



## 33<sup>RD</sup> MEETING OF THE NORTH SEA HYDROGRAPHIC COMMISSION (NSHC)

Ostend, Belgium, 27 – 28 March

### Contribution to the IHO Work Programme 2018

Element 3.2.1.9	Attendance of North Sea Hydrographic Commission (NSHC)
-----------------	--

Hosted by the Flemish Hydrographic Service, the 33<sup>rd</sup> meeting of the North Sea Hydrographic Commission (NSHC) took place in Ostend, Belgium from 27 to 28 March 2018.

The meeting was chaired by Mr Declan Black (Ireland). 20 delegates representing all ten Member States (Belgium, Denmark, Germany, France, Iceland, Ireland, Netherlands, Norway, Sweden and United Kingdom) participated and three expert contributors from industry stakeholders participated as observers by invitation of the NSHC Chair. IHO Secretary-General Dr Mathias Jonas represented the IHO Secretariat.

IHO Secretary-General provided the report of the IHO Secretariat and particularly encouraged NSHC-members to propose themes of strategic relevance through the Council. Bruno Frachon, France, in his capacity as chair of the Strategic Plan Review Working Group, gave a brief report on the current state of work of the Strategic Plan Review Working Group, established by the Council as instructed by the first Assembly.

The United Kingdom, as representative of this Commission at the Worldwide ENC Database Working Group (WENDWG), briefed the participants on WENDWG7 (2017) and the recent WENDWG8 Meeting, which took place in Buenos Aires, Argentina, the week prior to NSHC33. Discussion arose on the support to ships not covered by the SOLAS carriage requirements for ECDIS with ENC content.

Germany reported on the activities of the IHO EU Network Working Group (IENWG) for the intermediate period since 2016. The Commission confirmed Thomas Dehling, Germany, as NSHC representative at IENWG. The Commission approved the extension of the ToRs and RoPs for the North Sea International Charting Coordination Working Group (NSICCWG) to address harmonization of small and medium scale ENCs in the Commission area, Region D. The NSHC took note of the work progressing towards a common reference surface stretching over the entire area as well as an updated work plan under the coordination of the North Sea Tidal Working Group (NSTWG).

The Member States discussed at length how the Commission can play a more prominent role in strategic developments of the IHO Council, IHO Strategy Review and influencing the European Union discussions in the maritime domain. The Commission is well represented at the Council to address the various strategic issues, in addition the Commission is able to act as a coordinating



regional body and therefore can address and supervise regional activities such as e-navigation and autonomous shipping as potential new items. It was agreed to continue to meet under the current two year cycle but to intensify engagement on regional projects and endeavor to include topics and issues beyond those which are already assigned to dedicated NSHC Working Groups.

In the margins of the report of the Resurvey Working Group it was discussed whether the members of the Commission should engage in demonstrator projects for crowdsource bathymetry. No firm decision was made at this stage but Commission members anticipated it would be appropriate to initiate such activity within the forthcoming intersessional period. Mr Kenneth Himschoot, Sea-ID, presented his technical solution for a low cost data logger designed for crowdsourcing of single beam data. He indicated that the device had the new capability to measure GNSS ellipsoidal altitude with previously unseen accuracy for this sort of equipment. He invited the members of the Commission to set up test scenarios of the device to compare its capabilities in regular survey campaigns.

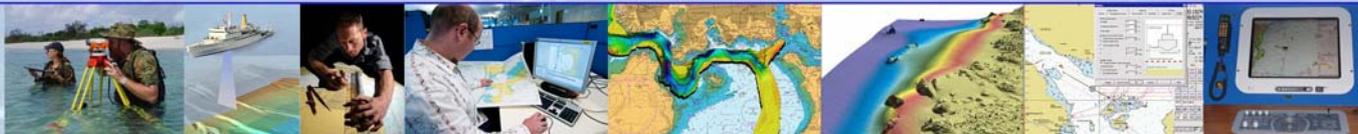
Numerous issues of regional relevance such as MSDI, bathymetry in support of the Blue Economy, work on Marine Spatial Planning in Norway and the designation of new shipping routes based on cross border marine spatial planning were addressed under the relevant agenda items.

