

## 3<sup>RD</sup> SESSION OF THE IMO SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE

London, United Kingdom, 29 February – 4 March

The Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) is a subordinate body of the Maritime Safety Committee (MSC) of the International Maritime Organization (IMO). Its functions are to consider technical and operational matters related to the obligations of Governments and operational measures concerning safety of navigation. These include: hydrographic and meteorological services, ships' routing, ship reporting systems, aids to navigation, radio-navigation systems, vessel traffic services, and pilotage; operational requirements and guidelines regarding navigational safety and associated issues, such as regulations for the prevention of collisions and groundings, bridge procedures, voyage planning, avoidance of dangerous situations, places of refuge (including maritime assistance services and relevant aspects of maritime security), carriage requirements, performance standards and operational guidelines for the use of shipborne navigational equipment and other navigational requirements; Governments' obligations and operational measures related to the Global Maritime Distress and Safety System (GMDSS), development and maintenance of the global Search and Rescue (SAR) Plan and the Long Range Identification and Tracking (LRIT) system; operational requirements and guidelines relating to radiocommunications and search and rescue, and, in co-operation with the International Civil Aviation Organization (ICAO), the harmonization of aeronautical and maritime search and rescue procedures; carriage requirements, performance standards and operational guidelines for the use of shipborne radiocommunications and search and rescue equipment; and liaison with the International Telecommunication Union (ITU) on maritime radiocommunication matters.

The 3<sup>rd</sup> Session of the Sub-Committee (NCSR3) was held at the IMO Headquarters in London, UK from 29 February to 4 March 2016. The IHO was represented by Director Gilles Bessero and Assistant Director David Wyatt, Mr Peter Doherty, Chair of the IHO World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC), and Mr Christopher Janus, Branch Chief, NGA Maritime Watch - NAVAREA IV/XII. Several representatives of Hydrographic Offices also attended the meeting as part of their national delegation.



*IMO NCSR 3 in plenary meeting*



NCSR3 approved three routing measures, four traffic separation schemes, one inshore route and one area to be avoided, which will be forwarded to the MSC for adoption at its 96<sup>th</sup> session in May 2016. The Sub-Committee also approved amendments to the General provision on ships' routing (IMO Resolution A.572(14)) regarding the establishment of multiple structures at sea.

The Sub-Committee received reports from the Chair of the IMO NAVTEX Panel, including details on proposed new NAVTEX stations, stations which had recently become operational with the issue of their B1 character, and stations which had become or remained non-operational. The Chair of the IHO WNWNS-SC reported on the activities of the Sub-Committee, highlighting the progress on the S-100-based Product Specification for Navigational Warnings - S-124, and the capacity building training provided to the East Asia Hydrographic Commission and Mediterranean and Black Seas Hydrographic Commission. The Sub-Committee endorsed the proposed amendments to the International SafetyNET Manual and the IMO NAVTEX Manual prepared by the WNWNS-SC and instructed the IMO Secretariat to draft the necessary MSC Circulars for consideration and approval by the MSC at its 96<sup>th</sup> session in May 2016. The Sub-Committee noted that amendments to the GMDSS Master Plan had been distributed in GMDSS/Circ.18 and Administrations were encouraged to check their national data for accuracy.

The NCSR agreed to advise the MSC that the Galileo system could be recognised as a future component of the World-Wide Radio Navigation System (WWRNS).



