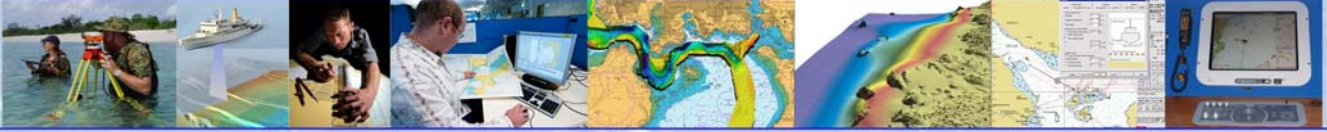




INTERNATIONAL HYDROGRAPHIC BULLETIN



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January - December 2013



JANUARY

25TH TRANSFER STANDARD MAINTENANCE AND APPLICATIONS DEVELOPMENT (TSMAD) WORKING GROUP MEETING

Tokyo, Japan, 15-18 January

The Transfer Standard Maintenance and Applications Development (TSMAD) held its 25th meeting at the offices of the Japan Hydrographic and Oceanographic Department (JHOD) in Tokyo, Japan from 15 to 18 January 2013. The meeting was attended by members from Australia, Brazil, Canada, Finland, France, Germany, Japan, Korea (Rep of), Netherlands, Sweden, Turkey, UK, USA (NOAA, NGA and NOO). Representatives from the following stakeholder organizations also attended the meeting: CARIS (Canada), ESRI (USA), Jeppesen Marine, KESTI (Rep. of Korea), IC-ENC, IIC Technologies, Japan Radio Company, KESTI (Rep. of Korea), NAVTOR, Nippon Sogo Systems, T-Kartor (Finland), SevenCs (Germany) and Transas (Russia).



The main TSMAD meeting was preceded by two sub-working group meetings; the first was a TSMAD group tasked with the development of the S-101 Data Capture and Encoding Guide (DCEG), and the second the Digital Information Portrayal WG (DIPWG) tasked with the development of the S-100 portrayal model. Good progress was made at both meetings which took place on 14 January.

Reports on the progress made by all the TSMAD sub-working groups were provided during the main TSMAD meeting. The activities of the other HSSC working groups, which may have an impact on TSMAD work, were also discussed. There was discussion about S-100 based product specifications being developed by other international organizations such as IALA. To accommodate the requirements of other IHO working groups, possible extensions to the S-100 standard (such as GML encoding) were discussed. In addition to the discussion and work on the S-100 and S-101 work items, the meeting also discussed issues related to S-57 (IHO Transfer Standard for Digital Hydrographic Data), S-64 (IHO Test Data Sets for ECDIS) and the IHO GI Registry.

The next TSMAD meeting will be held jointly with the HSSC Digital Information Portrayal Working Group (DIPWG) in Silver Springs, USA from 10 to 14 June 2013.



17TH SESSION OF THE IMO SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE & 11TH MEETING OF THE IHO WORLD-WIDE NAVIGATION WARNING SERVICE DOCUMENT REVIEW WORKING GROUP

London, UK, 21-31 January

The 17th session of the IMO Sub-Committee on Radiocommunications and Search and Rescue (COMSAR 17) was held at the IMO Headquarters in London from 21 -25 January. Director İpтеş, Assistant Director Wyatt and the Vice-Chair of IHO World-Wide Navigation Warning Service Sub-Committee (WWNWS) represented the IHO. The NAVAREA Coordinators from: NAVAREA 1 (UK); NAVAREA II (France); NAVAREAs IV and XII (USA); NAVAREAs XVII & XVIII (Canada) and NAVAREA XIX (Norway) were also represented.

The Sub-Committee considered three submissions by the IHO, it noted the outcome of WWNWS 4, approved a revision to Annex 7 of MSC.1/Circ.1382/Rev.1 containing the Questionnaire on Shore-based Facilities for the GMDSS, and approved the proposed draft amendments to IMO Resolutions A.705(17) on the Promulgation of Maritime Safety Information and A.706(17) on the World-Wide Navigational Warning Service. The Sub-Committee also noted the report by the chair of the IMO NAVTEX Coordinating Panel.

Delegates were invited to Inmarsat Headquarters on City Road, London, for an evening brief on Inmarsat 4, the new maritime safety service, Voice distress and Urgency calls on Fleetbroadband and maritime safety data service which provides SafetyNET type facilities as well as Distress alerting and communications. This new maritime safety data service includes an additional means of messaging and has a chat facility for vessels and Rescue Co-ordination Centres to facilitate SAR co-ordination.

Due to the continuing consultation on the reorganization of IMO and the proposed merger of COMSAR and the Sub-Committee on Safety of Navigation (NAV), it was decided not to hold an election of officers for 2014 until the future shape of the sub-committees had been decided. It was confirmed that Mr C. Salado (Chile), Chair, and Mr Ringo Lakeman (Netherlands), Vice-chair, would continue in their respective roles for the remainder of 2013 as elected at COMSAR 16.

COMSAR 17 considered various proposals and issues relating to the modernization of the GMDSS and decided to establish a Technical Working Group (TWG). The TWG was directed to provide comment and advice on the proposed overarching principles, consider how existing radiocommunications systems should be taken into account, prepare an initial draft document on the outcome of the High-level review of the GMDSS and prepare terms of reference for the Correspondence Group on the Review of the GMDSS, which is to report to the next meeting. COMSAR also continued its work on e-Navigation and continued its work on preparing a final list of potential solutions relevant to radiocommunications. COMSAR considered relevant aspects of the draft Polar Code, all of which were referred to the SAR and Technical Working Groups for further consideration before being passed to the Sub-Committee on Ship Design and Equipment.



IMO COMSAR 17 Plenary in session

Members of the Document Review Working Group (DRWG) of the WWNWS Sub-Committee (China, France, UK, USA, Inmarsat, IMSO, WMO and IHB), who are reviewing the WWNWS documentation, met at IMO in the week following COMSAR 17. The WG undertook final proof editing of IMO resolutions A.705(17), as amended "Promulgation of Maritime Safety Information"; and A.706(17), as amended, "World-Wide Navigational Warning Service" and prepared draft editorial amendments to the Joint IMO/IHO/WMO MSI Manual for further consideration at WWNWS 5.

The NAVAREA and National entries in Annex 8 of the GMDSS Master Plan were considered and areas for action were identified for highlighting to the respective NAVAREA, Sub-Area and National Coordinators. A revised WWNWS customer feedback survey questionnaire was developed for circulation and comment by WWNWS-SC members, prior to posting on the www.



WWNWS DRWG 11 members meeting at IMO Headquarters, London



7TH EAHC COORDINATION MEETING Busan, Republic of Korea, 23-24 January

The 7th Coordination Meeting of the East Asia Hydrographic Commission was hosted by the Korea Hydrographic and Oceanographic Department (KHOA) from 23 to 24 January in Busan. KHOA headquarters were relocated to Busan from Incheon in December 2012.

EAHC Coordination meetings are held annually in the period between Conferences to progress initiatives and to coordinate activities between the States in the region. Attendees comprised the national Hydrographers of China, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore and Thailand assisted by senior members of their staff. The Democratic People's Republic of Korea was not represented at the meeting. A representative of Vietnam attended. The President represented the IHB as an observer.

The meeting was chaired by the Chair of the EAHC Commodore Romeo Ho, Hydrographer of The Philippines.



President Ward and EAHC Chairman Commodore Romeo Ho

The key focus of the two-day meeting were the proposals to :

- establish an East Asia Regional ENC Coordinating Centre (RECC) to primarily harmonise ENC's within the region;
- establish a EAHC Training and Research and Development Centre to develop and coordinate capacity building capabilities and conduct Research and Development projects; and
- re-organize the structure of the EAHC to support the increase in activities and providing opportunity for the next generation of leadership within the region to head committee and working groups.

The Meeting also considered various subjects including developing clarification on the delimitation of cartographic boundaries for ENC production, the licensing, pricing and distribution of ENC's covering the South China Sea as well as small scale ENC's covering the whole region and the proposal for a Regional Marine Environmental ENC as a contribution towards protecting the marine environment. As a result of discussions in which all the delegates were actively involved, all proposals were accepted. The EAHC begins its new phase from 2013 with a new and simplified internal organisational structure, the function of the Coordination Meetings will be replaced by an annual meeting of the EAHC Steering Committee. A RECC, a Charting and Hydrographic Committee and a Training and Research Development Committee will all report to the Steering Committee.

It was agreed that a meeting of the EAHC Steering Committee will take place in Malaysia in mid-February 2014.



E-NAVIGATION UNDERWAY 2013

Copenhagen, Denmark - Oslo, Norway – Copenhagen, Denmark
29 - 31 January

The 3rd E-Navigation Underway Conference was held from 29 – 31 January 2013 on board M/S *Pearl Seaways*, sailing from Copenhagen, Denmark to Oslo, Norway and back to Copenhagen. Jointly organized by the Danish Maritime Authority and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), the Conference was also supported by the Nautical Institute (UK), Comité International Radio-Maritime (CIRM), and the ACCSEAS Project. It was attended by 141 delegates representing national maritime administrations, hydrographic offices (Denmark and France), industry and international organizations (BIMCO, CIRM, IALA, ICS, IHO, IMO, IMPA). Director Gilles Bessero represented the IHO and made a presentation on “IHO S-100, an essential contribution to e-Navigation and Maritime Spatial Planning”.



View of the audience during the scene-setting presentation by John Erik Hagen, Coordinator of the IMO Correspondence Group on e-Navigation

A series of 26 presentations were given under six main themes:

- Strategic views;
- Getting all stakeholders on board;
- Implementation strategies;
- Ship - Shore integration;
- Operations;
- Data modelling / Infrastructure.

In his opening statement, the IALA Secretary General acknowledged the IHO contribution to the development of e-Navigation. Several speakers addressed the use of S-100 as the baseline standard for e-Navigation data access and services, thus confirming the onus on IHO to deliver and maintain the adequate standards and associated tools.

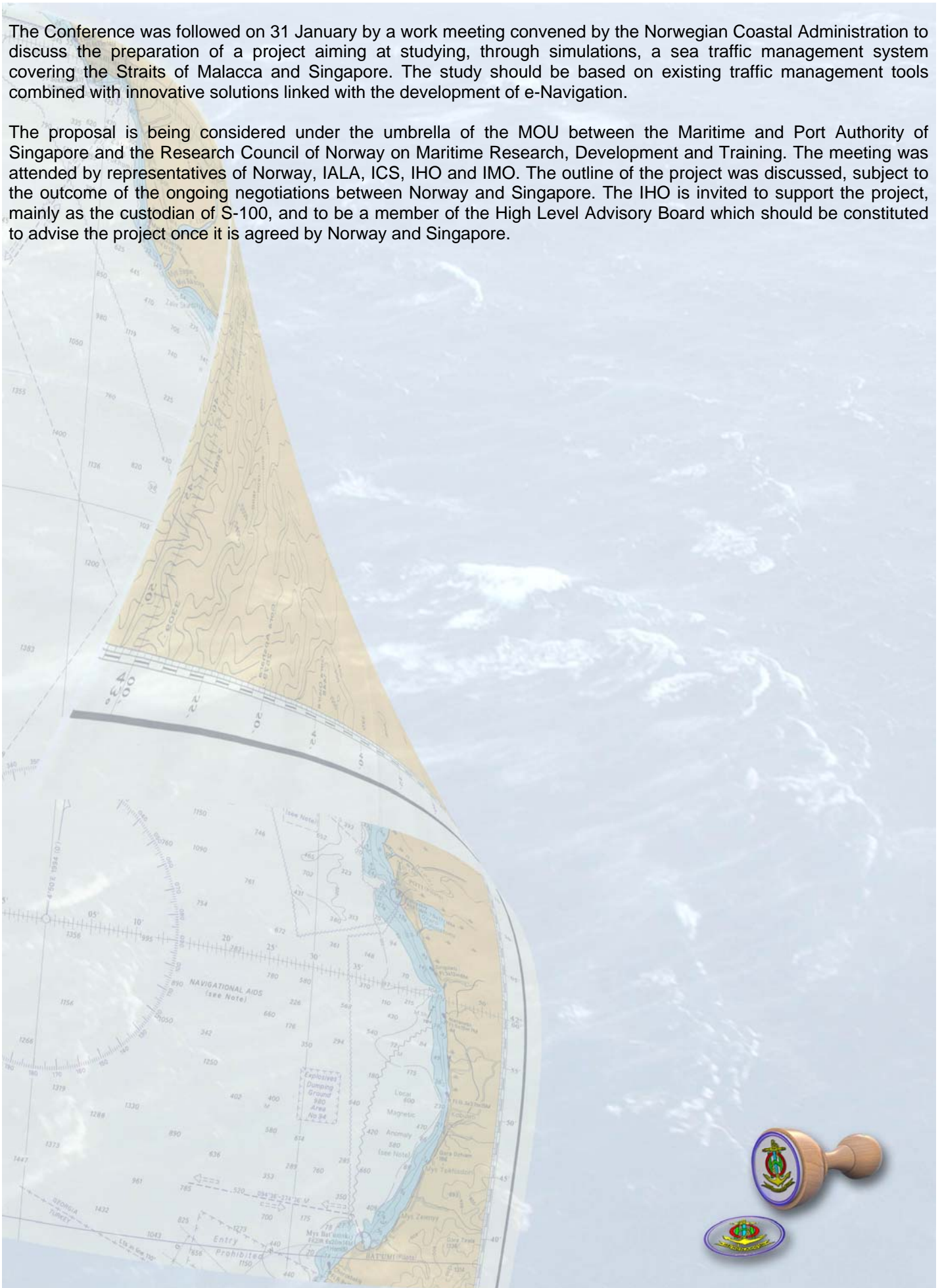
The Conference also offered a valuable opportunity to discuss and refine the timeline for the completion of the work of the IMO Correspondence Group on e-Navigation.

The presentations and the Conference Report are posted on the IALA e-Navigation portal (<http://www.e-navigation.net/>).



The Conference was followed on 31 January by a work meeting convened by the Norwegian Coastal Administration to discuss the preparation of a project aiming at studying, through simulations, a sea traffic management system covering the Straits of Malacca and Singapore. The study should be based on existing traffic management tools combined with innovative solutions linked with the development of e-Navigation.

