

9^{TH} MEETING OF THE SOUTH-WEST ATLANTIC HYDROGRAPHIC COMMISSION (SWATHC)

Montevideo, Uruguay, 19-20 March

The 9th Meeting of the South-West Atlantic Hydrographic Commission (SWAtHC) was hosted and chaired by the Hydrographic Office of Uruguay (*Servicio de Oceanografía, Hidrografía y Meteorología de la Armada - SOHMA*) on 19 and 20 March 2015. Nine delegates and one observer from industry attended the Meeting. Only two IHO Member States in the Region, Brazil and Uruguay, were represented. The IHB Directing Committee was represented by Director Gilles Bessero who provided a briefing on current IHO issues and the work of the IHB.



The Chair acknowledged a note of apology from the representatives of Argentina who could not attend for administrative reasons. The approval of the report of the 8th Meeting was confirmed and the status of the list of actions was reviewed.

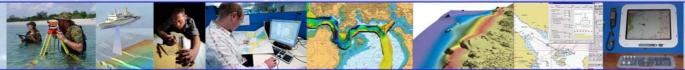




Vice Admiral Pontes, Hydrographer of Brazil, addressing the Meeting

Captain Musso, Hydrographer of Uruguay, and Director Bessero



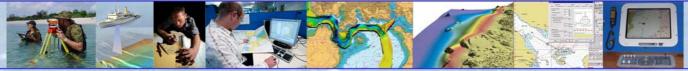


Brazil and Uruguay reported on their national activities since the 8th Meeting. Brazil, as Chair of the SWAtHC Planning Committee (*Comité de Planeamiento*), then reported on the progress of the work of the Committee, addressing notably the maintenance and implementation of the regional INT and ENC schemes. The Commission approved the work plan of the Committee for the next intersessional period. The work plan includes progressing the development of a prioritized capacity building plan, and the provision of an annual update of C-55 - *Status of Hydrographic Surveying and Nautical Charting Worldwide*. The Chair of the Commission was tasked to reiterate the invitation to Paraguay to join the Committee. The delegation from Brazil reported on the work of the Inter-Regional Coordination Committee, Capacity Building Sub-Committee, Worldwide ENC Database Working Group and Hydrographic Services and Standards Committee. The Commission agreed consequential actions. A brief on the technical visit to Paraguay conducted in January 2014 was also presented. Brazil, as one of the co-Chairs of the Inland ENC Harmonization Group, reported on the activities of that group. It was noted that interoperability issues might need to be considered in the future for vessels operating in waterways which include a downstream segment covered by ENC and an upstream segment covered by inland ENC.

The Commission discussed and agreed the proposals that will be submitted to the next meeting of the Capacity Building Sub-Committee. Following a presentation by Uruguay on the status of ENC coverage in the region, the Commission agreed to formalize through technical agreements, the pragmatic arrangements which have been progressively adopted to avoid gaps and overlaps and facilitate the shared maintenance of the scheme. The Commission welcomed the intention of Brazil to consider the establishment of a Regional Electronic Navigational Chart (ENC) Coordinating Centre covering South America and expressed its support.

The industry representative briefed the Meeting on new software now available to facilitate the acquisition and processing of data from multiple platforms and to prepare the transition to products based on S-100 - *Universal Hydrographic Data Model*.

It was proposed that the next Meeting be held in the first half of April 2016 in Argentina, the exact date and venue to be decided by 1 September 2015. In accordance with the Statutes of the Commission, the chairmanship will be transferred to Argentina within 45 days of the closure of the Meeting .



23RD SESSION OF COMMITTEE ON INTERNATIONAL OCEANOGRAPHIC DATA AND INFORMATION EXCHANGE OF THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IODE-XXIII)

Bruges, Belgium, 17-20 March

The 23rd Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXIII) was held in Bruges, Belgium from 17 to 20 March. The meeting was preceded on 16 March by a Scientific Conference to celebrate the 10th anniversary of the establishment of the Committee in Ostend, Belgium. Both events took place in the Bruges Provincial Court building.



Participants at IODE-XXIII.

The IODE Session was attended by 105 participants from 40 IOC Member States and 10 partner organizations. The IHO was represented by Assistant Director Anthony Pharaoh.