**Director Bessero in the plenary at NCSR 3**

In support of the work item on the development of *Guidelines for the harmonized display of navigation information received via communications equipment and guidelines and criteria for ship reporting systems*, the IHO submitted a document on the contribution of the S-100 framework to the harmonized display of navigation information. The need for coordination between related activities conducted by the IHO and the IMO was highlighted, including the opportunity of activating the IMO/IHO Harmonization

Group on Data Modelling, which had been previously authorized by MSC at its 90<sup>th</sup> session. Expectations that the output would provide a simplified and more user-friendly display of Marine Safety Information were expressed. The Sub-Committee invited Norway to coordinate a joint proposal from interested Member States and international organizations containing draft Guidelines for the harmonized display of navigation information received via communications equipment, for consideration by the NCSR at its fourth session in 2017. Related IMO activities include the development of *Additional modules to the Revised Performance standards for Integrated Navigation Systems (INS)*, for which the Sub-Committee established a Correspondence Group under the coordination of China, the *Interconnection of NAVTEX and Inmarsat SafetyNET receivers and their display on Integrated Navigation Display Systems*, for which the Sub-Committee invited further contribution from the USA and other interested Member States



and/or organizations, and the development of *Guidelines on standardized modes of operation (S-mode)*, to be addressed in the post-biennial agenda.

The NCSR endorsed a comprehensive list of conditions which would need to be fulfilled before the Iridium system could be recommended for recognition as a mobile satellite system service provider of the GMDSS. The Sub-Committee recognised that the process had identified a need to review the IMO Resolution A.1001(25), which details the criteria to be met by a provider seeking recognition as a service provider of the GMDSS. The Sub-Committee endorsed the draft outcome of the detailed review of the GMDSS and invited the MSC to approve the review and continue the project in developing the GMDSS Modernization Plan, for which a Correspondence Group was formed, under the coordination of the USA, in anticipation of the Committee's approval.

The IHO submitted a document on the monitoring of ECDIS issues and chart coverage. The IHO reported that industry had recently made a request to extend by one year, to 31 August 2017, the transition period for upgrading existing ECDIS systems to meet the revised set of IHO standards which came into force on 31 August 2015 for new ECDIS systems. The Sub-Committee agreed to the one-year extension. Noting the indication in the IHO report of the apparent and inappropriate use of the ECDIS Data Presentation and Performance Check by port State control and vetting inspectors, the Sub-Committee agreed to invite the MSC to note the issue and refer it to the Sub-Committee on Implementation of IMO Instruments (III). The discussion of ECDIS issues was also informed by an off-session presentation coordinated by INTERTANKO, the International Association of Independent Tanker Owners. The presentation reported the wide variations in the skills of "certified ECDIS users", a prevalent lack of awareness of software maintenance requirements and a lack of appropriate procedures aboard ships. The presentation questioned the relevance of some provisions of the IMO ECDIS Performance Standards related to display options. The presentation highlighted the lack of flexibility in setting the safety depth and the difficulty to optimize the anti-grounding function due to the insufficient density of contour lines in most Electronic Navigational Charts.

Mr Ringo Lakeman, The Netherlands, and Mr Nigel Clifford, New Zealand, were re-elected as Chair and Vice-Chair, respectively, of the Sub-Committee for its fourth session scheduled to be held at the IMO Headquarters from 6 to 10 March 2017.



## 3<sup>RD</sup> MEETING OF THE STEERING COMMITTEE OF THE EAST ASIA HYDROGRAPHIC COMMISSION Surakarta, Indonesia, 24-26 February



### EAST ASIA HYDROGRAPHIC COMMISSION



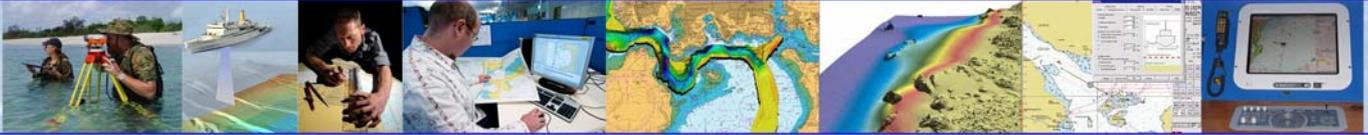
The 3<sup>rd</sup> meeting of the Steering Committee of the East Asia Hydrographic Commission (EAHC) was held in Surakarta, Indonesia from 24 to 26 February, hosted by Dinas Hidro-Oseanografi TNI AL (DISHIDROS), the Navy Hydro-Oceanographic Office of Indonesia, and chaired by Rear Admiral Zaa'im Bin Hasan, Director-General of the

National Hydrographic Centre, Malaysia and Chairman of the EAHC. The EAHC Steering Committee meets annually between the triennial meetings of the EAHC to monitor progress in the region and provide an annual forum for the region's Hydrographers to meet.