The proposal is being considered under the umbrella of the MOU between the Maritime and Port Authority of Singapore and the Research Council of Norway on Maritime Research, Development and Training. The meeting was attended by representatives of Norway, IALA, ICS, IHO and IMO. The outline of the project was discussed, subject to the outcome of the ongoing negotiations between Norway and Singapore. The IHO is invited to support the project, mainly as the custodian of S-100, and to be a member of the High Level Advisory Board which should be constituted to advise the project once it is agreed by Norway and Singapore.



MARINE SPATIAL DATA INFRASTRUCTURES (MSDI) MSDI FORUM & 4TH MSDIWG MEETING Copenhagen, Denmark, 30 January-1 February

The 4th meeting of the IHO Marine Spatial Data Infrastructure Working Group (MSDIWG) took place on 31 January and 1 February 2013 in Copenhagen, Denmark. It was preceded on 30 January by an MSDI Open Forum. Both events were held at the Danish Geodata Agency (GST) and were chaired by Mr. Jens Peter Hartmann of GST. The aim of both events was to reactivate IHO's interest in f MSDI and to propose ways to increase MSDI implementation within the Organization and its Member States. This was the first MSDIWG meeting since 2009. MSDI addresses, for the maritime domain, "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data"¹. The key interest for the IHO is that MSDI provides a framework for the provision of hydrographic information beyond the traditional field of surface navigation.

More than 30 people attended the two meetings, including some via webcast. IHO participants were mainly from Europe - Denmark, Estonia, Finland, France, Germany, Latvia, Netherlands, Norway, Spain (web) and United Kingdom - but also from Argentina, Japan, Suriname and USA (web). There was also a good level of participation by experts from industry, academia and from the European Union (web). Assistant Director Michel Huet attended from the IHB.



MSDI Open Forum

Various presentations, many of them given by external stakeholders, illustrated the technical, organizational, policy, educational and scientific aspects of MSDI. All presentations are now available from the IHO website at www.iho.int/mtg_docs/com_wg/MSDIWG/MSDIWG4/MSDI_Open_Forum/MsdiOpenForum.htm.

From the associated discussions a number of challenges facing the MSDIWG were identified as well as the opportunities that exist for the hydrographic community and its role in supporting social and economic development world-wide. These matters were further addressed by the 4th MSDIWG meeting, including:

- supporting how IHO Member States will adapt to new ways of working;
- sharing knowledge and experience within the HO community of practitioners;
- the modernisation of Hydrographic Offices; and
- making the case for MSDI.



¹Global Spatial Data Infrastructure Cookbook, 2009

4th MSDI Working Group Meeting

The 4th MSDI WG heard reports on national status and plans regarding MSDI-related activities. It was apparent that any developments within the European HOs are linked to the mandatory implementation of the INSPIRE² Directive. Also, national SDI developments, of which MSDI should be an important part, are generally led by the land mapping and cadastral agencies in each country. MSDI achievements so far appear to be limited to the setting up of geospatial data portals.

The results of a recent survey on MSDI conducted among Hydrographic Offices³ were examined. This survey revealed that for HOs:

- the dominant MSDI issues are identifying responsibilities for MSDI development; clarifying user needs across the relevant sectors; data interoperability, harmonization and standardization; and funding.
- pragmatic ways of addressing those issues would be to use the IHO as a channel to provide input to relevant organizations and engage in discussions in the MSDI arena, garner a better understanding of potential MSDI user needs through existing channels and stakeholders, promote the adoption of standards in line with those already in use by the hydrographic community, and identify core data that could become the standard baseline for countries to pursue in their MSDIs.
- initial tasks should include developing the role of the MSDI WG through the setting up of sub-groups to address key areas of further development, including defining clear goals and milestones; establishing communication channels with relevant organizations and with other IHO WGs; and creating an information base via the IHO website.

A detailed MSDI WG work plan was drawn up, divided into four sections, being: a general approach to MSDI, a review and status report on MSDI, a strategic approach to further MSDI development, and training and communication. Revised Terms of Reference for the MSDI WG were also discussed and agreed, including a vision "to place hydrography, and its value to social and economic development, at the heart of Spatial Data Infrastructures (SDI's) across the world" and an objective "to enable IHO Member States to develop their capability to engage and participate in regional and / or national MSDIs, and implement SDI principles and the benefits they bring". These will be forwarded to the MSDI WG parent body, the IHO Hydrographic Services and Standards Committee (HSSC), for consideration at its next meeting in November 2013.

Elections were conducted to select the MSDI WG office bearers. As a result:

- Mr. Jens Peter Hartmann (Denmark) was elected to continue as Chair;
- Ms. Ellen Vos (Netherlands) was elected as Vice Chair; and
- Mr. John Pepper (John Pepper Consultancy Ltd) was appointed as Secretary.

The next MSDI WG meeting, to be associated with a second MSDI Forum, is planned for February 2014, probably in North America.

² Infrastructure for Spatial Information in the European Community

³ IHB Circular Letter no. 104/2012

FEBRUARY

SECOND HIGH LEVEL FORUM ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT Doha, Qatar, 4 - 6 February

The Second High Level Forum on Global Geospatial Information Management held in Doha, Qatar from 4 to 6 February 2013 brought together representatives from 60 countries, several international organizations and the private sector. Convened by the Secretariat of the United Nations initiative on Global Geospatial Information Management (UN-GGIM), in collaboration with the Government of Qatar, the Forum was preceded on 3 February by an Exchange Forum attended by representatives from the private sector, governments, international organizations and the research community and moderated by the Joint Board-GIS (JB-GIS). Director Gilles Bessero represented the IHO and chaired one of the four sessions of the Exchange Forum.

The Exchange Forum reviewed the progress and limitations of technologies and methods in “determining”, “monitoring”, “connecting” and “delivering” “place”. The outcome was reported to the High Level Forum by the Chair of JB-GIS.



Some panel members of the Ministerial Segment

The High Level Forum was opened by the Prime Minister of Qatar. The proceedings began with a “Ministerial Segment” which shared views on the role of geospatial information in national development. It was followed by five thematic sessions focusing on “Building a National Geospatial Information System”, “Future Trends in Geospatial Information”, “Developing an Effective Global Geodetic Reference Framework”, “Geospatial Information and Sustainable Development” and “Challenges in Developing Core Global Reference Datasets”. Although the overwhelming majority of participants represented the land mapping sector, a number of presentations included the maritime domain in their considerations. The role of the IHO in developing geospatial standards was duly acknowledged, notably in the presentation by the Chair of ISO/TC211.

The documents of the Exchange Forum and of the High Level Forum are posted on the UN-GGIM website (<http://ggim.un.org>).



The IHO representative participated in two side events: an ad hoc meeting of the JB-GIS and an informal meeting of the newly established UN-GGIM Working Group for a Global Map for Sustainable Development (GM4SD) to which the IHO has been invited to participate with three other international organizations (ISCGM⁴, OGC⁵, ISO/TC211).



Participants at the ad-hoc meeting of JB-GIS

He also took the opportunity of his stay in Doha to visit the new survey boat of the Hydrographic Section of the Qatar Land and Survey Department and had an audience with Mr. Ali Abdulla Al-Abdulla, Assistant Undersecretary for Urban Planning, to which the Land and Survey Department reports. The development of Qatar hydrographic capabilities was discussed.

⁴ ISCGM: International Steering Committee for Global Mapping.

⁵ OGC : Open Geospatial Consortium.



13TH MEETING OF THE NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION (NIOHC)

Yangon, Myanmar, from 19 to 22 February

The 13th meeting of the North Indian Ocean Hydrographic Commission (NIOHC) was held in Yangon, Myanmar, from 19 to 22 February. NIOHC Member States representing Bangladesh, India, Myanmar, Saudi Arabia, Sri Lanka, Thailand and the UK attended the meeting with Associate Members and Observers attending from Australia, France, Mauritius, Pakistan, Sudan, the State Hydrographic Research Institute of Russia and the Naval Meteorology and Oceanography Command, USA. Director Iptes and Assistant Director Wyatt represented the IHB.

The meeting received National Reports from Member, Associate Members and the IHB as well as presentations by IALA and GEBCO. This was followed by reports on Worldwide ENC Database (WEND) issues, an update on the IHO Marine Spatial Data Infrastructures Working Group (MSDIWG) and on India's Inland Waterways organisation. Details of regional INT Chart and ENC coverage were discussed, highlighting areas which require further investigation to resolve. Considerable time was devoted to Capacity Building and regional requirements. A comprehensive plan was developed for submission to the IHO Capacity building Sub Committee (CBSC) later in the year. Delegates were encouraged to provide regular updates to the IHO Yearbook and to C-55 - *Status of Hydrographic Surveying and Nautical Charting Worldwide* and to reply to Circular Letter 51/2012 - *Continuous Provision of ENCs and RNCs to the IHB*.

Methods of engaging non-Member States were discussed. IHO was requested to lead initiatives to conduct high level visits to The Maldives and Seychelles. NIOHC Members were requested to consider strategies for encouraging participation of all non-Member States.

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

The Commission approved a revision to its Statutes that the tenure of the Chair and Vice-Chair will be fixed to one year with the automatic succession of the Vice-Chair to Chair. Pakistan applied for full membership of NIOHC and was unanimously accepted. The Commission appointed UK as the next Vice-Chair of the Commission. As incoming Chair, Thailand volunteered to host the 14th meeting of the NIOHC which will most likely take place in February 2014.



Director Iptes addressing the Opening Ceremony



NIOHC 13 in session



9TH DATA PROTECTION SCHEME WORKING GROUP MEETING (DPSWG)

IHB, Monaco, 26-28 February

The 9th DPSWG meeting took place at the IHB, from 26 to 28 February 2013. The meeting was chaired by Mr. Jonathan Pritchard (UKHO) and members from SHOM, UKHO, Chartworld, ECC, Furuno, IC-ENC, Transas and the IHB also participated in the meeting.

The meeting discussed important issues relating to the migration from S-63, Ed 1.0 to Ed 1.1.1. Some important differences with the edition are: VERSION numbers are included in permits, there is no link to edition numbers in permits, provision is made for large media support and the IHO root level certificate must be used for authentication on the ECDIS.

Some known issues with the S-64 test dataset were discussed and the meeting also considered the impact of rationalizing the current proliferation of data files (in an exchange set) into a single file which would contain the metadata for an entire service.

The meeting considered the potential impact that e-Navigation might have on data encryption, data authentication and data distribution services. It was concluded that S-100 will probably have considerable applicability to e-Navigation and integrating these services within the S-100 standard would enable them to be used within S-10x product specifications, if required.



Participants at the 9th DPSWG Meeting



WMO/IOC-JCOMM-ETMSS 4 Tokyo, Japan, 27 February to 2 March

The Expert Team on Maritime Safety Services (ETMSS) is part of the World Meteorological Organization (WMO) and the UNESCO Intergovernmental Oceanographic Commission's (IOC) Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM). The ETMSS participates in, and provides the meteorological input to, the IHO World-Wide Navigational Warning Service (WWNWS) Sub-Committee. ETMSS meets approximately every 4 years and held its 4th meeting at the headquarters of the Japan Meteorological Agency (JMA) in Tokyo from 27 February to 2 March 2013. The IHO was represented by Assistant Director David Wyatt.

Delegates from the WMO Secretariat, Australia, Argentina, Canada, China, Finland, France, Italy, Japan, Norway, Russian Federation, UK, USA, Chair of JCOMM Services Coordination Group and Inmarsat Global Ltd attended the meeting which was chaired by Henri Savina of METEO FRANCE.

The meeting received reports from JCOMM's Services and Forecast Systems Program Area (SFSPA), ETMSS Chair, the International Maritime Organization (IMO), IHO, Inmarsat Global Ltd, METAREA XVII/XVIII Coordinator on Arctic Met Services. The meeting reviewed the status of relevant WMO and Joint IMO/IHO/WMO documentation and agreed on the actions necessary to bring the WMO documentation into full alignment with the recently updated joint documentation and IMO Resolutions. The meeting endorsed the need for continuing the close cooperation between WMO and IHO through their ETMSS and WWNWS; in particular they agreed proactive steps to foster dialogue between NAV and MET AREA Coordinators to resolve a number of issues of significance to the maritime community.

In addition to a more general update on relevant activities, the IHO provided a brief on the IHO's Universal Hydrographic Data Model (S-100) focusing on supporting e-Navigation and Maritime Spatial Planning. Dr Vasili Smolianitsky of the Russian Federation and Chairman of the JCOMM Expert Team on Sea Ice (ETSI) provided information on mandatory sea ice information to be included in MSI and proposed rules for its description in GMDSS SafetyNET and NAVTEX bulletins. Dr Smolianitsky also gave a presentation on the Sea Ice Feature Catalogue progress and highlighted the need for engagement with IHO and TSMAD to progress S-100 issues and the creation of a WMO Domain for a Met-Ocean Feature Catalogue.

No date or venue was set for ETMSS-V; Neal Moodie (Australia) and John Parker (Canada) were elected as vice-chairs whilst Henri Savina (France) continued in the position of chair.



ETMS-IV in session



ETMSS-IV Delegates



MARCH

5TH MEETING OF THE ROPME SEA AREA HYDROGRAPHIC COMMISSION (RSAHC)

Riyadh, Kingdom of Saudi Arabia, 4 - 6 March



Director Iptes addresses delegates at the Opening Ceremony

The 5th meeting of the ROPME Sea Area Hydrographic Commission (RSAHC) was held in Riyadh, Kingdom of Saudi Arabia, from 4 – 6 March 2013. RSAHC Member States representing the Islamic Republic of Iran, the Sultanate of Oman, Pakistan, Qatar, Saudi Arabia and the United Arab Emirates (UAE) attended the meeting with Associate Members, France and the UK, and Observers from the International Association of Aids to Navigation and Lighthouse Authorities (IALA) and the IHO-IOC General Bathymetric Chart of the Oceans (IHO-IOC GEBCO) programme, together with various representatives from industry. Director Iptes and Assistant Director Wyatt represented the IHB.