Intersessional working groups were established to discuss and propose how the IODE could be restructured to operate more effectively; revise the IOC strategic plan for oceanographic data and information exchange and develop an IOC communication and outreach strategy for data and information management. The meeting considered how to formally establish the "OceanTeacher Global Academy" as an IODE capacity building project. Recommendations on the following topics were agreed: the revitalization of the Ocean Data and Information Network for the Black Sea (ODINBLACKSEA), the establishment of an IODE project for an international quality controlled ocean database (IODE-IQuOD), the establishment of an IODE



pilot project to expand the Ocean Biogeographic Information System (OBIS) with environmental data (OBIS-ENV-DATA) and the IODE work plan and budget for 2015 to 2017.

The IHO representative briefed the Session on the latest developments of the GEBCO project.

Ms Cynthia Chandler (USA) and Professor Yutaka Michida (Japan) were elected as the new IODE Co-Chairs. They take over from Ms Sissy Iona (Greece) and Mr Ariel Troisi (Argentina) who have both served two terms in office.



US HYDROGRAPHIC CONFERENCE 2015

National Harbor, Washington DC, USA, 17-19 March

The US Hydrographic Conference 2015 was organised in National Harbor, Washington DC, USA from 17 to 19 March by the Hydrographic Society of America (THSOA).



The Conference participants represented the full gamut of hydrographic interests including the government sector, academia, equipment manufacturers and commercial hydrographic surveyors. In addition to participants from across the USA, others came from Brazil, Canada, China, Egypt, France, Germany, Ghana, Republic of Korea, Mexico, Netherlands, Nigeria, Turkey and the United Kingdom.

The Conference was opened by Senator Sheldon Whitehouse, Head of the Senate Ocean Caucus and a strong advocate of measures to protect the environment and

health of the oceans; Mr Robert Cardillo, Director of the National Geospatial Intelligence Agency, Rear Admiral Gerd Glang, US National Hydrographer, Rear Admiral Timothy Gallaudet, Hydrographer of the Navy, and Mr. Robert Ward, President of the Directing Committee of the International Hydrographic Organization.

A wide and varied programme of presentations, workshops, a social programme and atechnical exhibition hall along with a Student Outreach programme were available over the three days. Close to 600 attendees registered, 70 industry exhibitors, 8 boats from industry and government were berthed for on water demonstrations, 50 technical papers were presented, 34 Lightning Rounds were presented, 22 Academic Posters were displayed and judged for prizes, 18 non-academic posters were displayed by industry contributors, and 20 Specialized Workshops were presented. Media coverage included Sea Technology, Hydro International, and xyHt.

The Hydrographic Society of America, as principal organisers of the Conference took the opportunity to induct its second group of hydrographers into its *Hall of Fame*". This year saw former US Hydrographer, Hydrographer of the National Geospatial Intelligence Agency and President of the Directing Committee of the IHO (1992-97) Rear Admiral Chris Andreasen inducted, together with Mssrs Karl Keininger and Bill Bergin.



THE 15TH MEETING OF THE NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION

Muscat, Oman, 16-18 March

The 15th meeting of the North Indian Ocean Hydrographic Commission (NIOHC) was held in Muscat, Oman, from 16 to 18 March, under the chairmanship of Rear Admiral Tom Karsten, National Hydrographer of the Kingdom. **Participants** welcomed at the Opening Ceremony by His Excellency Said Hamdoon Al Harthy, Under-Secretary for Ports and Maritime Affairs at the Ministry of **Transport** and Communications. and Rear Admiral Abdullah bin Khamis bin Abdullah Al Raisi. Commander of the Royal Navy of Oman.



NIOHC15 in session

NIOHC Member State representatives from Bangladesh, Egypt, India, Pakistan, Saudi Arabia, Sri Lanka, Thailand and the UK attended the meeting together with representatives of Associate Members from Australia, France, Mauritius, Oman, and the Seychelles. The Russian Federation was represented as an Observer State. Representatives of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), the IHO-IOC GEBCO Project and several commercial companies also attended as invited observers. Director Iptes and Assistant Director Wyatt represented the IHB. The 15th meeting of the Commission was preceded by a meeting of the NIOHC International Chart Coordination Working Group (ICCWG) on 15 March.



Director Iptes addressing the NIOHC15 plenary

The NIOHC received national reports from Member States, Associate Member States and the IHB as well as summary reports on the 6th meetings of the IHO Hydrographic Services and Standards Committee and the Inter-Regional Coordination Committee held during the previous year and presentations about progress in the GEBCO Project and IALA activities. The meeting also received reports on progress

and issues related to the IHO Worldwide ENC Database concept and the associated

Regional ENC Coordinating Centres, an update on the work of the IHO Marine Spatial Data Infrastructures Working Group and brief overviews on the progress towards an IHO crowd-sourced bathymetry programme, relevant activities that had taken place in the International Maritime Organization, an update from the NAVAREA VIII Coordinator and the outcomes of the 7th meeting of the World-Wide Navigational Warning Service Sub-Committee.