Representatives from all but one EAHC Member State attended the meeting: China, Indonesia, Japan, Republic of Korea (RoK), Malaysia, Philippines, Singapore and Thailand. The Democratic People's Republic of Korea was not represented. Associate Members Brunei Darussalam and Viet Nam attended the meeting together with the Chair of the GEBCO Guiding Committee (GC). President Ward attended as an invited observer from the secretariat of the IHO.

On the basis of their recent acceptance as Member States of the IHO, Brunei Darussalam and Viet Nam sought full membership of the EAHC. The applications received the support of all the existing Members present, but a final decision must await notification of the approval of the DPRK before full membership can be confirmed.

The meeting received progress reports on the Training and Research Development Center (TRDC), based at the Korean Hydrographic and Oceanographic Agency, in Busan, RoK, established by the Commission to deliver its regional Capacity Building Programme (see: <http://trdc.eahc.asia/>). The increasingly successful implementation of a sustainable and replicating regional capacity building capability was illustrated by the growing number of regional instructors becoming available to conduct training. The TRDC provided a strategic analysis of the current status of the EAHC Capacity Building Programme. This will be used to guide further development of the programme. The Committee endorsed the 2017 work programme and funding bids to be forwarded to the IHO Capacity Building Sub-Committee. President Ward provided a report of IHO activities of relevance to the Commission and the Chair of the GEBCO GC provided a briefing on the IHO-IOC GEBCO project and its involvement with crowd-sourcing for data.



Details of regional Electronic Navigational Chart (ENC) coverage were discussed.

During the meeting, the participants developed a procedure for selecting representatives to serve on the IHO Council when it is formed under the revised Convention on the IHO which is anticipated to enter into force in the near future.

The next meeting of the EAHC Steering Committee will be held in Japan in February 2017.

Prior to the 3<sup>rd</sup> meeting of the EAHC Steering Committee, President Robert Ward took the opportunity to visit DISHIDROS in Jakarta at the invitation of the Hydrographer of Indonesia, Commodore Daryanto. President Ward delivered a presentation to the staff and invited guests where he discussed current topics being considered in the IHO. He also called on the Chief of Navy, Admiral Ade Supandi, and was able to provide him with a brief on the organizational impacts for national Hydrographic Offices of the global transition from government mapping agencies moving from the sole production of maps and charts to the provision of geodata services.



## MEETING WITH THE DIRECTOR-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

European Commission, Brussels, Belgium, 18 February

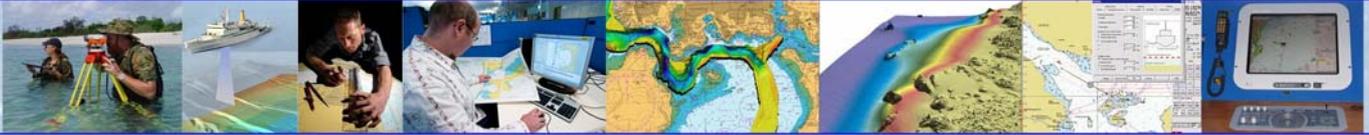


On 18 February 2016, IHB Director Gilles Bessero and Ingénieur Général Bruno Frachon, National Hydrographer of France, on behalf of the IHO-European Union Network Working Group (IENWG), met with Mr Joao Aguiar Machado, Director-General for Maritime Affairs and Fisheries, at the European Commission (EC) in Brussels, Belgium. This meeting had been arranged at the end of 2015 following the appointment of Mr Machado. The Directorate-General for Maritime Affairs and Fisheries (DG MARE) is the EC point of contact for the implementation of the Memorandum of Understanding (MOU) on establishing cooperation on maritime affairs between the EC and the IHO that was signed in April 2012.