The meeting received National Reports from Member and Associate Member States and the IHB followed by reports on IHO-IOC GEBCO and Worldwide ENC Data Base (WEND) issues. Delegates were encouraged to provide regular updates to the IHO Yearbook and C-55 - *Status of Hydrographic*

Surveying and Nautical Charting Worldwide and to reply to CL 51/2012 concerning the provision of ENCs for the IHB library chart collection. RSAHC Members were requested to consider strategies for encouraging the participation of all Member and non-Member States. Details of regional INT Chart and ENC coverage were discussed, highlighting areas which require further investigation to resolve. A WG was created to take forward this work. The NAVAREA IX Coordinator provided an update on activities in the region, which also includes the Red Sea. Discussion took place over the World-Wide Navigation Warning Service (WWNWS) questionnaire and its availability for download as well as completion via the internet. A brief was given, followed by a discussion on regional infrastructures for tsunami and other disaster warning systems.



RSAHC 5 in session

The meeting included a large number of presentations from industry representatives. The presentations highlighted technologies and training opportunities available to the region. Industry representatives were keen to emphasise their willingness to engage with the RSAHC and its Members to assist the development of the hydrographic and cartographic capability in the region. A presentation was given by IALA which was followed by presentations from the regional Capacity Building (CB) Coordinator. The presentations generated considerable debate on CB issues and regional requirements. A comprehensive plan was developed for submission to the IHO Capacity Building Sub-Committee (CBSC) that will meet later in the year.

The Commission agreed that Member States should sign the Statutes but further advice was required from IHB before any action could be taken. It was also agreed to hold an extraordinary meeting of the Commission in Monaco in 2014, in advance of the 5th Extraordinary International Hydrographic Conference in October. IALA and the Arabian Maritime and Navigation Aids Services (AMNAS) applied for formal Observer status. Both were unanimously accepted. UAE and the I.R. of Iran were elected as the next Chair and Vice-Chair of the Commission. UAE, as Chair, volunteered to host the 6th meeting of the RSAHC which will probably take place in February 2014. The overall level of participation indicated that the encouraging progression from the 4th meeting of the RSAHC had been maintained.



7TH CONFERENCE OF THE SOUTH WEST ATLANTIC HYDROGRAPHIC COMMISSION (SWATHC)

Buenos Aires, Argentina, 18-19 March



The 7th Conference of the South West Atlantic Hydrographic Commission (SWAtHC) was hosted and chaired by the Hydrographic Office of Argentina (*Servicio de Hidrografía Naval - SHN*) on 18-19 March 2013 in Buenos Aires. 10 delegates attended the Conference. The three IHO Member States of the Region (Argentina, Brazil and Uruguay) and the Associate Member (Paraguay) attended. The IHB Directing Committee was represented by Gilles Bessero who provided a briefing on current IHO issues and the work of the IHB.

The Chair acknowledged an apology note from Bolivia who could not attend for administrative and technical reasons. The draft report of the 6th Conference was approved and the status of the list of actions was reviewed. The States present reported on their national activities since the 6th Conference and then Brazil reported on the work of IRCC, CBSC, WEND-WG and HSSC. The Conference updated the membership of the SWAtHC Planning Committee (*Comité de Planeamiento*) and tasked this Committee with progressing ongoing or new actions related to the maintenance of the INT and ENC schemes, the exchange of experience on producing inland ENCs, the harmonization of Sailing Directions, and the implementation of S-100 based product specifications. The Commission agreed the Capacity Building request for 2014 which will be submitted to the next CBSC meeting; it includes a technical visit and a high level visit to Paraguay.



Additionally, the Commission benefited from a tour of the SHN. It was agreed that the next Conference will take place in March 2014 in Brazil, the precise date and venue to be decided before 1st September 2013. The 7th SWAtHC Conference was followed by the 9th meeting of the IOC-GOOS Regional Alliance formed by Argentina, Brazil and Uruguay, the "*Alianza Oceanográfica del Atlántico Suroeste Superior y Tropical*". The SHN offered a joint reception for both groups.

All the Conference documents are posted on the SWAtHC page of the IHO website.



IALA E-NAVIGATION COMMITTEE

Saint Germain en Laye, France, 18-22 March

President Robert WARD represented the IHO as an Observer at the 13th meeting of the International Association of Aids to Navigation and Lighthouse Authorities (IALA) e-Navigation Committee at the IALA Headquarters. The IALA e-Navigation Committee was established to address various relevant aspects of the e-Navigation concept being developed by the International Maritime Organization (IMO) and to provide appropriate input to the IMO for consideration. The meeting comprised 108 people from 29 countries and 6 sister organizations.



The principal topic of interest to the IHO that was discussed by the Committee was work on using IHO S-100 as the basis for IALA data modelling and data exchange requirements. In this regard, the 13th meeting of the e-Nav Committee endorsed the preparatory work undertaken by one of its seven Working Groups. The Data Modelling and Interfacing Working Group continued its activity on S-100 based Product Specifications for an IALA Inter VTS (Vessel Traffic Service) Exchange format (IVEF) and an Aids to Navigation metadata exchange standard. The Working Group also completed a number of draft procedural documents, based on existing IHO documentation, that will be used during an IALA workshop in May on Developing S100 Product Specifications for e-Navigation.



57TH SESSION OF THE IMO SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT London, UK, 18 - 22 March

The Sub-Committee on Ship Design and Equipment (DE) is a subordinate body of the Maritime Safety Committee (MSC) of the International Maritime Organization (IMO). The functions of the DE are to consider matters concerned with the design, construction, structure, equipment, machinery installations and electrical installations of all types of ships, vessels and craft covered by IMO instruments; life-saving equipment, appliances and arrangements; and survey and certification. The DE has also been tasked with coordinating the development of a mandatory code for ships operating in Polar waters, including inputs and submissions from other IMO committees and sub-committees. The 57th session of the IMO Sub-Committee on Ship Design and Equipment (DE 57) was held at the IMO Headquarters in London from 18 -22 March. Assistant Director Wyatt represented the IHO.

Of particular interest to the IHO, the DE considered one submission by the IHO, DE 57/1/24, which was circulated to Member States under IHB CL 07/2013 dated 21 January. The IHO document was introduced into plenary and received broad support from IMO Member States and non-Governmental Organizations. The document was passed to the Working Group on Development of a mandatory Code for Ships Operating in Polar Waters, where the proposed contents were briefly considered for inclusion in the Part B of the draft Polar Code. At the same time it was decided by the DE that the IHO document and report of the associated discussions should be referred to the Sub-Committee for Navigation Safety (NAV) of the IMO Maritime Safety Committee for further consideration and expert review.

Due to the continuing consultation on the reorganization of IMO and the proposed merger of DE and the Sub-Committees on Fire Protection (FP) and Stability & Load Lines and Fishing Vessels Safety (SLF) into two new Sub-Committees, possibly to be named the Sub-Committees on Ship Systems and Equipment (SSE) and Ship Design and Construction (DSC), it was decided not to hold an election of officers for 2014 until the future shape of the sub-committees had been decided. It was confirmed that Dipl-Ing A Jost (Germany), Chair, and Dr S Ota (Japan), Vice-Chair, would continue in their respective roles for the remainder of 2013 as elected at DE 56.



IMO DE 57 Polar Code Working Group in session



APRIL

2ND MEETING BETWEEN THE IHO AND THE EUROPEAN COMMISSION Brussels, Belgium, 5 April

In accordance with the Memorandum of Understanding on establishing co-operation on maritime affairs between the IHO and the European Commission (EC), the 2nd EC-IHO meeting took place in Brussels, Belgium, on 5 April 2013. The meeting was co-organized by the Directorate-General for Maritime Affairs and Fisheries (DG Mare) and the French Hydrographic Office (SHOM), as Chair of the Working Group on European Union Marine and Maritime Policies of the North Sea Hydrographic Commission (NSHC/EU2MPWG). It was attended by three representatives from the European Commission (DG Mare, DG Environment), eleven representatives from IHO (France, Belgium, Netherlands, Norway, Spain, Sweden, United Kingdom, IHB) and one observer from ETT (Italy), as coordinator of the EMODNET Portal for physical parameters. Director Gilles Bessero represented the IHB.

The meeting reviewed the draft report prepared by DG Mare on the outcome of the public consultation on the EU Green Paper "Marine Knowledge 2020", to which the IHO and national HOs had contributed, and was informed of the preliminary observations of DG Mare on the 2014-2020 budget for EMODNET, the European Marine Observation and Data Network. The implementation of INSPIRE, the infrastructure for spatial information in Europe, and the coordination with IHO and HO activities related with Maritime Spatial Data Infrastructures were discussed. In this context, the development of a GIS-based framework for IHO Publication C-55 was presented by Director Bessero. The meeting then debated potential IHO/HO initiatives which could benefit from EU support, focusing on the possibility of developing a European programme of hydrography, acquiring a European lidar capacity for coastal mapping, setting up a European coastal vertical reference framework and progressing research on the dynamics of marine sand waves. The way forward was outlined. Future events of common interest were reviewed, including World Hydrography Day 2013. It was agreed that the next meeting will be held in Paris, France, around 26 June 2013.



57TH MEETING OF THE NORDIC HYDROGRAPHIC COMMISSION (NHC)

Arkö, Sweden, 15-17 April

The 57th Meeting of the Nordic Hydrographic Commission (NHC) was hosted and chaired by the Hydrographic Office of Sweden on 15-17 April 2013 in the training centre of the Swedish Maritime Administration on the island of Arkö. Thirteen delegates attended the Conference and the five Nordic States (Denmark, Finland, Iceland, Norway and Sweden) were represented. The IHB Directing Committee was represented by Gilles Bessero who provided a briefing on current IHO issues and the work of the IHB and reported on the outcome of the 4th IRCC meeting.

The report of the 56th Meeting was approved and the status of the list of actions from the previous meetings was reviewed. The members reported on their national activities since the 56th Meeting. Then the Commission reviewed ongoing joint activities and projects of common interest related to validation of multibeam data, survey technologies and procedures - including outsourcing and crowd-sourcing - the future of national sailing directions, chart data exchange between the Nordic countries, the operation of Primar, the development of official electronic chart services for pleasure craft and the development of Marine Spatial Data Infrastructures.



The Commission discussed its input to the WEND-WG. It agreed to submit a proposal to IRCC aimed at further improving the IHO interface with the European Commission under the current IHO-EC MOU. It was decided that the Chair will represent the Commission on the Editorial Board of the International Hydrographic Review.

The relevance of the Nordic Cooperation Agreement on Nautical Charting and Hydrographic Surveying which governs the activities of the Commission was discussed and the Commission decided to initiate its revision. In accordance with the current Agreement, Finland took over the chairmanship at the end of the meeting. The next meeting will be hosted by Finland and is tentatively scheduled for 19-20 August 2014.

All the meeting documents are posted on the NHC page of the IHO website.



36TH MEETING OF THE FIG/IHO/ICA INTERNATIONAL BOARD ON STANDARDS OF COMPETENCE FOR HYDROGRAPHIC SURVEYORS AND NAUTICAL CARTOGRAPHERS Lisbon, Portugal, 15-25 April

The 36th Meeting of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC36) was held at the Hydrographic Institute of the Portuguese Navy from 15 to 25 April 2013. The meeting was attended by nine members of the Board and Assistant Director Alberto Costa Neves (IBSC Secretary). Director Mustafa Iptes attended during the first three days of the meeting.

The Board assessed sixteen programmes for Hydrographic Surveyors: ten were recognized or re-recognized, four were not recognized, one was granted a one-year extension and one will be reviewed intersessionally. The Board also approved the procedures for on-site reviews, which is the process being introduced to confirm the status of recognized programmes and provide mid-term feedback from the Board.

The Board reviewed the positive feedback received in response to the White Paper on the development of a new edition of the Standards, S-5 - *Standards of Competence for Hydrographic Surveyors* and S-8 - *Standards of Competence for Nautical Cartographers*, and submitted an implementation plan for endorsement by the fifth meeting of the Inter-Regional Coordination Committee (IRCC5) in June. The current editions of the Standards were also reviewed and revised versions were submitted to IRCC5 for endorsement, prior to seeking the approval of Member States.

A code of conduct was adopted by the Board and will be incorporated in the Rules of Procedure. Prof. Dr. Nicolas Seube (IHO, France) was elected as the new Chairman. Prof. Dr. Mohd Razali Mahmud (FIG, Malaysia) and Mr. Ron Furness (ICA, Australia) were elected as Vice Chair 1 and Vice Chair 2. The next IBSC meeting will be held in China in April 2014. The report of the meeting is published on the IHO website.



The participants at the IBSC36 Meeting.



OGP GEOMATICS COMMITTEE MEETING The Hague, Netherlands, 26-27 April

The International Association of Oil and Gas Producers (OGP) is a non-governmental international organization which encompasses most of the world's leading oil and gas companies, industry associations and major upstream service companies. It was formed in 1974 as the Oil Industry International Exploration and Production Forum (E&P Forum) to develop effective communications between the upstream industry and an increasingly complex network of international regulators. Its objective is to provide a forum in which members identify and share best practices to achieve improvements in health, safety, the environment, security, social responsibility, engineering and operations.

The organization conducts its work through a network of committees, sub-committees, task forces and work groups, each working in their own specialist area. The OGP Geomatics Committee, previously known as the Surveying and Positioning Committee, was formed in 2005 by the absorption into OGP of the now-defunct European Petroleum Survey Group (EPSG) which itself had been formed in 1986. The Geomatics Committee comprises specialists from OGP members working in the areas of surveying, geodesy, cartography, and geospatial information management.

The OGP Geomatics Committee has the following objectives:

- to develop and disseminate best practice;
- to provide a forum for the exchange of experiences and knowledge;
- to influence regulators and standards organizations;
- to liaise with industry associations;
- to be the voice of geomatics in the oil and gas industry.

The main outputs of the OGP Geomatics Committee are the EPSG Geodetic Parameter Dataset, the Geomatics Guidance Notes, and maintenance of positioning data exchange formats.

In 2010, the Committee set up a task force to develop a standard GIS data model for seabed survey. This model, called "Seabed Survey Data Model" (SSDM), is meant to be used both as a deliverable standard between O&G companies and survey contractors, and a data model for managing seabed survey data at an enterprise level within O&G companies.

The IHB became aware of the development of SSDM in early 2013 and invited the Chair of the IHO TSMAD Working Group to liaise with the OGP Geomatics Committee to discuss potential synergies with the development of S-100, the IHO Universal Hydrographic Data Model.