Director Iptes reported on the IHO Work Programme and the Organization's activities during the previous year. The outcomes of the 5th Extraordinary International Hydrographic Conference held in October 2014 were also considered. Regional INT Chart and ENC coverage were covered with a brief on the INT Chart concept delivered by the IHB. Considerable time was devoted to capacity building (CB) and regional requirements. A comprehensive CB plan was developed for submission to the 13th meeting of the IHO Capacity Building Sub-Committee (CBSC-13) later in the year. The meeting received a comprehensive brief on the work of the Combined Maritime Forces countering maritime crime and piracy in the region.

The meeting included a number of presentations from industry representatives. These highlighted technologies and training opportunities available to the region. Industry representatives were keen to emphasise their willingness to engage with the NIOHC and its members to assist the development of hydrographic and cartographic capability within the region.

The meeting discussed several topical issues including how to maximise the use of hydrographic data, the movement towards a data-centric world, an introduction to e-Navigation and potential uses of AIS data, all of which included valuable industry input and generated much discussion.

The current Vice-Chair of the NIOHC, Bangladesh, will assume the Chair of the NIOHC within the next four months in accordance with the Statutes of the Commission. The NIOHC elected Egypt to assume the Vice-Chair position for the next period. Bangladesh volunteered to host the 16th meeting of the Commission in Bangladesh from 14 to 16 March or 23 to 25 February 2016 and it was proposed to hold an INT Chart Coordination Working Group meeting prior to NIOHC-16.



3RD WORLD CONFERENCE ON DISASTER RISK REDUCTION (WCDRR-3)

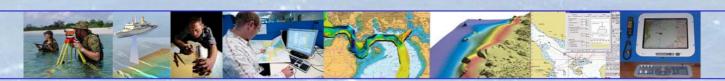
Sendai, Japan, 14-18 March

In 2011, the UN General Assembly initiated the development of a post-2015 framework for disaster risk reduction, in continuation of previous UN initiatives to reduce the vulnerabilities and risks to hazards. The Directing Committee has registered the IHO as a contributor to the preparatory process. This provides the IHO with opportunities to highlight the role and importance of surveying and charting the world oceans, seas and coastal waters in the prevention and mitigation of maritime disasters. The IHO input so far has advised that the preparation of a post-2015 framework should address the availability of appropriate coastal and bathymetric data, both through direct contribution to the consultation process and through related initiatives and programmes, such as the UN initiative on Global Geospatial Information Management and the work plan of the Group on Earth Observations (GEO).

As part of the UN process, the 3rd World Conference on Disaster Risk Reduction (WCDRR-3) convened in Sendai, Japan, from 14 to 18 March 2015. It was tasked by the UN General Assembly to adopt the post-2015 framework for disaster risk reduction. Japan agreed to represent the IHO at the Conference. The IHO delegation was composed of Messrs Hideki Kinoshita, Director of International Affairs Office, and Katsumasa Miyauchi, Senior Official International Affairs Office, Japan Coast Guard - Hydrographic and Oceanographic Department.

Over 6,500 participants, including 2,800 government representatives from 187 UN Member States, attended WCDRR-3. 150 intergovernmental and multi-stakeholder events were held and over 350 side events were organized in the public forum with over 143,000 visitors.

The IHO delegation attended several events, including the Opening Ceremony, plenary sessions, working sessions and side events. Mr Kinoshita delivered a statement on behalf of the IHO under Agenda Item 9 of the Plenary Sessions (Statements by the intergovernmental and other organizations), highlighting the important roles of hydrography in predicting the impact of marine disasters such as coastal storms, tsunamis and sea level rise as well as in the forecasting of the likely spread and track of oil slicks as part of oil spill response plans. address viewed http://webtv.un.org/meetings-Kinoshita's can be at: events/conferencessummits/3rd-un-world-conference-on-disaster-risk-reduction-14-18march-2015-sendai-japan/watch/representative-from-the-international-hydrographicorganization-8th-plenary-meeting/4116435100001





Mr Kinoshita addressing the Plenary Session

The role of geospatial data infrastructures in the reduction of disaster risks was addressed in a working session on "Earth Observation and High Technology to Reduce Risks" on 15 March, with input from GEO and from the International Steering Committee for Global Mapping.