Mr Machado was assisted by Mr Iain Shepherd, acting Head of DG MARE Unit C/1 - Maritime Policy Atlantic, outermost regions and Arctic, and main point of contact at DG MARE of the IENWG.

Mr Machado acknowledged the importance of the EC-IHO MOU and welcomed the positive outcomes, in particular through the launch of the Coastal Mapping Project led by a consortium of Hydrographic Offices and funded by the EC within the framework of the European Marine Observation and Data Network (EMODnet). He confirmed that there was no alternative to the current mechanism of calls for tenders and public contracts for awarding financial support to HOs. He enquired on the inclusion of the outermost regions of the EU in the Coastal Mapping Project.

The IHO representatives highlighted the wide scope of activities of the IHO and its Member States, encompassing not only the safety of navigation but the support of the whole blue economy, and the relevance of these activities for several EC Directorates-General, including capacity building issues in relation to development aid. They suggested that points of contact be identified in the relevant DGs and that an annual review of items of joint interest be established in order to further develop the synergies between the EC and the IHO, including through better anticipation of the initiatives or needs of the DGs. They noted the need to ensure the sustainability of EMODnet in the long term, building on the operational role of Hydrographic Offices (HOs) and the relevance of the expertise of the HOs in relation to maritime spatial planning and climate change issues.



The current unsatisfactory status of the knowledge of the bathymetry of the seas and oceans and the specific difficulties related to surveying the coastal areas were emphasized. The responsibilities of governments in the provision of hydrographic services and the references to IHO resolutions and recommendations described in the international Convention for the Safety of Life at Sea (SOLAS) were also mentioned.

Director Bessero recalled that three EU coastal States are not yet members of the IHO and noted the importance of the example set by Malta in asking to join the Organization.

The possibility to promote IHO activities at the next European Maritime Day, which will be celebrated in May 2016 in Turku, Finland, was discussed. DG MARE indicated that the programme was already finalized and suggested liaising with the Secretariat of EMODnet to set up a joint stand.

It was agreed in principle to schedule the next meeting between the EC and the IHO in October 2016.



## 2<sup>ND</sup> MEETING OF THE CROWD-SOURCED BATHYMETRY WORKING GROUP

**Boulder, Colorado, USA, 10-11 February**

The Crowd-Sourced Bathymetry Working Group (CSBWG) has been tasked by the Inter-Regional Coordination Committee (IRCC) to develop a draft IHO publication on policy for trusted crowd-sourced bathymetry (CSB). This CSB Guidance Document will provide guidelines on the collection and assessment of CSB data for inclusion in the global bathymetric data set which is maintained in the IHO Data Centre for Digital Bathymetry (DCDB). This data is intended to be available as a reference for the widest possible use, which may also include nautical charting in some cases.

The Working Group held its second meeting at the offices of the National Oceanographic and Atmospheric Administration (NOAA) - National Centers for Environmental Information (NCEI) in Boulder, Colorado, USA on 10-11 February 2016. The Chair of the CSBWG, Ms Lisa Taylor (USA), chaired the meeting which was attended by representatives from three Member States (Italy, Japan and USA), and observers and expert contributors from Olex AS and Sea ID, which are two

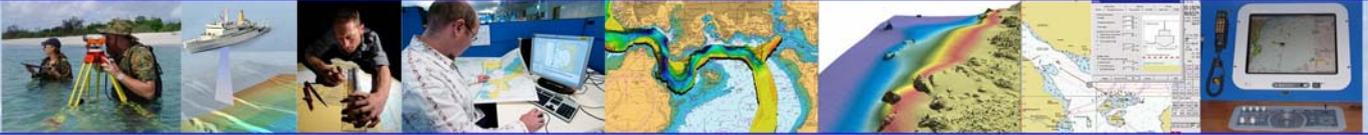


*Participants at CSBWG2 Meeting*

companies involved in crowd-sourcing technologies. Assistant Director David Wyatt represented the IHB.