In that context, Tom Richardson, from the UKHO, attended on behalf of the IHO part of the last meeting of the OGP Geomatics Committee which took place in The Hague, Netherlands, on 26-27 April 2013. Tom Richardson gave a presentation on S-100, explaining its contents, use, current status and development plans.

This participation presented also an opportunity to observe and discuss the work of the Committee as well as presentations from related organizations such as Energistics, IMCA, and APSG.

Although targeting different activities the IHO and OGP are both tasked with supporting management of geospatial data in the maritime domain. Therefore cooperation between IHO and OGP is desirable to ensure interoperability through compatible and complementary standards. This will be progressed through the outreach activities of HSSC and its working groups. OGP could also apply to be granted observer status.



CIRM ANNUAL MEETING

Paphos, Cyprus, 22-24 April

The Comité International Radio-Maritime (CIRM) held its annual meeting in Paphos, Cyprus, from 22 to 24 April 2013. CIRM is a non-governmental international organization (NGIO) representing the maritime electronics industry in the development of relevant international regulations and standards and is accredited by the IHO as an observer. CIRM maintains an active role in the IHO Hydrographic Services and Standards Committee (HSSC), with a number of its members also participating as Expert Contributors in many HSSC Working Groups.

The meeting was attended by about 130 participants representing more than 50 companies, as well as governmental and non-governmental international organizations such as BIMCO, IALA, IMO, IMSO and RTCM. Director Gilles Bessero represented the IHO. A representative of the UKHO was also present.

Four working groups were formed to discuss the way forward at the CIRM level on current issues related with type approval, software quality assurance, e-navigation, AIS, GMDSS, radar interferences and performance monitoring for service providers. The outcome was reviewed in plenary. About twenty presentations in plenary addressed recent technological developments and reported on the activities of international organizations of interest to CIRM members.

Director Bessero recalled the structure and activities of the IHO with a focus on IHO outreach mechanisms. He presented a summary of the analysis of the IHO ENC ECDIS Data Portrayal and Performance Check reported by ships and provided a status report on the development of S-100 and associated product specifications.

Mr Michael Bergmann, Director Maritime Industry - Affairs and Services at Jeppesen, was elected President of CIRM for 2013-2015.

Director Bessero took advantage of his stay in Cyprus to visit on 25th April the Department of Land and Surveys which is the national organization responsible for hydrographic services, based in Nicosia. The current capabilities and their potential development were discussed with Mr Andreas Sokratous, Deputy Director of the Department of Land and Surveys and Chairman of the National Hydrographic Committee, and with Mr Giorgos Kokosis, officer at the Geodesy and Special Surveys and Mapping Branch and secretary of the National Hydrographic Committee.



Visit to the Department of Land and Surveys, Nicosia, Cyprus
From left to right: Georgia Papatoma, Andreas Sokratous, Gilles Bessero and Giorgos Kokosis



MAY

3RD MEETING OF THE WORLDWIDE ENC DATABASE (WEND) WORKING GROUP Monaco, 13-14 May

The 3rd meeting of the Worldwide ENC Database (WEND) Working Group was held at the IHB in Monaco, on 13 and 14 May 2013, under the Chairmanship of Captain Jamie McMichael-Phillips (UK). Twenty-four representatives from eight Regional Hydrographic Commissions (BSHC, EAHC, EAHC, MBSHC, NHC, NSHC, SWAtHC and USHC), seven Member States, and the Regional ENC Centres (IC-ENC, PRIMAR) attended the meeting. The IHB was represented by President Robert WARD, Director Mustafa IPTES, Director Gilles BESSERO and Assistant Director Alberto COSTA NEVES (Secretary).

The meeting approved revised guidelines for the implementation of the WEND Principles and endorsed a proposal to establish a definition for *cartographic boundary* to help the production of ENCs in areas with conflicting territorial claims. The meeting analyzed the potential impact of ENC issues (gaps, overlaps and poor quality source data) and considered the development of a risk assessment tool and guidelines for assessing the risks associated with overlapping ENCs.

The Working Group decided to make evaluation criteria available to assist RHCs and Member States in identifying and resolving significant differences between paper charts and ENCs. It also considered the development of a policy to address the withdrawal of ENCs after they are issued. The meeting further discussed the importance of having an authoritative ENC metadata reference library in order to allow the IHO to properly assess and report to relevant stakeholders the status of ENCs. Arrangements for the development of the concept of an IHO RENC/WENC was also considered and agreed.



The participants at the WENDWG3 meeting



5TH MEETING OF THE IHO TIDAL AND WATER LEVEL WORKING GROUP Helsinki, Finland, 14-16 May



TWLWG 5 in session at Finnish Transport Agency

The Tidal and Water Level Working Group (TWLWG), which is tasked by the IHO Hydrographic Services and Standards Committee to monitor and develop the use of tidal and water level information as well as to advise on tidal and water level observation, analysis and prediction, held its 5th meeting at the Finnish Transport Agency, Helsinki, Finland from 14 to 16 May 2013. Representatives from Brazil, Chile, Finland, France, Norway, Peru, Spain, Sweden, UK, and the IHB attended the meeting. David Wyatt, IHB Assistant Director, represented the IOC-GLOSS Group of Experts.

Topics discussed at the meeting included a standard for digital tide tables; the dynamic application of tides in ECDIS; a standard for the transmission of real-time tidal data; a revised definition of Mean Sea Level for tidal and non-tidal areas, covered by IHO Resolution 3/1919, as amended, (Datums and Bench Marks) and the establishment and maintenance of vertical reference frameworks for high resolution bathymetric surfaces.

Revised wording for IHO Resolution 3/1919, as amended, was agreed and this will be presented for endorsement at HSSC 5 in November prior to seeking IHO Member State approval. The meeting also generated the initial outline scope requirement for the dynamic application of tides in ECDIS, which will be presented to the TSMAD meeting in Silver Spring in mid-June. The members present, recognising the increasing work load of the WG and the complexity of the S-100 related issues to be addressed, suggested it could be considered extending the length of the meeting by one day whilst also seeking to invite experts from industry to assist in the discussions.



TWLWG visit to Helsinki Tide Gauge

The meeting report and all papers are available from the TWLWG section of the IHO web site. Gwenaële Jan (SHOM – France) and Chris Jones (UKHO-UK) were elected as chair and vice-chair respectively.

The meeting agreed to accept the kind offer from Australia to hold TWLWG 6 at the Australian Hydrographic Offices in Wollongong with the week 7-11 April 2014 as the suggested period.



SATELLITE APPLICATIONS CATAPULT SOLUTIONS WORKSHOP ON THE DEVELOPMENT OF INDUSTRY STANDARDS AND SPECIFICATIONS FOR BATHYMETRY FROM SATELLITE OBSERVATION

Harwell, UK, 20 May



**Prof. Nick Veck,
Programme Director,
Satellite Applications
Catapult addresses the
workshop Participants**

At the invitation of the organisers, President Ward represented the IHO at a workshop convened by the UK Satellite Applications Catapult to discuss the technical issues relating to the assessment of satellite derived bathymetric data and the current standards applicable to hydrographic data. The Satellite Applications Catapult is one of seven elite, not for profit technology centres representing a £1Bn public and private sector investment programme in the UK over the next five years. It seeks to stimulate the innovative potential of the industrial and academic communities to reach commercial reality.

This workshop was the first in a series of four; the others will address market research for the development and provision of satellite derived maritime environmental data, water movement and the means of merging satellite derived bathymetry from multiple sensors into a consolidated data set.

While satellite derived bathymetry has been used for some time in support of certain charts and other activities, it has yet to be demonstrated how well it can meet users' needs - particularly in relation to its wider use for nautical charting. For this reason, there is reticence in many sectors to commission the production of satellite derived bathymetry, even though it has the potential to help overcome the current shortfall in the availability of any hydrographic data for many areas of the world.

The principal outcome of the workshop was the concept of a Space Applications Catapult sponsored working group will address the following:

- A rigorous assessment programme for satellite derived bathymetric data;
- A means to fully understand the total propagated uncertainty values for this technology;
- Development of parameters to establish industry standards;
- Development of initial industry specifications for satellite derived bathymetric data gathering.

The Directing Committee will closely monitor the work of the Catapult programme, since its work may have significant relevance and interest to Member States.



36TH ANTARCTIC TREATY CONSULTATIVE MEETING Brussels, Belgium, 20-29 May

The 36th Antarctic Treaty Consultative Meeting (ATCM36) was held in Brussels in May. The Antarctic Treaty Consultative Meeting is the primary forum for the representatives of Parties to the Antarctic Treaty to exchange information and formulate measures, decisions and resolutions to further the principles and objectives of the Treaty. The IHO is an Invited Expert to ATCM and was represented at the meeting by President Robert Ward.

As part of the opening ceremony, Prince Albert II of Monaco addressed over 450 delegates representing the 50 States Parties to the Antarctic Treaty and the recognized Observer and Invited Expert organizations. The Prince urged delegates to continue managing Antarctica on an international basis. He noted, in particular, that, as well as international cooperation in scientific research, internationalizing the Antarctic infrastructure and services should be considered. It is worth noting that the IHO, through its Hydrographic Commission on Antarctica, already coordinates surveying and charting between all States with charting interests in the region, thereby avoiding duplication and gaining obvious efficiencies. This should be seen as a well-established example of international infrastructure and services.



***HSH Prince Albert II of Monaco (right of screen)
awaits his opportunity to address the ATCM***

President Ward introduced the report from the IHO that described the state of hydrographic surveying and nautical charting in Antarctica. The report highlighted the fact that over 95 per cent of Antarctic waters remain unsurveyed, which poses serious risks for maritime incidents and impedes the conduct of maritime activities. Noting that the level of human activity in Antarctica is increasing dramatically, the report expressed concern that resources for surveying activities were at the same time diminishing. In order to prevent disasters, the IHO recommended that the ATCM: consider the serious shortcomings in hydrography and charting in Antarctica and its impact on activities; consider encouraging Parties to increase their support for surveying and charting of Antarctica; encourage States to allocate appropriate resources to accelerate the production of paper charts and Electronic Navigational Charts of Antarctica; and adopt the proposed ATCM Recommendation on hydrography and nautical charting developed by the IHO Hydrographic Commission on Antarctica.

The ATCM delegates noted the IHO's Report but neither commented on it nor implemented any specific initiatives aimed at making improvements to the situation that was described to them.

The 37th meeting of ATCM will take place in Brasilia, Brazil in May 2014.



36TH ISO/TC 211 WORKING GROUP AND PLENARY MEETING Busan, Republic of Korea, 27 - 31 May

The 36th ISO/TC 211 Working Group and plenary meetings took place in Busan, Republic of Korea, from 27 to 31 May 2013. The IHO is a Class A liaison member of the ISO Technical Committee 211 and participates in its standards development and maintenance work. The ISO 19100 series of framework standards and specifications are important reference documents for the IHO S-100 standard.

Cyprus was welcomed as an observer member to TC211 and the Committee currently has 35 participating and 31 observer members. The meeting was attended by delegates from 19 participating member organizations and 13 liaison organizations. The IHO was represented by Anthony Pharaoh.

The following new work items were approved: 19164 - Registry service; 19104 - Terminology; 19155-2 - Place Identifier Architecture (Part 2); and several standards were approved for release as draft international standards. The meeting also included a "Standards in Action" workshop during which presentations on a variety of geospatial standards related topics were provided. A workshop on terminology will be held at the next TC211 meeting which is scheduled to take place in Redlands, USA from 11 to 15 November 2013.



1ST MEETING OF THE IHO SURFACE CURRENT WORKING GROUP NOAA, Silver Spring, Maryland, USA, 29-31 May

The Surface Current Working Group (SCWG), which is tasked by the IHO Hydrographic Services and Standards Committee (HSSC) to develop standards for the delivery and presentation of navigationally significant surface current information on an ENC in an ECDIS, held its 1st meeting (SCWG 1) at the Office of Coastal Survey (OCS), National Oceanic and Atmospheric Administration (NOAA), Silver Spring, Maryland, USA from 29 to 31 May 2013. Representatives from Canada, France, Netherlands, Spain, USA, and the IHB attended the meeting. David Wyatt, Assistant Director, represented the IHB.

The SCWG received presentations covering the development of S-100 Product Specifications and initial concept developments from NOAA and the Canadian Hydrographic Service (CHS) respectively. The SCWG then developed a User Survey questionnaire to elicit customer requirements and potential product usage, as required by IHO Resolution 2/2007. The SCWG also drafted a Work Plan for the period 2013-2017, which will be submitted to HSSC 5 for endorsement. An outline scope requirement was created for presentation to TSMAD 26 and DIPWG 5 with the objective of seeking confirmation that the progress achieved was in the anticipated direction, whilst also seeking guidance and input from industry partners to assist in the development of the Product Specification.

It was agreed a meeting would be beneficial once the results from the questionnaire had been analysed and greater clarity on user/customer requirements had been obtained. SCWG 2 is tentatively planned for the period 17-19 June 2014 in North America.

The meeting report and all papers are available from the SCWG section of the IHO web site. Kurt Hess (NOAA – USA) and Louis Maltais (CHS – Canada) were confirmed as chair and vice-chair respectively.



SCWG 1 in session at OCS, NOAA



SCWG 1 outside the Office of Coastal Survey, NOAA



11TH MEETING OF THE CAPACITY BUILDING SUB-COMMITTEE Wollongong, Australia, 30 May - 1 June

The 11th meeting of the Capacity Building Sub-Committee (CBSC11) was held in Wollongong, Australia from 30 May to 1 June. The meeting was attended by 11 members and 29 observers from 21 countries. The IHB was represented by President Robert Ward, Director Mustafa Iptes and Assistant Director Alberto Costa Neves (CBSC Secretary).