The Conference adopted the Sendai Framework for Disaster Risk Reduction 2015-2030 (see http://www.wcdrr.org/uploads/Sendai Framework for Disaster Risk Reduction 2015-2030.pdf).

The framework identifies the need for "focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas:

- 1. Understanding disaster risk;
- 2. Strengthening disaster risk governance to manage disaster risk;
- 3. Investing in disaster risk reduction for resilience;
- 4. Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction."

The framework also invites "States, regional and international organizations and other relevant stakeholders" ... to "take into consideration the key activities listed under each of these four priorities and should implement them, as appropriate, taking into consideration respective capacities and capabilities, in line with national laws and regulations."



38TH CONFERENCE OF THE US-CANADA HYDROGRAPHIC COMMISSION

National Harbor, Washington DC, USA, 16 March

The USA hosted the 38th Conference of the US-Canada Hydrographic Commission (USCHC) on 16 March in National Harbor, Washington DC, USA immediately prior to the biennial US Hydro Conference organised by the Hydrographic Society of America. In addition to the two Member States of the Commission, Mexico and the United Kingdom attended as Observer

States at the meeting. The IHO was represented by President Robert Ward. As usual, the meeting was co-chaired by the national Hydrographers of Canada and the United States of America. Mr Denis Hains. Hydrographer-General of Canada represented Canada and Rear Admiral Gerd Glang, Hydrographer of the USA, represented the United States America.



Each country provided reports and presentations on their organizations and accomplishments in the past year. Specific topics discussed were the status of world-wide Electronic Navigational Chart (ENC) coverage. The USA described its progress on evaluating the use of satellite-derived bathymetry, the development of the IHO Data Centre for Digital Bathymetry to become a global crowd-sourced bathymetry database and the potential for collaboration on a web-based tool to better discover ENCs - ENC Online. Canada provided information on its world-class tanker safety system, the web-based water



Co-Chairs Mr Hains and Admiral Glang (both on right) seek views from IHB President Robert Ward (second left) during the meeting

levels and currents project, its continuous vertical datums project and the Canadian Federal Geospatial Platform.

The next meeting of the Commission will be held in Halifax, Nova Scotia, Canada on 16 May 2016 immediately preceding the Canadian Hydrographic Conference 2016 that will be held in the same location.



2ND SESSION OF THE IMO SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE

London, United Kingdom, 9 - 13 March

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 governments operational and measures related to safety of navigation. These include: hydrographic and meteorological services. ships' routeing, ship reporting systems, aids to navigation, radio-navigation systems, vessel



IMO NCSR 2 Plenary in session

traffic services, and pilotage; operational requirements and guidelines relating to 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; obligations of governments 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, standards operational guidelines for the use of shipborne performance and radiocommunications and search and rescue equipment; and liaison with the International Telecommunication Union (ITU) on maritime radiocommunication matters.



Director Bessero in the plenary at NSCR 2

The 2nd session of the Sub-Committee (NCSR 2) was held at the IMO Headquarters in London from 9 to 13 March 2015. The IHO was represented by Director Gilles Bessero and Assistant Director David Wyatt, Mr Peter Doherty, the Chair of the 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.



NCSR 2 approved three routeing measures which will be forwarded to the MSC for adoption at its 95th session in June 2015. The Sub-Committee also approved two model document templates for ships' routeing and reporting system proposals.

NCSR 2 finalized a draft consolidated guideline on Software Quality Assurance (SQA) and Human Centred Design (HCD) for e-navigation prepared by a Correspondence Group. The Sub-Committee agreed there was no requirement for input from the Sub-Committee on Human Element, Training and Watchkeeping (HTW) at the present time and endorsed the draft guideline with a view to approval by the MSC.

The Sub-Committee received reports from the Chair of the IMO NAVTEX Panel, in which details of proposed new NAVTEX transmitters were provided, and the Chair of the IHO WWNWS-SC, in which were highlighted the results of a year-long customer survey which revealed an apparent lack of system knowledge and a potential gap in GMDSS training for on-board users. The Sub-Committee noted that amendments to the GMDSS Master Plan had been distributed in GMDSS/Circ.17 and Administrations were encouraged to check their national data for accuracy. It was noted that GMDSS/Circ.18 would be issued in September 2015, allowing time for amendments to be submitted.

The NCSR finalized a draft MSC Resolution on the *Performance standards for multisystem shipborne radionavigation receivers*. The draft was endorsed by the Sub-Committee with a view to approval by the MSC with a proposed implementation date of 31 December 2017. The Sub-Committee also identified a future work item on the *interconnection of NAVTEX and SafetyNET receivers and their display on Integrated Navigation Display System*.