Subjects on new developments in cartography and survey were presented for automated generation of contour algorithms to facilitate ENCs with dense bathymetric contours. Based on a proposal from Germany, the Commission agreed to initiate a workshop on this topic hosted by the Federal & Maritime Hydrographic Agency of Germany (BSH).

Further discussion arose about challenges in survey activities close to or even inside wind farm areas. Germany presented a specific large scale paper and digital charts covering such an area.

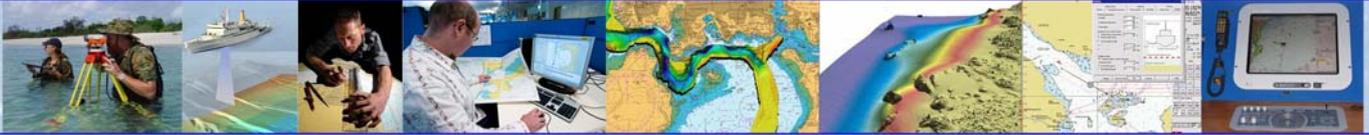


*The Participants to the NSHC33*



Norway presented a proposal sponsored by Germany, New Zealand, Sweden and USA to provide GEBCO with bathymetric information extracted from ENCs. The concept proposes to appoint the RENCs as the ENC hub with the task of creating a technical solution for extracting this information in a suitable format and then forwarding the data to the IHO DCDB for inclusion in the GEBCO grid database. France suggested that for the North Sea the provision of detailed bathymetric data for the support of GEBCO would be the more viable solution. The Commission took note that the proposal was already being submitted to IRCC via WENDWG for a high level decision, and subsequent direction and guidance. Norway continued with the presentation of a new approach to updating text oriented Nautical Publications such as pilot books.

At the end of the meeting, the role of chair was passed to Ms Virginie Debuck, Belgium. The next NSHC meeting is scheduled to be held in March 2019 in Reykjavik, Iceland.



## 41<sup>ST</sup> MEETING OF THE UNITED STATES – CANADA HYDROGRAPHIC COMMISSION (USCHC) Victoria, British Columbia, Canada, 26 March 2018, Victoria

### Contribution to the IHO Work Programme 2018

Task 3.2.15

Attendance of USCHC - USA and Canada  
Hydrographic Commission

The 41<sup>st</sup> meeting of the United States – Canada Hydrographic Commission (USCHC) was held on 26 March in Victoria, British Columbia, Canada. USCHC41 took place in conjunction with the 2018 Joint Canadian Hydrographic and National Surveyors' Conference. The meeting was co-chaired by the Hydrographer General of Canada, Dr Geneviève Bécharde and the Director of the Office of Coast Survey of the USA, Rear Admiral Shepard Smith. Thirty one participants attended the meeting including representatives from the Canadian Hydrographic Service (CHS), the Departments of National Defence (DND) and Fisheries and Oceans (DFO), the National Oceanographic and Atmospheric Administration (NOAA), the National Geospatial-Intelligence Agency (NGA), the US Navy and the United Kingdom Hydrographic Office (UKHO). Director Abri Kampfer represented the IHO Secretariat.



*The participants of the USCHC41 meeting.*



The USCHC41 agenda covered a wide range of topics of mutual interest with the Member States' reports and the additional briefs on the activities of the International Hydrographic Organization (IHO), WEND Working Group, Maritime Spatial Data Infrastructure (MSDI) Working Group, Crowdsourced Bathymetry Working Group and IHO/IOC GEBCO Seabed 2030 Project.

Some of the topics provoking in-depth discussions included:

- The INT Chart Programme review (from the USCHC perspective);
- Marine Spatial Data Infrastructures;
- Hydrographic Remote Sensing Workshop;
- Grid based ENCs; and
- Crowdsourced bathymetry.

Several technical presentations were also made that were complementary to the discussions, including: Future of the Paper Chart (Canada); Visualizing Model Data for Mariners (USA); Conversion of equipment to autonomous vessels (Canada) and Seabed-2030-a-call-to-action (USA).

