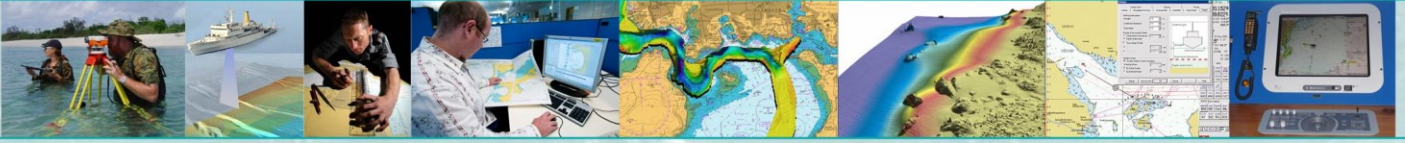
Noting the support offered by the RENCs, the WENDWG agreed on the way forward for a joint NIPWG/S-100WG concept paper on the operational use of S-128, starting with a use case#1 focused on SOLAS Navigation and Route Monitoring, in accordance with the WEND-100 Implementation Guidelines.

Throughout the meeting, all discussions were also used by the representative of the US (NGA) to capture the extended functions of the WENDWG. Significant amendments to the TORs and ROPs of the WENDWG (main drivers: scope extension to S-100, S-100 implementation and RHC coordination, amended version of the ECDIS Performance Standard and gender-neutrality) are planned to be submitted to the IRCC for approval in June 2023.

The WENDWG welcomed the offer made by the US to host the WENDWG-14 meeting (20-22 February 2024)¹⁰ and invited the Chair to consider an open session for industry in 2024 (with a theme to be defined). Australia and Hong-Kong China volunteered to host in 2025 and 2026 respectively.

⁹ See Doc. WENDWG13-06.2A.

¹⁰ Dates and location to be confirmed, back-up IHO Secretariat.



At the end of the meeting, Mr Jens Schröder-Fürstenberg (BSH, DE) was elected as Chair by secret ballot, and Mr Jason Scholey (UKHO, UK) as Vice Chair by acclamation, with 1 July 2023 as the date of effect for the two positions¹¹. The WENDWG thanked the outgoing Chair and Vice Chair, for their remarkable commitments and achievements since 2019/2020.

¹¹ After the 3rd Session of the Assembly and IRCC-15.