The NCSR agreed in principle on new definitions of GMDSS sea areas A3 and A4 and that a definition of interoperability, based on the functional requirements of the future GMDSS, was needed. Views were expressed that this concept should be applicable to all the GMDSS service providers and that it might be included in a future revision of SOLAS Chapter IV - Radiocommunications. The NCSR endorsed a draft outline of the detailed review of the GMDSS to be progressed by an intersessional Correspondence Group on the review and modernization of GMDSS.

The IHO submitted a document reporting on the monitoring of ECDIS issues and chart coverage. The IHO also highlighted that some port authorities required the carriage of paper charts in addition to the carriage of an adequate set of ENCs, in accordance with the requirements set out in SOLAS Regulation V/19.2.14. The Cook Islands highlighted the recent successful meeting of the South West Pacific Hydrographic Commission (SWPHC) held in Rarotonga and cautioned to ensure a quality assurance mechanism would guarantee the quality of crowd-sourced bathymetry data, whilst acknowledging the potential value of such data to improve nautical charts.

Mr Ringo Lakeman, The Netherlands, and Mr Nigel Clifford, New Zealand, were elected as Chair and Vice-Chair, respectively, of the Sub-Committee for its 3rd session scheduled to be held at the IMO Headquarters in London, United Kingdom, from 29 February to 4 March 2016.



6TH MEETING OF THE MARINE SPATIAL DATA INFRASTRUCTURES

Working Group (MSDIWG), London, UK, 4-6 March

The 6th Meeting of the Marine Spatial Data Infrastructures Working Group (MSDIWG) took place in London, UK, hosted by the United Kingdom, from 4 to 6 March. The meeting was chaired by Mr. Jens Peter Hartmann (Denmark). Ten participants from nine Member States (Canada, Denmark, France, Germany, Japan, Netherlands, Norway, United Kingdom and USA), six Expert Contributors representing the Coastal & Marine Union (EUCC) and industry (Caris, Envitia, ESRI, and OceanWise), and the IHB attended the meeting. Assistant Director Alberto Costa Neves represented the IHB.

The meeting considered the impact of the decision to transfer governance of the MSDIWG from the Hydrographic Services and Standards Committee (HSSC) to the Inter-Regional Coordination Committee (IRCC) and prepared revised Terms of Reference that will be submitted to the IRCC for approval. Participants looked at ways to assist IHO Member States and Regional Hydrographic Commissions in understanding the benefits of, and the means for, establishing MSDIs. The need to promote cultural changes, to develop an MSDI strategy and to invest in training were all considered. The technical aspects of MSDI will be reported to HSSC when and if necessary.

The MSDIWG also discussed the impact of Crowd-Sourced Bathymetry (CSB) and the use of authoritative versus non-authoritative data. The possibility of establishing the uncertainty of such data was considered while discussing the character of CSB as an extension of Hydrographic Notes (reports from mariners), the nature of the input to the General Bathymetric Chart of the Ocean (GEBCO) gridded data sets and the parallel with the use of Vessels of Opportunity by the World Meteorological Organization (WMO) to collect data. Participants focused on the "data centric" approach rather than on products in order to make data available for re-use.

Presentations on regional and national MSDI developments allowed participants to better understand the progress that has been made in some countries, but a large gap still exists between the advanced hydrographic services and those that are yet to modernize and embrace a digital geospatial information environment. The meeting considered examples of the use of common datasets to enable greater collaboration across national boundaries, the improvement of data management processes, links to the development of e-Navigation and improvements to the public and government acknowledgement of hydrographic services at a national and regional level. The MSDIWG agreed on actions to build use cases and a generic business case framework for MSDI.

Participants also considered the need to establish training syllabi for MSDI at distinct levels - decision-makers, managers, users. The MSDIWG will seek input from academia and the wider hydrographic community to review and extend the IHO Publication C-17 (*Spatial Data Infrastructures: "The Marine Dimension" - Guidance for Hydrographic Offices*), to identify national and regional best practices, to identify the challenges that are faced by hydrographic services and to update existing MSDI documentation on the IHO website. The meeting also reviewed the existing standards and how appropriate they are to MSDI.