The CSBWG received verbal reports from the coordinators of its Correspondence Groups. The reports covered Metadata and Data Formats, Uncertainty, and Systems and Hardware. Discussion sessions were held with the systems developers working on enhancements to the DCDB database and user web-portal and NOAA Legal Counsel for the USA Extended Continental Shelf Project Office. The meeting focused on the structure and contents of the CSB Guidance Document that will be presented as an initial draft to the IRCC at its 8<sup>th</sup> meeting in Abu Dhabi, UAE in May. Work on this is proceeding well.

It was agreed that a further meeting of the Working Group would be beneficial after IRCC8 and prior to the next International Hydrographic Conference/Assembly and IRRC9 to be held in April and May 2017 respectively. This would assist in ensuring the completion of the guidance document by taking into account any further guidance from the IRCC. A third meeting of the CSBWG is therefore planned for 7-8 November 2016 at the IHB in Monaco.



This meeting will be followed by meetings of the Galway Statement Tri-Partite Implementation Committee and the Atlantic Seabed Mapping International Working Group on the Implementation of the Galway Statement, both of which are actively engaged in crowd-sourced bathymetry initiatives to help improve knowledge in the Atlantic, in particular.

The report of the meeting and the supporting papers will be available from the CSBWG section of the IHO web site: [www.iho.int](http://www.iho.int) > Committees & WG > IRCC > CSBWG



## ENC STANDARDS MAINTENANCE WORKING GROUP MEETING IHB, Monaco, 8 - 10 February

The ENC Standards Maintenance Working Group (ENCWG) is a subsidiary Working Group of the Hydrographic Services and Standards Committee (HSSC), and is tasked with the maintenance of the standards that pertain to ENC production and portrayal. The ENCWG Chair, Thomas Mellor (UKHO), convened a Sub-Working Group comprising representatives from several *Expert Contributors* that participate in the ENCWG, in order to review implementation issues identified with the IHO S-52 Presentation Library Edition 4.0.1 and inconsistencies (clarifications) that had been identified in Edition 3.0.1 of IHO publication S-64 - *IHO Test Data Sets for ECDIS*. The meeting took place at the IHB from 8 to 10 February and was attended by seven members from the following companies involved in ECDIS equipment and associated software: Jeppesen, Transas, 7Cs, Wärtsilä SAM Electronics, Navtor and Furuno. The IHB was represented by Assistant Director Anthony Pharaoh.



**ENC Standards Maintenance Working Group Meeting**

The outcome of the meeting will be considered at the next ENCWG meeting that will take place in Tokyo, Japan from 14 to 18 March. This meeting will be held in conjunction with the S-100 and the Data Protection Scheme Working Groups. It is anticipated that clarifications of the relevant documents will be produced following this meeting.



## VISIT TO KING ABDULAZIZ UNIVERSITY AND HYDROGRAPHIC COURSE GRADUATION CEREMONY

**Jeddah, Saudi Arabia, 7 - 9 February**

At the invitation of the President of the King Abdulaziz University, Jeddah, Saudi Arabia, President Ward visited the Faculty of Maritime Studies and attended the graduation ceremony of the first Category A course to be recognised by the International Board on the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) in Saudi Arabia and in the region.

On 8 February nine students were awarded a Bachelor of Science degree in hydrographic surveying by the Acting President of the King Abdulaziz University, Prof. Abdulrahman Obaid Alyoubi. The four-year course included field studies in Canada, France and The Netherlands. In addition to their degrees, President Ward presented each graduate with a certificate of recognition.