The 42<sup>nd</sup> USCHC meeting will be held in conjunction with the US Hydrographic Conference-2019 which will take place in Biloxi, Mississippi, USA, from 19 to 22 March 2019.



## 8<sup>TH</sup> MEETING OF THE WORLDWIDE ENC DATABASE (WEND) WORKING GROUP (WENDWG)

**Buenos Aires, Argentina, 20 – 22 March**

### Contribution to the IHO Work Programme 2018

Task 3.4.1	Organize, prepare and report annual meetings of the WEND Working Group - Foster the implementation of the WEND principles, monitor progress and report to IRCC
------------	--

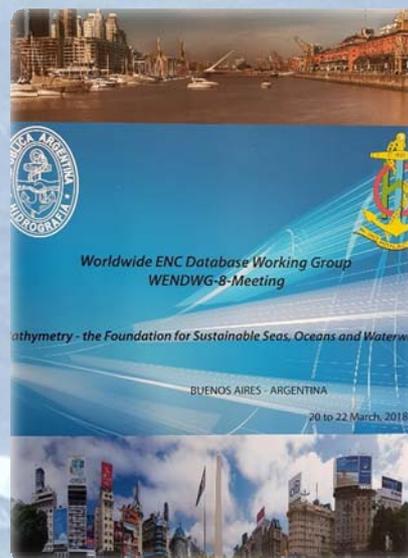
The eight meeting of the Worldwide ENC Database Working Group (WENDWG) took place in Buenos Aires, Argentina, hosted by the Hydrographic Service of the Navy (SHN) of Argentina, from 20 to 22 March, in conjunction with the 3<sup>rd</sup> joint meeting of the Regional ENC Coordinating Centres (RENC), IC-ENC and PRIMAR. The meeting was chaired by Mr Jamie McMichael-Phillips (United Kingdom). Thirty-two delegates from thirteen Member States (Argentina, Brazil, Canada, China, Finland, France, Iran (Islamic Republic of), Italy, Netherlands, Norway, Turkey, United Kingdom and United States) representing twelve Regional Hydrographic Commissions (ARHC, BSHC, EAHC, EAthC, MACHC, MBSHC, NHC, NSHC, RSAHC, SAIHC, SWAtHC and USHC), the Chairs of the IC ENC Steering Committee and PRIMAR Advisory Committee and the directors of both RENCs attended the meeting. Additionally, five expert contributors from industry stakeholders and academia participated as observers by invitation of the WENDWG Chair. Director Mustafa Iptes and Assistant Director Yves Guillam (Secretary) represented the IHO Secretariat.

The main objectives of the WEND Working Group are to advise the Inter-Regional Coordination Committee (IRCC) and to assist in facilitating a world-wide consistent level of high-quality, updated official ENCs through integrated services that support chart carriage requirements of SOLAS Chapter V and the requirements of the IMO Performance Standards for ECDIS.



Commodore Valentín Alejandro Sanz Rodríguez, Director of the SHN, welcomed the participants, highlighting the key role played by the WENDWG within the IHO for the safety of mariners.

Following the adoption of the IHO Resolution 1/2018 - *Elimination of overlapping ENC data in areas of demonstrable risk to the safety of navigation* -, the meeting discussed the ways and means that are at the disposal of the ENC Producers, the RENCs and the Regional Hydrographic Commissions (RHCs) to implement it. It was noted that the IHO has now all the necessary tools in place to reach the objective of the elimination of overlapping ENC data (overlap checker, IC ENC policy as a decision aid on risk assessment and the new Edition 3.1.0 of S-11 Part A – *Guidance for the preparation and maintenance of ENC schemes*).