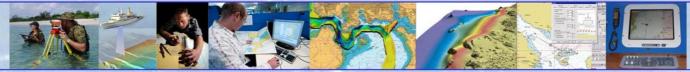


MSDIWG-6 was preceded by a one day "MSDI Open Forum" attended by 30 people. The Forum explored the theme: "Building a Maritime Spatial Data Infrastructure — Are the Principles at Odds with Strategies for Delivery?". MSDIWG members and external stakeholders discussed the relationship between MSDI and hydrography. Geospatial data developments - mainly in UK and Europe, SDI case studies and open data standards and policies were also on the agenda.

The next meeting of the MSDIWG, to be associated with another MSDI Forum, will take place in early February 2016, in Tokyo, Japan. Further information concerning the meeting and the Open Forum presentations are available on the IHO web site at: www.iho.int \rightarrow Committees & WG \rightarrow MSDIWG \rightarrow MSDIWG6 (and \rightarrow MSDI Open Forum)



MSDIWG6 Open Forum participants



5TH MEETING OF THE WORLDWIDE ENC DATABASE (WEND) WORKING GROUP (WENDWG)

Singapore, 3-5 March

The 5th meeting of the Worldwide ENC Database Working Group (WENDWG) took place in Singapore, hosted by the Hydrographic Department of the Maritime and Port Authority (MPA) of Singapore, from 3 to 5 March. The meeting was chaired by Captain Jamie McMichael-Phillips, UKHO. Twenty-six delegates from 14 Member States (Brazil, Canada, China, Finland, France, Germany, Japan, Norway, Poland, Singapore, South Africa, Turkey, United Kingdom, USA), representing 10 Regional Hydrographic Commissions (ARHC, BSHC, EAHC, EAtHC, MACHC, MBSHC, NHC, NSHC, SAIHC, USCHC), 2 Regional ENC Coordinating Centres (IC-ENC and PRIMAR), and the IHB attended the meeting. Australia (representing the SWPHC) could not participate and provided written comments. Director Mustafa Iptes and Assistant Director Yves Guillam (Secretary) represented the IHB.





5th WENDWG Meeting March 2015 Singapore





The meeting considered the decisions and actions affecting WENDWG activities arising from the 6th meeting of the Inter-Regional Coordination Committee (IRCC-6) and the 5th Extraordinary International Hydrographic Conference (EIHC-5). Subsequent actions were included in the WENDWG 2015-16 proposed work programme, now aligned in its format with those of the other IHO subordinate bodies. This work programme will be submitted to the next meeting of the IRCC (IRCC-7) in June for approval. The meeting considered issues associated with ENC information overlays and prepared the way ahead to address this matter in accordance with existing IHO Resolutions and Standards. The meeting also prepared suggestions for the consideration of IRCC-7 to progress EIHC-5 Decision No. 10 concerning ENC coverage, and Decision No. 12 on the full implementation of the WEND Principles. Two ad hoc sub-groups met during the meeting to make progress on various standing issues including how to manage the collation of the strategic and working level performance indicators that are within the scope of the Working Group and are required for the IHO Annual Report. Methods and timelines for delivering them were agreed.

The WENDWG agreed that it would monitor RENC harmonization activities related to technical and distribution issues as a new permanent item of the WENDWG work programme; as a consequence, it was agreed that the RENC Harmonization Sub-Group could be disbanded.

Two initiatives were agreed to further address ENC overlap issues:

- one - led by Singapore (on behalf of the East Asia Hydrographic Commission) and IC-ENC -will consider ECDIS scenarios and ENC overlapping test dataset cases.

Results are expected in early 2016; and

- the second - to establish an IHO online repository of useful documents such as the report of the US-Canada Hydrographic Commission transboundary ENC agreement - intends to share best practises.

The continuing re-development of the IHO ENC Catalogue was noted and its principles agreed. The offer made by PRIMAR (on behalf of the RENCs) for the International Charting Regions Co-ordinators and the IHB to use its online RENC ENC database catalogue and overlap checker tool was most welcomed. These password-protected tools will be made available to the Regional Hydrographic Commissions so that they can monitor ENC coverage, overlaps and gaps in their regions.

The WENDWG agreed to recommend to IRCC that there was no need to further amend or enhance the existing WEND Principles and the Guidelines for the implementation of these WEND Principles at this stage. However, some work is required to align IHO publication S-65 - Electronic Navigational Charts, Production, Maintenance and Distribution Guidance - with the guidelines and principles.



The next WENDWG meeting will be held in early March 2016, in Stavanger, Norway.

Further information concerning the meeting is available on the IHO web site at www.iho.int > Committees & WG > WENDWG > WENDWG-5.



WENDWG-5 participants visiting the Port Operations Control Centre of Singapore - Vista