A revision of the IHO Capacity Building (CB) Strategy was one of the major topics on the agenda. The CBSC had been tasked with the revision by the XVIIIth International Hydrographic Conference. The results of the revision are to be reported to the 5th Extraordinary International Hydrographic Conference in 2014. During the meeting the CBSC identified the main topics to be addressed and the timetable for the revision process. The main topics for consideration as part of the revision process will be: the possibility of funding equipment as part of capacity building; the establishment of guidelines on the level of capacity building available to non-Member States; the need for comprehensive projects and the use of consultants to assist with or deliver capacity building programmes; the use of C-55 - *Status of Hydrographic Surveying and Nautical Charting Worldwide* as a country profile database; the limited use of funds to support administrative processes; co-operation with stakeholders; the development of standard courses in Maritime Spatial Data Infrastructure (MSDI); and the increasing requirement for hydrographic surveying courses at the IBSC Category B level.

The CBSC approved two new CB Procedures (7 - application for courses, technical workshops, seminars and financial assistance, and 8 - project finance management) that will enter into effect immediately. The CBSC also decided to establish "Guidelines" in order to guide the work of the CB Coordinators in each Regional Hydrographic Commission (RHC).



The Participants of the CBSC11 Meeting

The CBSC acknowledged the significant contribution of the International Maritime Organization (IMO) in supporting the development of hydrographic services in developing States through its Integrated Technical Co-operation Programme. The CBSC also acknowledged the support of Norway in the development of the CB Management System and the programme Performance Indicators (PIs). The preliminary figures for the Strategic PIs were discussed and reported to IRCC5.

The CBSC acknowledged the significant contributions made by the Republic of Korea and the Nippon Foundation of Japan to the IHO Capacity Building programme, and also recognized a risk assessment process developed by New Zealand as a very useful tool for establishing priorities for surveys and charting in a region, as well to guide CB activities and projects. CBSC also recognized the contribution of stakeholders from industry to the IHO Capacity Building programme and the need to develop further engagement with industry partners.

The CBSC discussed experiences and lessons learned from the execution of the 2012 and 2013 Capacity Building Work Programme (CBWP) and reviewed the activities associated with the 2013 IHO CBWP. This was used to adjust the future programme. The CBSC reviewed the proposals for CB projects submitted by the RHCs and drew up the

2014 IHO CBWP, listing the approved projects by order of priority so that additional projects can be undertaken if additional funds become available during the year.

The next CBSC meeting will be held in Brest, France from 14 to 16 May 2014. The full report of the meeting will be published on the IHO website.



JUNE

5TH MEETING OF THE INTER-REGIONAL COORDINATION COMMITTEE Wollongong, Australia, 3-4 June

The 5th meeting of the Inter-Regional Coordination Committee (IRCC5) was held in Wollongong, Australia on 3-4 June 2013. The IRCC is, in effect, the IHO steering committee that oversees IHO Programme 3 that primarily concerns inter-regional cooperation and capacity building activities. The meeting was attended by the Chairs or representatives of the 15 Regional Hydrographic Commissions (RHCs), the subordinate bodies of the IRCC and 24 observers; a total of 43 participants from 22 countries. The IHB was represented by President Robert Ward, Director Mustafa Iptes and Assistant Director Alberto Costa Neves.



IRCC5 delegates gather on the beach at Wollongong

The Committee examined the achievements and challenges being faced by the RHCs and the IRCC's subordinate bodies, the current status of hydrographic surveys and nautical charts at the global level, the progress in providing comprehensive ENC schemes, the development of a risk based assessment process for surveys and charting coverage in the South-West Pacific, the initiatives for collaboration between stakeholder organisations, the impact of the IHO's Capacity Building programme, the establishment of the new INT Chart Region N covering the Arctic region, the development of an IHO GIS database for the Antarctic and its proposed extension to support the Capacity Building programme and IHO Publications C-55 - *Status of Hydrographic Surveying and Nautical Charting Worldwide*, S-11 - *Guidance for the Preparation and Maintenance of International Chart Schemes and Catalogue of International (INT) Charts*, P-5 - *IHO Yearbook* and others.

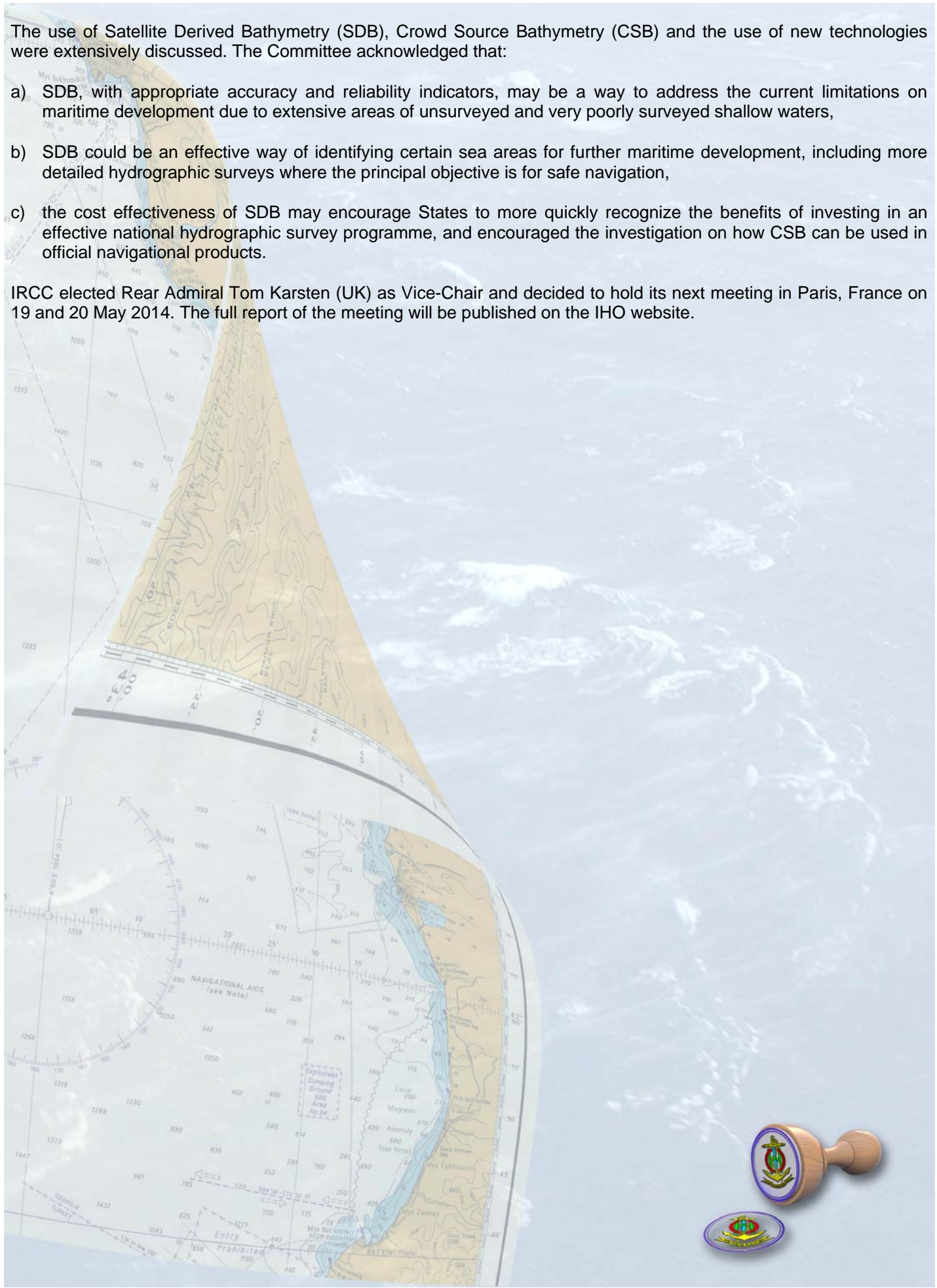
The IRCC approved revised Terms of Reference for its World-Wide Electronic Navigational Chart Database Working Group (WENDWG) and endorsed revised WEND Guidelines for submission to Member States for approval. The Committee also approved a work plan for the revision of the IHO Capacity Building Strategy that will then be considered at the 5th Extraordinary International Hydrographic Conference (EIHC5). An initial definition of *Cartographic Boundary* proposed by Malaysia was endorsed by the Committee for subsequent consideration for inclusion in the relevant IHO publications.

The importance of providing an authoritative ENC catalogue was acknowledged by the Committee. The Committee also recognized that it was important that Member States provide access to their INT paper charts and ENCs in compliance with Article 19 of the IHO General Regulations. The Committee endorsed revisions to IHO Publications B-6 - *Standardization of Undersea Feature Names*, S-5 - *Standards of Competence for Hydrographic Surveyors* and S-8 - *Standards of Competence for Nautical Cartographers* for submission to Member States for adoption. IRCC adopted a document setting out various business and administrative rules that it will apply to its operations and established new procedures for the submission of reports and papers to IRCC meetings.

The use of Satellite Derived Bathymetry (SDB), Crowd Source Bathymetry (CSB) and the use of new technologies were extensively discussed. The Committee acknowledged that:

- a) SDB, with appropriate accuracy and reliability indicators, may be a way to address the current limitations on maritime development due to extensive areas of unsurveyed and very poorly surveyed shallow waters,
- b) SDB could be an effective way of identifying certain sea areas for further maritime development, including more detailed hydrographic surveys where the principal objective is for safe navigation,
- c) the cost effectiveness of SDB may encourage States to more quickly recognize the benefits of investing in an effective national hydrographic survey programme, and encouraged the investigation on how CSB can be used in official navigational products.

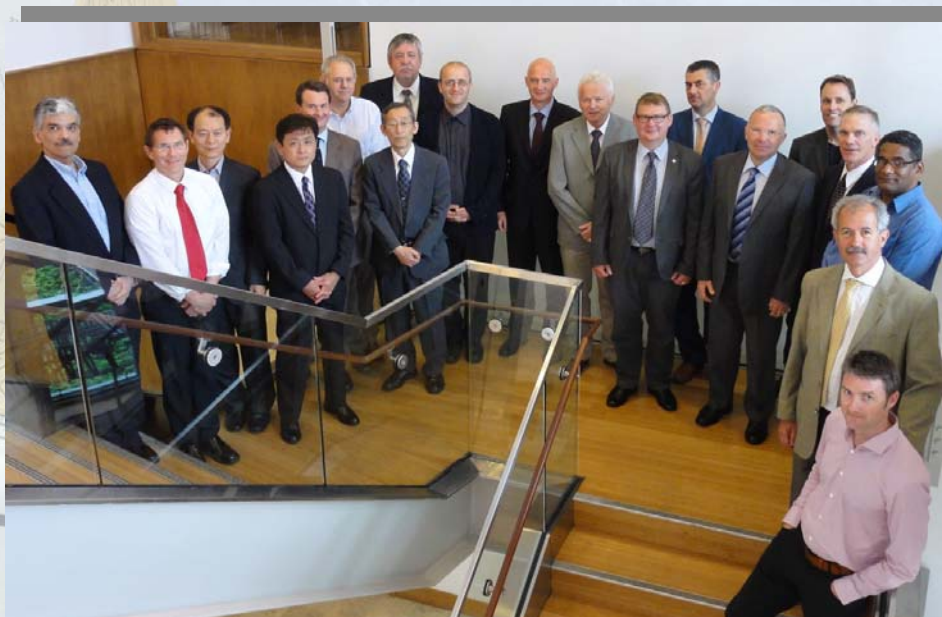
IRCC elected Rear Admiral Tom Karsten (UK) as Vice-Chair and decided to hold its next meeting in Paris, France on 19 and 20 May 2014. The full report of the meeting will be published on the IHO website.



16TH STANDARDIZATION OF NAUTICAL PUBLICATIONS WORKING GROUP MEETING Silver Spring, Maryland, USA, 3-7 June

The 16th SNPWG meeting was held at the Silver Springs Civic Centre and chaired by Mr. Jens SCHRÖDER-FÜRSTENBERG (Germany). Representatives from the following Member States and industry partners participated in the meeting: Denmark, Finland, France, Germany, Japan, Korea, Norway, Spain, UK, USA, Caris, Jeppesen and NOVACO. The IHB was represented by Anthony Pharaoh, Assistant Director, Digital Technology.

Some of the issues discussed at the meeting included the results of a questionnaire concerning nautical publications information. Mariners indicated overwhelmingly that Traffic Management information is the most beneficial information in nautical publications, followed by Navigational Marks, Hydrography and Radio Signals information respectively. The WG also continued work on radio signals and marine protected areas product specifications. Several proposed extensions to the S-100 standard (required for future nautical publications work) were discussed and included in the SNPWG report to the joint TSMAD DIPWG meeting which was due to take place the following week at the same venue.



Participants at the 16th SNPWG Meeting.

The next SNPWG meeting is scheduled to take place in April 2014 in Rostock, Germany.



**STUDY TRIP BY THE « EFTA GROUP »
OF THE COUNCIL OF THE EUROPEAN UNION
Monaco, Principality of Monaco, 4-6 June 2013**

The Prince's Government invited and hosted a delegation of twenty-eight diplomats and senior government officials of the EFTA Group (European Free Trade Association) from 4 to 6 June, as part of a study trip to Monaco, in order for them to get a better understanding of the institutional, economic and social aspects of Monaco with a view to preparing a report on the relations of the European Union with small third States.

The delegation also met with representatives from State and private Monegasque entities as well as international organizations with headquarters in Monaco. Director Gilles BESSERO, accompanied by Assistant Director David WYATT, gave a presentation on the IHO. This presentation was a good opportunity to mention that three Coastal State members of the European Union (Bulgaria, Lithuania and Malta) are not yet members of the IHO.

For more information, consult:

<http://www.gouv.mc/Action-Gouvernementale/Monaco-a-l-International/Actualites/Voyage-d-etude-du-Groupe-A.E.L.E.-du-Conseil-de-l-Union-europeenne>

**IMO REGIONAL AWARENESS SEMINAR ON SAFETY OF NAVIGATION
Bangkok, Thailand, 4 to 7 June**



A regional seminar on safety of navigation was held in Bangkok, Thailand from 4 to 7 June 2013. The seminar was organized by IMO in cooperation with the International Hydrographic Organization (IHO) and the International Association of Marine Aids to Navigation and Lighthouse Authorities World Wide Academy (IALA WWA) as part of the UN capacity building initiative "Delivering as One" and hosted by the Marine Department of Thailand. The IHO was represented by Director Mustafa Iptes who provided briefings on current hydrographic issues including ENC coverage, ECDIS and ECDIS operating anomalies and the role of the IHO and its Capacity Building Programme.