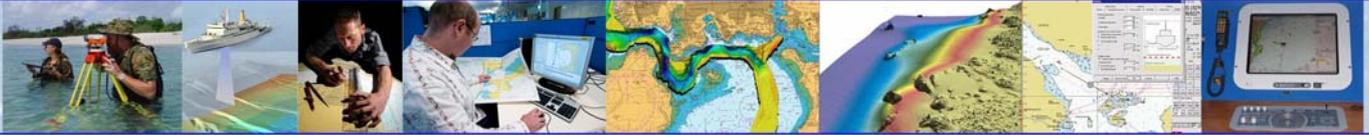


The meeting agreed to investigate the possibility of acquiring a world-wide AIS (Automatic Identification System) traffic density database to facilitate the assessment of gaps in the ENC coverage by ENC Producers and the International Charting Coordination Working Groups (ICCWG). The aim is to make the database available through the enhanced version of the INTToGIS system (INTToGIS II), developed by KHOA<sup>1</sup> in liaison with the IHO Secretariat. The representatives of the six RHCs present, agreed to experiment with INTToGIS II. The task on the monitoring of gaps will be complemented by the updates to the List of Ports database<sup>2</sup> to be provided by the RHCs on a regular basis. With regards to the ENC coverage and availability, the WENDWG agreed to commission a more user-friendly version of the IHO ENC Coverage Catalogue that was under development since 2016 as part of the actions identified for a better implementation of the WEND Principles.

The WENDWG commended the high quality support provided by IC-ENC and PRIMAR and noted the establishment of the East Asia-Regional ENC Coordination Centre (EA-RECC). The representative of the EA-RECC was invited to participate in the future Joint RENCs e-meetings. The WENDWG addressed the need for all types of vessels (SOLAS, leisure boats, etc.) to be in a position, for safety reasons, to get access to the most updated navigational data (S-57) and invited the RENCs to consider the way forward for offering harmonized license management services to their Members. The WENDWG Members also agreed to consider supporting the GEBCO Seabed 2030 Initiative, as soon as this enlargement of the scope of the WENDWG is endorsed by IRCC.

<sup>1</sup> Korea Hydrographic and Oceanographic Agency, Republic of Korea.

<sup>2</sup> NGA Publication 150.



The meeting reviewed its work programme and agreed on the top priority work items to be proposed for IRCC's endorsement.

Mr Jamie McMichael-Phillips (UK) and Mr John Nyberg (US) were re-elected as Chair and Vice-Chair of the WENDWG respectively.

The 9<sup>th</sup> meeting of the WENDWG is scheduled to be held in Brest, France, in early 2019.



*WENDWG-8 participants in Buenos Aires, Argentina*



## 5<sup>TH</sup> MEETING OF THE NAUTICAL INFORMATION PROVISION WORKING GROUP (NIPWG)

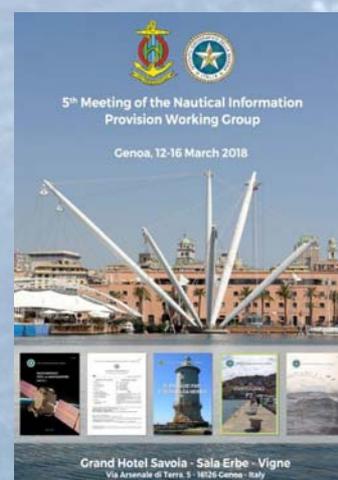
Genoa, Italy, 12-16 March

Contribution to the IHO Work Programme 2018	
Task 2.1.2.5	Organize, prepare and report meetings of NIPWG
Task 2.5.2	Support the development and implementation of Maritime Service Portfolios (MSP)
Task 2.8.1	Maintain S-12, as appropriate - <i>Standardization of List of Lights and Fog Signals</i>
Task 2.8.3	Maintain S-49, as appropriate - <i>Standardization of Mariners' Routeing Guides</i>

The 5<sup>th</sup> meeting of the Nautical Information Provision Working Group (NIPWG) took place in Genoa, Italy, from 12 to 16 March, hosted by the Istituto Idrografico della Marina (IIM).

The NIPWG is an IHO working group reporting to the Hydrographic Services and Standards Committee (HSSC) that is responsible for the development of S-100 conformant product specifications in support of future e-navigation services that are intended to provide mariners with harmonized up-to-date information on integrated displays.