**President Ward, the President of KAU and the Dean of the Faculty of Maritime Studies flanked by the graduating students, the Vice Dean of the Faculty and the Head of the Department of Hydrographic Surveying**

His Excellency Dr Abdul Aziz Al Saab, President of the General Commission for Survey and principal representative of Saudi Arabia to the IHO also attended the graduation ceremony.



President Ward congratulated the University on its achievement in delivering a very impressive course which he said sets a fine example for the country, the region and the world.

On the previous day, President Ward was given an extensive briefing and tour of the Faculty of Maritime Studies by its Dean, Dr Salem Marzook Alharbi and his academic staff. The President observed the wide range of modern equipment and systems being used during the teaching of hydrography. He also paid a visit to the

dedicated survey motor launch and the newly acquired oceanographic and hydrographic survey ship *Al Azizi*, which was delivered from the builders in France in 2015 and which, along with the existing dedicated hydrographic survey launch, will be used as part of the hydrographic surveying course in the future.



**6<sup>TH</sup> ANNUAL INTERNATIONAL  
E-NAVIGATION UNDERWAY CONFERENCE  
MS Pearl Seaways, at Sea, 2 - 4 February**

The 6<sup>th</sup> International e-Navigation Underway Conference was organized on the Baltic Sea ferry *Pearl Seaways* from 2 to 4 February by the Danish Maritime Authority and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). The primary focus of the Conference was the collaboration and cooperation now taking place to implement the e-Navigation concept.

The Conference was attended by 140 representatives from many parts of the world representing a cross-section of interests from mariners, maritime administrations, significant flag States, navigation equipment manufacturers, academia and international maritime organizations.



**Secretary-General of IMO, Mr Kitack Lim addresses the Conference**

Mr Kitack Lim, recently appointed Secretary-General of the International Maritime Organization (IMO), provided the Opening Address in which he highlighted his wish to see the various stakeholders working together to fulfil the IMO's vision for e-Navigation.

President Robert Ward, representing the IHO, addressed the Conference after the Secretary-General and described the underpinning role that the IHO will play in supporting the IHO S-100 - *Universal Hydrographic Data Model*, that has now been designated as an underpinning e-Navigation data exchange framework

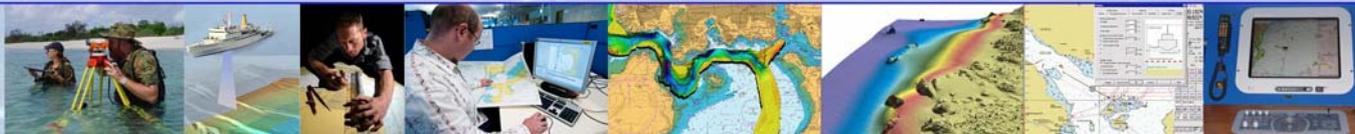
standard for e-Navigation. President Ward reported the impending recruitment of an officer at the IHO secretariat who will be dedicated to supporting the IHO digital data standards and in particular S-100.

As a result of the various presentations and discussions that took place over the three days of the Conference, the participants concluded that:



**Secretary-General Lim enjoying a joke with the Conference participants**

- The stakeholders are cooperating and coordinating and are actively exploring methods to harmonise e-navigation data and communications.



- IALA may be an appropriate organization to coordinate the IMO unplanned output 6 on Maritime Service Portfolios (MSPs) and harmonise the format, structure and communications channels for the exchange of information electronically.
- Recognising the value of the Baltic and International Maritime Council (BIMCO) cyber security guidelines, the e-navigation stakeholders agreed that similar cyber and data security measures must underpin e-navigation.
- Participants recognised that e-navigation should improve the human decision making process, not replace it.
- Participants considered that the concept of the Maritime Cloud could support e-navigation infrastructure and trials are underway.

The next e-Navigation Underway Conference in Europe is tentatively planned from 31 January to 2 February 2017.