The seminar was intended to raise awareness among regional authorities in charge of maritime safety by providing an overview of methods to improve safety of navigation and the efficiency of maritime traffic in the area. The seminar focussed on the obligations placed on coastal States following the implementation of the revised SOLAS chapter V in 2002 and on recently developed tools intended to assess risk associated with highly dense shipping traffic in critical waterways, thereby improving safety of navigation and traffic monitoring.

The seminar was attended by 54 senior management and technical administrators in charge of safety of navigation in Bangladesh, Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Islamic Republic of Iran, Malaysia, Myanmar, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Thailand, Viet Nam and Hong Kong, China.



MONACOLOGY 2013

Monaco, Principality of Monaco, 10-14 June

Monacology 2013, the Monegasque Awareness Week to raise children's awareness of Environment and Sustainable Development, was held on the Quai Antoine 1er from 10 to 14 June 2013, with the support of H.S.H. Prince Albert II and Princess Charlene of Monaco and the Monaco Education Department.

IHO participated in Monacology for the first time with a stand which was one of the attractions of the event. More than 350 pupils from local schools in Monaco and neighbouring France visited the IHO stand and the activities guided by the IHB staff were greatly appreciated. Each visitor was able to draw his/her own chart of the Mediterranean Sea using tracing paper and/or try his/her hand at doing a magnetic puzzle chart. A sticker with the IHO logo and an IHO badge indicating they were a "Junior Hydrographer" were given to each child in recognition of their efforts.

The IHO stand was also honoured to receive the visit of HSH Prince Albert II on Monday, 10 June during the Inauguration of the Monacology Week and Director Iptes introduced the IHO and the activities related to Monacology. It was a good opportunity to raise awareness of hydrography, to explain the role of the IHO to the local people and particularly to the younger generations.



The Monacology Event was inaugurated by H.S.H. Prince Albert II of Monaco.



**BREAKFAST DEBATE WITH THE MONACO PRESS CLUB ON
THE OCCASION OF WORLD HYDROGRAPHY DAY
Monaco, Principality of Monaco, 13 June**

On 13 June 2013 the Monaco Press Club and the Directing Committee held a breakfast debate at the IHB premises on the occasion of the coming celebration of World Hydrography Day. This event brought together about twenty press and non-press representatives, amongst whom were Mr. Henri FISSORE, Ambassador attached to the Minister of State of the Prince's Government, Mr. Jean-Louis GRINDA, President of the Commission on the Environment and Lifestyle of the National Council of Monaco and Mr. Jean-Pierre MARGOSSIAN, President of the Monaco Press Club.

The discussions, led by Mr. Noël METTEY and Mrs. Joëlle DEVIRAS, Vice-Presidents of the Monaco Press Club, gave Director Gilles BESSERO the opportunity to explain the importance of hydrography and nautical cartography in the context of the blue economy and to make known the role and activities of the IHO. This event also gave rise to three interviews with Radio Monaco, Riviera Radio et Monaco Info⁶.

MONACO Press Club

Bienvenue au petit-déjeuner débat
sur
l'Organisation hydrographique internationale

World Hydrography Day 2013
Hydrography - underpinning the Blue Economy

Journée mondiale de l'hydrographie 2013
L'hydrographie - à l'appui de l'économie bleue

⁶ <http://www.monacochannel.mc/Chaines/Monaco-Info-Les-Reportages/Videos/Journee-mondiale-de-l-hydrographie>

JOINT MEETING OF THE TRANSFER STANDARD MAINTENANCE AND APPLICATIONS DEVELOPMENT (TSMAD) AND THE DIGITAL INFORMATION PORTRAYAL (DIPWG) WORKING GROUPS

Silver Spring, Maryland, USA, 10-14 June

Representatives from the following Member States attended the joint TSMAD 26 and DIPWG 5 meeting: Australia, Brazil, Canada, Denmark, Finland, France, Germany, Japan, Korea (Rep. of), Netherlands, Norway, Russian Federation, South Africa, Sweden, UK and the USA. A further 25 participants from academia and industry also attended the meeting. The IHB was represented by Anthony Pharaoh, Assistant Director, Digital Technology.

RAdm Gert Glang opened the meeting and commented on the importance of the work being carried out by the working groups. This includes the improvements being made to the existing standards and specifications that support ENC production and their portrayal in ECDIS, and also the development work associated with the S-100 Universal Hydrographic Data Model and the S-101 product specification.

The meeting was jointly chaired by Mr. Barrie Greenslade (UK) and Mr. Colby Harman (USA), and covered topics relating to existing ECDIS portrayal and ENC encoding issues as well as issues relating to the development of the new S-100 portrayal model, and the new S-101 product specification.

Australia (Geoscience Australia) submitted a proposal for an S-10n product specification for the exchange of maritime boundary information. Breakout groups were convened to work on new editions of the S-52 and S-58 documents, and the S-64 test data sets. The new S-100 portrayal model was discussed, and progress reports were provided on the S-101 development tasks being undertaken by the group.

The next TSMAD meeting is scheduled to take place in Brazil during the week starting 2 December 2013, and the next joint meeting is anticipated to take place in April or May 2014.



Participants at the Joint TSMAD 26 and DIPWG 5 Meeting



**92ND SESSION OF THE IMO MARITIME SAFETY COMMITTEE
& IMO SYMPOSIUM ON THE FUTURE OF SHIP SAFETY (MSC92)
London, UK, 10-21 June**

MSC92

The Maritime Safety Committee (MSC) is the highest technical body of the International Maritime Organization. The functions of the MSC are to consider matters concerned with aids to navigation, construction and equipment of vessels, manning from a safety standpoint, rules for the prevention of collisions, handling of dangerous cargoes, maritime safety procedures and requirements, hydrographic information, log-books and navigational records, marine casualty investigations, salvage and rescue and any other matters directly affecting maritime safety. The 92nd session of the IMO Maritime Safety Committee (MSC 92) was held at the IMO Headquarters in London from 12 – 21 June. The President and Assistant Director Wyatt represented the IHO.



IMO MSC92 in plenary session

Of particular interest to the IHO, the MSC approved the proposed draft amendments to the questionnaire on shore-based facilities for the Global Maritime Distress and Safety System (GMDSS), IMO Resolutions A.705(17) on the Promulgation of Maritime Safety Information and A.706(17) on the World-Wide Navigational Warning Service, all of which were endorsed by the 17th session of its Sub-Committee on Radiocommunications and Search and Rescue (COMSAR). These will be disseminated by the IMO Secretariat as MSC.1/Circ.1382/Rev.2, MSC.1/Circ.1287/Rev.1 and MSC.1/Circ.1288/Rev.1 respectively.

The MSC also addressed various matters related to hydrography and nautical charting including those resulting from the 57th session of its Sub-Committee on Ship Design and Equipment (DE 57) in relation to the Development of a mandatory Code for Ships Operating in Polar Waters (the Polar Code). The IHO made an intervention highlighting the inadequate state of hydrographic surveying and charting in the polar regions and requested the MSC recognise it is the responsibility of the IMO to encourage all coastal States of the Organization to meet their obligations for providing appropriate hydrographic and nautical charting services in accordance with Regulation 9 of SOLAS Chapter V. The IHO received strong support, particularly from Australia, Germany, which also highlighted the potential use of Satellite Derived.

Bathymetry (SDB) as a method of obtaining data for use in charts in remote areas, and from the International Chamber of Shipping (ICS), that drew attention to the limited amount of hydrographic data that is available in other remote areas, not only in the polar regions. The MSC noted all the comments and instructed that they should be forwarded for consideration at the 59th session of its Sub-Committee on Safety of Navigation (NAV 59) along with associated issues from DE 57. The MSC also approved an intersessional meeting of the Polar Code WG to take place between 30 September and 4 October, after NAV 59.



The United States introduced an information paper on the Iridium mobile satellite system and requested the MSC to allow the USA to proceed with the administrative processes required to enable recognition of Iridium as a Global Maritime Distress and Safety System (GMDSS) provider. It is anticipated that this topic will be discussed by the IHO Sub-Committee on the Worldwide Navigation Warning System (WWNWS) at its 5th meeting, which is scheduled to take place in Monaco in October 2013.

MSC 92 discussed the proposed reorganization of the IMO committee structure and endorsed the proposed new sub-committee configuration from 2014. This will be considered for approval by the next sessions of the IMO Council and Assembly. The restructured subsidiary IMO bodies reporting to the Maritime Safety Committee (MSC) and the Marine Environment Protection (MEPC) will have the following titles:

- The Sub-Committees on Ship Design and Equipment, Fire Protection and Stability and Load Lines and on Fishing Vessel Safety will merge to become the Sub-Committee on Ship Systems and Equipment (SSE) and the Sub-Committee on Ship Design and Construction (SDC).
- The Sub-Committees on Safety of Navigation and Radiocommunications and Search and Rescue will merge to become the Sub-Committee on Navigation, Communications, Search and Rescue (NCSR).
- The Sub-Committee on Bulk Liquids and Gases will be renamed the Sub-Committee on Pollution Prevention and Response (PPR).
- The Sub-Committee on Dangerous Goods, Solid Cargoes and Containers will be renamed the Sub-Committee on Carriage of Cargoes and Containers (CCC).
- The Sub-Committee on Flag State Implementation will be renamed the Sub-Committee on Implementation of IMO Instruments (III).
- The Sub-Committee on Standards of Training and Watchkeeping will be renamed the Sub-Committee on Human Element, Training and Watchkeeping (HTW).

The MSC unanimously re-elected Captain Christian BREINHOLT of Denmark as Chair and Captain Muhamad SEGAR of Singapore as Vice-Chair of the Committee for 2014.

The next session of MSC will take place at IMO Headquarters in May 2014.

SYMPOSIUM: FUTURE OF SHIP SAFETY

The IMO hosted a symposium on the Future of Ship Safety at the IMO Headquarters in London from 10 -11 June, immediately before MSC 92. Assistant Director Wyatt represented the IHO.

The symposium was divided into six sessions; the initial sessions highlighted the current state of ship safety focusing on the recent trends in ship design, the needs of society and global trade, and the economic, environmental and consumer forces impacting on maritime safety. The final sessions looked at methods of achieving better safety through data collection and analysis methodologies for risk assessment, ways of encouraging a safety culture beyond mere compliance, and whether the current international regulatory framework can respond to the future challenges identified.

The need for a new SOLAS Convention was discussed and a Resolution for consideration by the IMO Maritime Safety Committee was agreed.



11TH CONFERENCE OF THE SOUTH-EAST PACIFIC HYDROGRAPHIC COMMISSION (SEPHC)

Lima, Peru, 17-18 June

The 11th Conference of the South-East Pacific Hydrographic Commission (SEPHC) was hosted and chaired by the Hydrographic Office of Peru (Dirección de Hidrografía y Navegación - DHN) on 17-18 June 2013 in Lima. Twelve delegates attended the Conference. The participants included nine representatives from three of the four IHO Member States of the Region (Chile, Ecuador and Peru) and two observers from industry. The IHB Directing Committee was represented by Gilles Bessero who provided a briefing on current IHO issues and the work of the IHB.



The Commission acknowledged a letter of apology from Colombia who could not be present for administrative reasons and regretted that Panama had not responded to the invitation to participate. The States present reported on their national activities since the 10th Conference. Colombia presented its report by video conference. Then the coordinators of the HSSC, IRCC, CBSC and WEND-WG reported on their work and the Commission discussed their future activities in connexion with the IHO Work Programme. The Capacity Building activities for 2013-2017 were reviewed and agreed. The Commission agreed an action requesting that each member submits at least one article per year for publication in the International Hydrographic Review. The two representatives from industry presented their companies and outlined the support that they could provide to the Commission and to its Member States. The Commission confirmed its designation as adopted in the 3rd edition of its Statutes: Comisión Regional Hidrográfica del Pacífico Sudeste (CHRPSE).

The Commission decided that the next Conference will take place from 1 to 3 June 2015 in Guayaquil, Ecuador. All the Conference documents are posted on the SEPHC page of the IHO website.



CELEBRATION OF WORLD HYDROGRAPHY DAY AT THE INTERNATIONAL HYDROGRAPHIC ORGANIZATION HEADQUARTERS IHB, Monaco, 20 June



The theme for this year's celebration was "Hydrography - supporting the blue economy" - highlighting the significant economic value of hydrography to all human activities that take place in, on or under the sea.



The Commanding Officer of Surveying Ship Galatea presents a gift to the IHO President

The celebration in Monaco received a significant boost from the Italian Navy whose surveying vessel *Galatea* (Commanding Officer Lieutenant Giorgio Mazzi) was berthed in Monaco's main harbour, Port Hercule and was open to visitors.

Guests from the government, local dignitaries, maritime industry, and current and retired IHO staff gathered on the IHO's rooftop terrace for an evening reception. The Prince of Monaco was represented by HE Jacques Boisson, Secretary of State.

World Hydrography Day celebrations in the Italian Hydrographic Institute in Genoa were held on 13 June which allowed the Hydrographer of Italy, Rear Admiral Andrea Liaci to attend the ceremony in Monaco. In addition, the IHO was hosting a meeting of the Black and Azov Seas Working Group which enabled the Hydrographers of Georgia, Russian Federation, Turkey and Ukraine to be present.

over of data from a recent survey conducted in the Antarctic Peninsula by Mr. Stephen Wilkins from his exploration yacht *Xplore*. This survey will be passed on to the hydrographic offices that are producing charts of the Antarctic Peninsula.



President Ward addresses guests at WHD celebration



ANTARCTIC SURVEY DATA PROVIDED TO IHO Monaco, 20 June

As part of the World Hydrography Day celebrations held at the IHB on 20 June, Mr Stephen Wilkins presented the President of the IHO, Robert Ward with the final Report of Survey and multibeam survey data obtained during recent surveys conducted from his exploration yacht *Xplore* in the Antarctic Peninsula. Extensive details about the survey have been reported in the May/June edition of the magazine *Hydro International*.