Rear-Admiral Luigi Sinapi, Director of the Italian Hydrographic Institute and Chair of the HSSC, welcomed the participants and attended some sessions. The meeting was chaired by Mr Jens Schröder-Fürstenberg (Germany). Twenty-five delegates from 15 Member States (Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Republic of Korea, Russian Federation, Spain, Sweden, United Kingdom, and United States) and six expert contributors (Anthropocene Institute, IIC Technologies, Portolan Sciences, University of New Hampshire) attended the meeting. The IHO Secretariat was represented by Director Abri Kampfer<sup>3</sup>, Technical Standards Support Officer Jeff Wootton<sup>4</sup>, and Assistant Director Yves Guillam.



<sup>3</sup> From 12 to 14 March.

<sup>4</sup> From 13 to 14 March.



The meeting reviewed the IHO Resolutions that are in their remit, such as IHO Resolution 7/2009 – *Time Reference*, the amendments of which to be submitted to HSSC for endorsement were agreed. The IHO Resolution 2/2007 - *Principles and Procedures for making changes to IHO Technical Standards and Specifications* remains the most important one to be revised. By Decision 12 of the 1<sup>st</sup> Assembly, the main objective of this revision is to introduce some guidance for conducting impact assessment studies that will support the approval process of S-100-based product specifications. The first proposed amendments will be submitted to the next meeting of HSSC for discussion.

The meeting noted the progress made, by contract, on the development of the product specification S-127 (*Traffic Management*) – which was endorsed - , and by the Republic of Korea, for S-128 (*Catalogues of Nautical Products*). While addressing the various complex issues relating to the development of these product specifications and the associated data models, questions were raised on data sources, data flows, portrayal and consistency with other subset of S-100-based products including S-101 ENCs, S-2xx and S-4xx products.

The meeting commended the S-124 Correspondence Group and its outgoing Chair (Yves Le Franc, France), for the work done. NIPWG was encouraged to adopt a similar consistent and holistic approach for the development of other S-1xx products in its remit.

Noting that the developments of S-100 based product specifications are incremental and noting further that close interactions between those product specifications may cause issues, the meeting acknowledged that there was a need to map the global system architecture for every S-100-based products in the remit of NIPWG and to further address, under HSSC guidance, the basic principles of the supply chain and its various components.

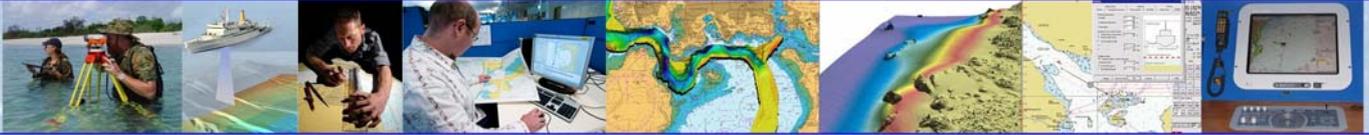
An informative presentation on the IHO Geospatial Information Registry was delivered, highlighting the need for a dedicated workshop on this topic. The comments received from the Chair of the Data Quality Working Group on the data quality component were noted and will be considered in the subsequent editions of S-122, S-123 and S-127, as appropriate.

Noting the existence of several national initiatives on the use of the XML structure for Notices to Mariners (NtM), the meeting decided to take up the harmonization of data exchange mechanism for the provision of NtM paper chart corrections that could enhance data exchanges between HOs.

The Chair reported on the outcome of the 1<sup>st</sup> meeting of the IMO-IHO Harmonization Group on Data Modelling (HGDM) and will keep HSSC informed on the invitation to submit Maritime Services descriptions, which are under IHO responsibility according to the HGDM Maritime Services template. NIPWG stands ready to coordinate the inputs from the other IHO Working Groups and Sub-Committees (WWNWS<sup>5</sup> for instance) involved in the Maritime Services.

The meeting reviewed its work programme and agreed on the top priority work items to be proposed for HSSC's endorsement.

<sup>5</sup> World-Wide Navigational Warning Service.