A short video illustrating the survey is also available at:

<http://www.tv.reson.com/video/8153079/>

or:

<http://member.hydro-international.com/articles/item/e95dd658f0c14c169445f1eb04854f7c>

Stephen Wilkins is the skipper of the *Xplore*. He is also an active representative of the International Association of Antarctic Tour Operators (IAATO). IAATO, in turn, is an active participant in the work of the IHO Hydrographic Commission on Antarctica (HCA), that seeks to coordinate all surveying and charting activity in Antarctica as a way of improving the levels that presently exist.

Captain Wilkins, knowing how much hydrographic data is still required on the Antarctic coast, seized the initiative by arranging for his yacht, which regularly conducts bespoke expeditions to Antarctica to be used for surveying.

The surveys were completed in January this year, with the assistance of the French Hydrographic Service, SHOM, whose surveyor joined the yacht, and the involvement and support of Sky Ring Marine of Chile that provided surveying equipment, particularly a multibeam echosounder. As a result, *Xplore* was able to complete a number of surveys that fully comply with the relevant IHO standards.



**Stephen Wilkins
hands over his survey to President Ward
on World hydrography Day**

The secretariat of the IHO will forward the data to Chile, Argentina and UK – who produce charts in the area where the surveys took place.



11TH MEETING OF THE BLACK AND AZOV SEAS WORKING GROUP (BASWG11) Monaco, 19-20 June 2013

The 11th meeting of the Black and Azov Seas Working Group (BASWG11), which is a Working Group of the Mediterranean and Black Seas Hydrographic Commission (MBSHC), was held in Monaco on 19-20 June under the chairmanship of Captain (PhD) Erhan GEZGIN, Hydrographer of Turkey. Ten delegates attended the meeting. Four Black Sea States were represented: Georgia, Russian Federation, Turkey and Ukraine. The IHB was represented by Director Mustafa IPTES and Assistant Director Alberto Costa NEVES. Director IPTES provided a briefing on current IHO issues and the work of the IHB, and reported on the outcome of the 5th IRCC meeting held in Australia in June.

The Member States present reported on their national activities since the last meeting. The WG examined the INT chart and ENC schemes of the Black Sea and Azov Sea. New INT chart proposals were approved by the WG and a draft ENC scheme was proposed by Turkey for consideration by the Member States. The WG also reviewed the Capacity Building requirements of the Black Sea States and agreed a Capacity Building plan for 2013-2017. The activities and the new developments of the BASWG will be reported to the forthcoming meeting of the MBSHC in Istanbul, in September. The participants of BASWG11 also attended the IHO World Hydrography Day reception at the IHO headquarters on 20 June.

Captain GEZGIN was re-elected as Chair of the BASWG. The next BASWG meeting will take place in Batumi on 3-4 June 2014, hosted by Georgia.



*The participants of the 11th meeting
of the Black and Azov Seas Working Group*



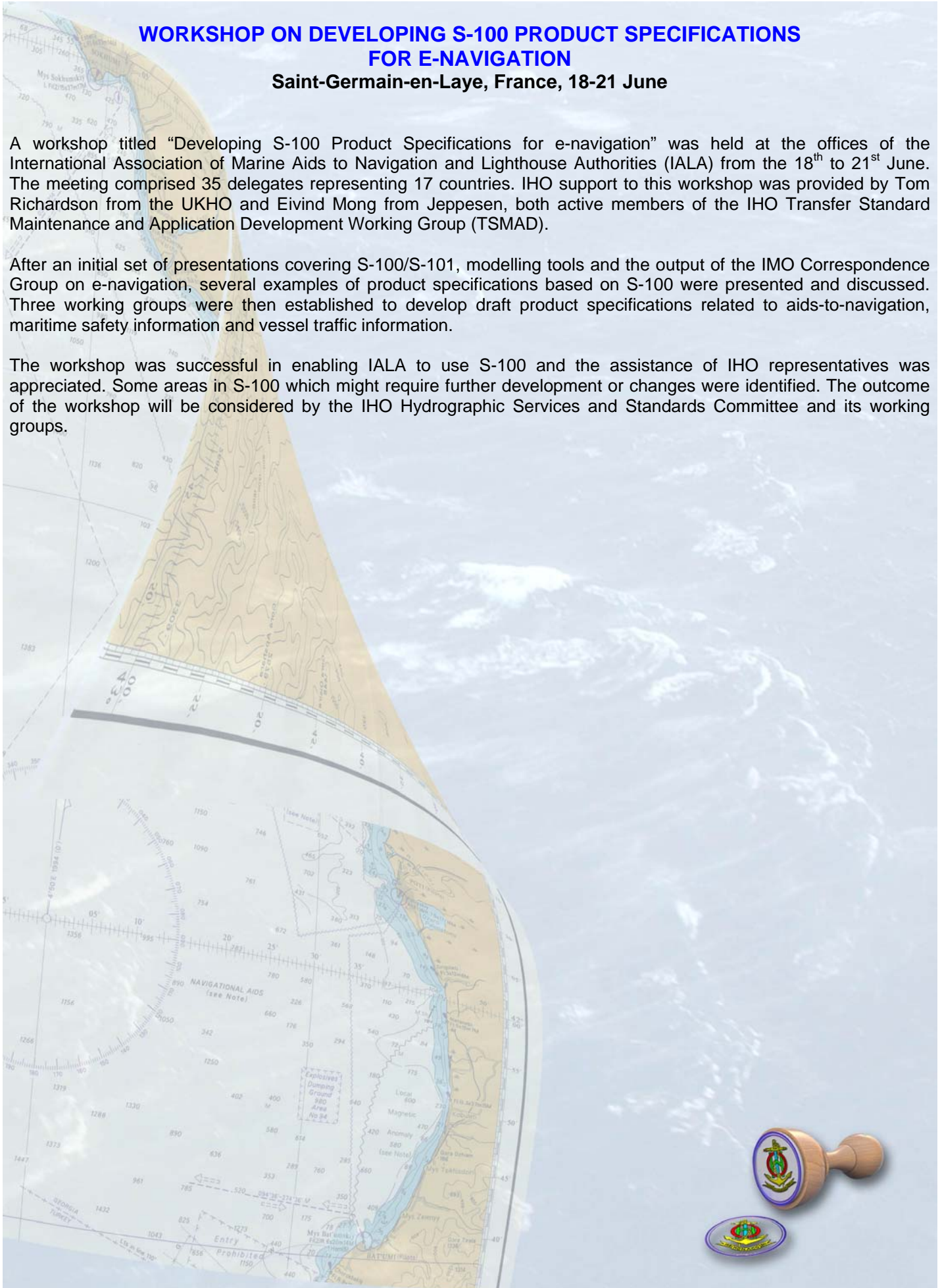
WORKSHOP ON DEVELOPING S-100 PRODUCT SPECIFICATIONS FOR E-NAVIGATION

Saint-Germain-en-Laye, France, 18-21 June

A workshop titled “Developing S-100 Product Specifications for e-navigation” was held at the offices of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) from the 18th to 21st June. The meeting comprised 35 delegates representing 17 countries. IHO support to this workshop was provided by Tom Richardson from the UKHO and Eivind Mong from Jeppesen, both active members of the IHO Transfer Standard Maintenance and Application Development Working Group (TSMAD).

After an initial set of presentations covering S-100/S-101, modelling tools and the output of the IMO Correspondence Group on e-navigation, several examples of product specifications based on S-100 were presented and discussed. Three working groups were then established to develop draft product specifications related to aids-to-navigation, maritime safety information and vessel traffic information.

The workshop was successful in enabling IALA to use S-100 and the assistance of IHO representatives was appreciated. Some areas in S-100 which might require further development or changes were identified. The outcome of the workshop will be considered by the IHO Hydrographic Services and Standards Committee and its working groups.



3RD MEETING BETWEEN THE IHO AND THE EUROPEAN COMMISSION

Saint-Mandé, France, 26 June

Under the Memorandum of Understanding on establishing co-operation on maritime affairs between the IHO and the European Commission (EC), the 3rd EC-IHO meeting was hosted by the French Hydrographic Office (SHOM) in Saint-Mandé, France, on 26 June 2013. The meeting was chaired by France, as chair of the Working Group on European Union Marine and Maritime Policies of the North Sea Hydrographic Commission (NSHC/EU2MPWG). It was attended by one representative from the European Commission (DG Mare), eleven representatives from the IHO (France, Belgium, Greece, Norway, Spain, Sweden, United Kingdom, IHB) and one observer from the French Prime Minister's Office for European Affairs. Director Gilles Bessero represented the IHB. Apologies had been received from Denmark and Germany.



As suggested by the IHB, the IHO representatives met separately before the EC-IHO plenary meeting. They reviewed the outcome of EU-related discussions that took place at the 5th meeting of the IHO Inter-Regional Coordination Committee (IRCC) so as to agree ways forward to seek EU support for various activities being undertaken or considered by Hydrographic Offices. A timeline for implementing the relevant IRCC actions was agreed and communication with the appropriate Regional Hydrographic Commissions was discussed. The guiding principles for developing a "European Programme for Hydrographic Knowledge 2020" were agreed. It was also agreed to prepare a submission to the IHO Hydrographic Services and Standards Committee (HSSC) on tasking its Marine Spatial Data

Infrastructure Working Group (MSDIWG) to assess the implementation of the INSPIRE⁷ framework in relation to hydrography and to develop recommendations on how best to meet the requirements of the EU initiative "Marine Knowledge 2020".

The plenary meeting reviewed three IHO initiatives that could benefit from EU support and discussed how they should be progressed. These initiatives relate to the proposed "European Programme for Hydrographic Knowledge 2020", seamless land-sea mapping and the development and maintenance of accurate vertical reference frameworks (in liaison with the IHO Tidal and Water Level Working Group and the NSHC Tidal Working Group). The connection with the progress of the EU initiative "Marine Knowledge 2020" and a recent EC proposal for an EU Directive on integrated coastal management and marine spatial planning was discussed. The discussion highlighted the relevance of the current development of the new GIS-based version of IHO Publication C-55 - *Status of Hydrographic Surveying and Nautical Charting Worldwide* and of promoting the use of IHO standard S-100 - *Universal Hydrographic Data Model* in ensuring the interoperability of the various components of the European Marine Observation and Data Network (EMODnet).



It was agreed that the next meeting will be hosted by the Hydrographic Office of Belgium in Brussels, around 24 October 2013.



⁷ INSPIRE: Infrastructure for Spatial Information in the European Community.

9TH JOINT TECHNICAL EXPERTS WORKING GROUP MEETING Taunton, UK, 26-27 June

The 9th Primar / IC-ENC Joint Technical Experts meeting took place at the Holiday Inn hotel in Taunton, UK on 26 and 27 June 2013. This was preceded by separate Technical Experts Working Group meetings of both organizations on 25 June. Representatives from the following Member States and industry partners participated in the meetings: Belgium, Denmark, Estonia, Finland, France, Italy, Latvia, Netherlands, Norway, Poland, Russia, Spain, Sweden, UK, IC-ENC, Primar, 7Cs, Caris and Jeppesen. Members from Brazil, Portugal and IC-ENC (Australia) also participated via video link. The IHB was represented by Anthony Pharaoh.

Status reports were provided on the activities of the RENC organizations since the last JTEWGW meeting, and several issues relating to ENC encoding practices, data consistence and data validation were discussed. Some of these issues will be submitted to the next TSMAD meeting for consideration. A proposal to develop a document similar to S-11, providing guidance on the preparation and maintenance of ENC schemes was also discussed. Presentations were provided by representatives from CARIS, Jeppesen and 7Cs on their current production and validation applications, and their preparations to support an S-101 ENC's production environment.



The 9th Joint Technical Experts Meeting Participants.



JULY MEETINGS

63RD MEETING OF THE IMO'S TECHNICAL COOPERATION COMMITTEE (TC63) London, 10 - 12 July

The 63rd session of IMO's Technical Cooperation Committee (TC63) was held at IMO's headquarters from 10 to 12 July 2013. The IHO was represented by Director Mustafa Iptes and Assistant Director Alberto Costa Neves.

The IHO had submitted document TC63/INF.13 informing the Committee of the IHO's Capacity Building programme, including the training courses delivered in 2012-2013 in Central America and the Caribbean, West Africa and the South-West Pacific. The IHO had the opportunity to introduce the document during the discussion on IMO's Partnership for Progress. The IHO emphasised the cooperation between IMO and IHO in the delivery of the elements of the Integrated Technical Cooperation Programme (ITCP) within the IHO's area of competence. It highlighted the joint "IMO/IHO/IALA Regional Awareness Seminar on safety of navigation" for the East Asia countries, which was successfully held in Bangkok, Thailand, from 3 to 7 June 2013, and acknowledged the in-kind contribution from IMO and also from Korea, Japan and the Nippon Foundation. The IMO Member States were also invited to work closely with their national hydrographic services to improve maritime safety worldwide.

TC63 provided the opportunity for the IHO delegates to meet and progress capacity-building matters with representatives of numerous maritime administrations and members of IMO's Technical Cooperation Division.

TC63 approved the ITCP for the period 2014-2015. The programme includes 5 training courses for MACHC, SWPHC, EAHC and SAIHC. Another important step was the approval of the Country Maritime Profile that will assess the need of IMO Member States with respect to training.

Ms Nancy Karigithu (Kenya) was re-elected as the Chair of TC and Mr Zulkarnain Ayub (Malaysia) was elected as the Vice-Chair for 2014.



110TH SESSION OF IMO COUNCIL London, UK, 15-19 July

The President, Robert Ward represented the IHO at the 110th session of the IMO Council.

The Council reviewed the budget and the progress of the various organs of the organization. It considered reports on the continuing review of the IMO strategy, planning and reform processes and on the decision to reorganize and amalgamate some of the IMO Sub Committees and also to reduce staffing levels in the secretariat.



Mr. Jeffrey Lantz (United States),
Chairman of IMO Council

Of particular relevance to the IHO, the Council endorsed a proposed Agreement of Cooperation between the IMO and IHO. This Agreement, which will be considered for approval at the next Assembly of the IMO in November, will reaffirm the long-standing relationship and cooperation between the two organizations.

Based on a paper submitted by the IHO and a short introductory statement made by the President on the status of membership of the IHO, the Council reaffirmed its recommendation that IMO Member States that are not Member States of the IHO should give favorable consideration to joining the Organization.