The 6<sup>th</sup> meeting of the NIPWG is scheduled to be held in Rostock, Germany, from 14 to 18 January 2019, and the 7<sup>th</sup> meeting, from 25 to 29 November 2019 in Saint-Petersburg, Russian Federation.



*NIPWG-5 participants in Genoa, Italy*



**THE 8<sup>TH</sup> MEETING OF THE EAST ASIA HYDROGRAPHIC COMMISSION (EAHC) TRAINING, RESEARCH AND DEVELOPMENT CENTRE BOARD OF DIRECTORS (TRDC-BOD) AND 5<sup>TH</sup> MEETING OF STEERING COMMITTEE OF THE EAHC**

**Xiamen, China, 05 - 08 March**

<b>Contribution to the IHO Work Programme 2018</b>	
Task 3.2.1.3	Attendance at 8th Meeting of the East Asia Hydrographic Commission (EAHC) Training, Research and Development Centre Board of Directors Meeting (TRDC-BOD) and 5th Meeting of Steering Committee of the EAHC.

The 8th meeting of the EAHC Training, Research and Development Centre Board of Directors Meeting (TRDC-BOD) and 5th meeting of the Steering Committee of the East Asia Hydrographic Commission (EAHC) was held in Xiamen, China from 05 to 08 March 2018, hosted by the China Maritime Safety Administration (CMSA) chaired respectively by Mr Jamie Chen, Singapore and by the Hydrographer of Malaysia Rear Admiral Dato' FADZILAH bin mohd Salleh. Mr Xu Ruqing, Director General of the Maritime Safety Administration, Department of Transport, People's Republic of China (CMSA) opened the 5<sup>th</sup> EAHC SC. He acknowledged the importance of hydrography for safety of navigation and the very important role of the EAHC in a very dynamic region. He assured delegates that CMSA is fully committed to participate in an international and regional role to improve hydrographic surveying and charting.



*Participants in the 8<sup>th</sup> EAHC TRDC-BOD Meeting*



*Participants in the 5<sup>th</sup> EAHC SC Meeting*

Representatives from all but one EAHC Member State attended the meetings. The following IHO Member States were present: Brunei Darussalam, China, Indonesia, Japan, Republic of Korea (RoK), Malaysia, Philippines, Singapore and Thailand. The Democratic People's Republic of Korea and Vietnam was not represented. Cambodia was represented at the meeting as an Observer State. Director Abri Kampfer represented the IHO Secretariat.

The EAHC TRDC-BOD Meeting discussed the regional interventions regarding training and technical development and determined capacity building requirements. The developments of Train-The-Trainer and basic Survey and Cartography course curricula was deemed to be very successful as the majority of EAHC have implemented it. The Steering Committee discussed and pledged support for participation in the 2018 capacity building programme and approved the 2019 capacity building funding bids, as proposed by the EAHC TRDC-BOD, to be forwarded to the IHO Capacity Building Sub Committee. Consensus was reached on the update process of the EAHC Statutes that was last amended in 1980 and feedback will be provided at the 6<sup>th</sup> meeting of the EAHC SC.

The Commission discussed progress and involvement in Marine Spatial Data Infrastructures (MSDI) and the RoK, as the chair of the EAHC-MSDIWG, provided an update on completed and planned events.

Details of regional electronic navigational chart (ENC) coverage were discussed including the current temporarily suspended distribution of the co-produced navigation purpose 2 (small scale) ENC coverage in the South China Sea. It was announced by China - Hong Kong that two of the four ENCs have been updated and will be circulated for comments during March. The planned release date is 01 April 2018. China - Hong Kong provided feedback on the progress of the establishment of the East Asia Regional ENC Coordinating Centre (EA-RECC). It was



reported that the EA-RECC has been established, that it is fully resourced and staffed, and that EAHC members were invited to join.

Japan was elected as the new chair of the EAHC SC with Indonesia as the Vice-Chair. The 6<sup>th</sup> meeting of the EAHC Steering Committee will be held in Indonesia in March 2019.