VISIT TO IHO DCDB AND ESRI USER CONFERENCE Boulder and San Diego, USA, July

The President, Robert Ward visited the IHO Data Centre for Digital Bathymetry (DCDB) in July where discussions took place between the manager of the DCDB and the Deputy Director of the US Geodetic Data Centre, where the DCDB is hosted. The DCDB is the global digital repository of ocean soundings that supports the IHO-IOC GEBCO project that creates gridded datasets and maps of the world's seas and oceans for public use. During the visit, the President provided feedback on the interface for the digital gazetteer of undersea feature names that will be released on the internet shortly. He also discussed the feasibility of extending the DCDB to include the world's nearshore areas and enabling ships to upload their passage soundings (so-called crowd-sourced bathymetry).



The President discusses the global state of hydrography with Mark Cygan, President of the International Map Industry Association and Paul Holthus, President of the World Ocean Council

The President also visited the ESRI Users Conference in San Diego. This annual conference is arranged by the geospatial information systems (GIS) company ESRI to provide an opportunity for GIS users to learn about new and emerging trends and developments in GIS. The conference attracted over 13,000 attendees and covered oceans, ocean mapping and nautical cartography among its many themes. Representatives from a number of Member State hydrographic offices were present. In addition to a group discussion on the development of GIS analysis tools to support the IHO Capacity Building Programme by identifying priority areas for surveying and chart improvement, the President facilitated a lively special interest group session on “*Taking Hydrography Beyond the Horizons of Navigation*”. This was attended by a broad spectrum of stakeholders.



7TH MEETING OF THE DATA QUALITY WORKING GROUP (DQWG) Fredericton, Canada, 16-18 July

The 7th meeting of the IHO Data Quality Working Group (DQWG) was hosted by the University of New Brunswick, Fredericton, Canada from 16 to 18 July 2013. The meeting was chaired by Mr. Chris Howlett of the UKHO. The DQWG is a subsidiary of the Hydrographic Services and Standards Committee (HSSC) and its objective is to develop appropriate methods of classifying and depicting the quality of digital hydrographic data.

Nineteen persons attended the meeting representing the Hydrographic Offices of Australia, Canada, Finland, France, Netherlands, Sweden, United Kingdom and the United States, as well as Industry and Academia. Assistant Director Michel Huet attended for the IHB.



In partnership with the DQWG, the University of Southern Mississippi (USM) had conducted a study into the visualisation of Data Quality within ENC's, initially focusing on developing a quality indicator visualisation test-bed that can be used to get feedback from mariners. This work was presented at USHydro 2013 and feedback from experienced mariners was reported to DQWG-7, including the need for easy access (on/off) to the data quality for a mariner to obtain the information in a timely manner during an emergency. USM suggested the use of the red-yellow-green indicator along with the inverted triangles, thus assuring support for the colour scheme suggested by DQWG while maintaining the integrity of the CATZOC Value.

The DQWG set up a sub-group, led by Australia, to develop a hierarchy of data quality indicators and build an algorithm that will drive the data quality display. It was agreed that the visualization of data quality should be based on four categories (good quality, moderate quality, poor quality, unknown). Final results of the sub-group work will be presented to a joint TSMAD/DIPWG meeting in March 2014.

The next DQWG meeting has been planned on 25-27 March 2014 in Sydney or Wollongong, NSW, Australia.



OFFICIAL VISITS TO ALBANIA, MONTENEGRO AND BULGARIA

22 - 26 July

IHB Director Mustafa Iptes undertook official visits to Albania, Montenegro and Bulgaria from 22 to 26 July. The purpose of the visits was to encourage Albania to apply for membership and to urge Montenegro and Bulgaria to complete the procedure to become Member States of the IHO. During his visits he presented the vision, mission and activities of the IHO and underlined the importance of hydrography and the benefits of becoming a full Member State. He also provided information on regional and global cooperation, the IHO Capacity Building programme and hydrographic training activities.

First, Director Iptes visited Albania on 22 July. He made an official visit to the Albanian Navy HQ in Durres where he met with Brigadier General Qemal Shkurti, Commander of the Albanian Navy accompanied by Captain Gezim Koci, Chief of the Hydrographic Service. This was followed by a meeting with Mr. Arben Imami, Minister of Defence, in Tirana. Director Iptes was informed that Albania was very keen to join the IHO in the near future and to develop its hydrographic capabilities.

Director Iptes' second visit was to Montenegro, on 23-24 July. In Podgoricia, he visited Mr Luka Mitrovic, Director of the Institute of Hydrometeorology and Seismology of Montenegro, followed by a meeting with Mr Branimir Gvozdenović, Minister of Sustainable Development and Tourism. Director Iptes was informed that the Government of Montenegro intended to deposit its Instrument of Accession for full membership of the IHO and this would be done following formal parliamentary approval in September. Director Iptes also had meetings with Mr Ivan Mašulović, Deputy Minister of Defence, and Mr Damir Grbovic, Director General for Multilateral Affairs and Regional Cooperation.

In the last part of his programme, Director Iptes visited Bulgaria. He met Mr Ivan Ivanov, Deputy Minister of Defence, in Sofia, and Commodore Dimitar Denev, Deputy Head of the Navy. The meetings were fruitful and it would appear that Bulgaria is likely to deposit its Instrument of Accession for full membership of the IHO, some 21 years after obtaining the required approval by two-thirds of existing Member States.



Director Iptes exchanges gifts with Brigadier General Qemal Shkurti, Commander of the Albanian Navy.



Director Iptes and Mr Luka Mitrovic, Director of Institute of Hydrometeorology and Seismology of Montenegro



Director Iptes and Mr Ivan Ivanov, Deputy Minister of Defence of Bulgaria, accompanied by a member of his staff



3RD SESSION OF THE UN COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT Cambridge, UK, July 26th 2013



The third session of the *UN Committee of Experts on Global Geospatial Information Management* (UN-GGIM) took place in Cambridge, UK from 24 to 26 July. The purpose of the UN-GGIM is to advance international cooperation in geospatial information management by making accurate and authoritative geospatial information readily available, particularly in support of advancing sustainable development.

The UN-GGIM reports to the UN Assembly via the UN Economic and Social Council (ECOSOC). ECOSOC has instructed UN-GGIM to work according to a five-year programme and to provide its first report in 2016.

Over 70 UN Member States were represented at the third session of UN-GGIM together with representatives from nearly 20 international organizations, including the IHO. President Robert Ward represented the IHO.

A number of the agenda items generated discussions that were of relevance to IHO Member States, particularly those that are planning or are already contributing hydrographic data and services to their national spatial data infrastructure, including:

- Developing a global map for sustainable development
- Future trends in national institutional arrangements for geospatial information management
- Integrating land and marine geospatial information
- Establishment and implementation of standards for the global geospatial information community
- Status of mapping in the world



Co-Chair of GGIM-3 and Director General and CEO of the UK Ordnance Survey, Dr. Vanessa Lawrence, CB

The 3rd session of UN-GGIM was attended by the greatest number of UN Member States so far. This helped to raise awareness of the importance of geospatial information, both at a national and a global level. Of particular importance for IHO Member States is the growing acknowledgement and awareness by UN-GGIM of the relevance and the potential contribution of hydrographic information in the context of global geospatial data infrastructures. This places even greater relevance on the continuing work of the IHO Marine Spatial Data Infrastructure Working Group (MSDIWG) and its task in assisting Member States in their role as custodians of national hydrographic data sets and their obvious part in national and global spatial data infrastructures. It also emphasises the importance of the IHO-IOC GEBCO project as a fundamental part of the global geospatial information infrastructure.

The fourth session of UN-GGIM is planned to take place in New York in August 2014.



AUGUST

HYDROGRAPHIC TRAINING AT THE UNIVERSITY OF SOUTHERN MISSISSIPPI SPONSORED BY THE REPUBLIC OF KOREA

August

The Government of the Republic of Korea (RoK) has made another generous financial contribution as part of the IHO Capacity Building programme. This financial support from the RoK has enabled three students from developing States to enroll in the Category A Hydrographic Surveying Programme at the University of Southern Mississippi (USM) in the USA starting from August 2013. As well as paying for all tuition fees, the RoK financial contribution also provides a grant that covers travel to the USA and financial support for accommodation and living expenses. The course is expected to run in future years and may support up to five students each year.

The course is intended to assist States to increase their hydrographic surveying skills and expertise and, as a result, help improve and maintain the nautical charts and hydrographic services of their area.

This year, the IHO received 23 applications from 20 countries. Unfortunately, the short notice meant that only three selected students were able to complete the various administrative requirements in time to join the course in the USA. There will be a longer lead-time for applications and selections for the 2014 course.

The selected students for 2013 are Mr. Hembal Teckmun from Mauritius, Mr. Mohammad Minhaz Uddin from Bangladesh and Mr. Antonio Williams from Jamaica. The course started in August and lasts for 12 months. Director Mustafa Iptes paid a visit to the USM on 1 August in order to coordinate the details of the programme.



*The three students with their Course Manager
Mr Maxim van Norden (far right)*



VISIT BY STUDENTS FROM THE INTERNATIONAL TRIBUNAL ON THE LAW OF THE SEA

A course leader and eight students attending a 9-month training programme, funded by the Nippon Foundation, at the International Tribunal on the Law of the Sea (ITLOS) in Hamburg, Germany, visited the IHB on Wednesday 27 August 2013 where they received a briefing on “Hydrography and the United Nations Convention on the Law of the Sea” followed by a question and answer session. The visit was part of the international liaison section of their course. In addition to the IHB they will visit other intergovernmental organizations in Europe, including IMO and OSPAR.

The course leader, Ms Yara Saab, came from Lebanon and the students were from: Brazil, Comoros, Haiti, Indonesia, Lebanon, Philippines, Tanzania and Tunisia.



ITLOS Nippon training programme group at the IHB



MEETING OF THE ICA COMMISSION ON GEOINFORMATION INFRASTRUCTURES AND STANDARDS Dresden, Germany, 22-25 August

The 2013 meeting of the ICA Commission on Geoinformation Infrastructures and Standards took place at the *Technische Universität* in Dresden, Germany, from 22-25 August. The meeting was chaired by Mr. Antony Cooper (South Africa). Attendees were from academia or geospatial organizations in the Czech Republic, Denmark, Namibia, South Africa and the USA. Assistant Director Michel Huet attended for the IHB. This ICA Commission conducts research on the development and implementation of Spatial Data Infrastructures (SDIs) at the global, regional, national and local levels, and the theory and notions behind them, while considering the implications for the ICA.

The meeting addressed the following topics:

- Modelling the stakeholders in a Spatial Data Infrastructure (SDI), building on the commission's paper "*Extending the formal model of a spatial data infrastructure to include volunteered geographical information*". Experience with implementing the model for the SDI of Namibia was reported at the meeting.
- Value-added Resellers (VARs) and Spatial Data Infrastructures (SDIs), expanding on the commission's paper "*Exploring the impact of a spatial data infrastructure on value-added resellers and vice versa*", which was presented at the 26th International Cartographic Conference, also in Dresden, the following week.

It is intended to submit the above papers, when completed, for publication in a scientific journal.



26TH INTERNATIONAL CARTOGRAPHIC CONFERENCE Dresden, Germany, 26-30 August



The International Cartographic Association (ICA) held its 26th Conference (ICC 2013) at the International Congress Center in Dresden, Germany, from 26 to 30 August 2013. About 1400 people attended the Conference, many of them key role players in the cartographic world, although essentially from the land mapping side. ICC 2013 included:

- The Conference itself, where numerous scientific papers on cartography-related matters were presented throughout the week in sessions running in parallel.
- A Map Exhibition, where various maps and other cartographic products from ICA member countries were presented. An IHO cartographic exhibition was held in addition to the main map exhibition.
- A commercial exhibition.

The Conference

IHO President Robert Ward addressed the conference during the opening ceremony, thanking the ICA President, Professor Georg Gartner, for his friendship and support in ensuring that the relationship and liaison between the ICA and the IHO remain strong, and noting that there is expertise within ICA that could assist the IHO as it continues the move from paper to digital cartography.

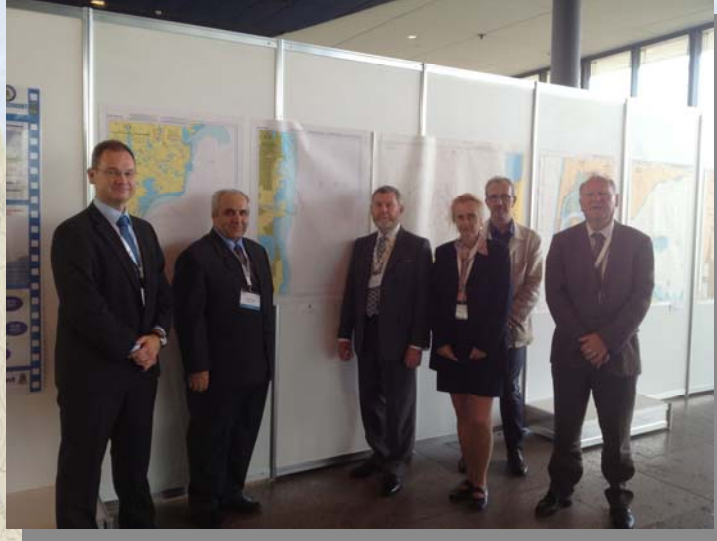
Eight sessions ran in parallel throughout four full days. These covered many cartographic-related subjects including Spatial Data Infrastructures (SDI), map visualisation, cartographic design, web mapping or volunteered geographical information (VGI). Assistant Director Michel Huet chaired a session on Marine and Arctic Data Infrastructure.

Eight sessions ran in parallel throughout four full days. These covered many cartographic-related subjects including Spatial Data Infrastructures (SDI), map visualisation, cartographic design, web mapping or volunteered geographical information (VGI). Assistant Director Michel Huet chaired a session on Marine and Arctic Data Infrastructure.



The IHO Cartographic Exhibition

Besides the ICC 2013 map exhibition, an IHO cartographic exhibition was mounted, organized by the IHB with the kind assistance of the German Hydrographic Office (BSH). The following Hydrographic Offices and the IHB participated in the IHO display: Chile, Finland, France, Germany, Mexico, Romania, Spain, Ukraine and United Kingdom. Some other HOs had chosen to exhibit nautical charts as part of their national display at the ICA Map Exhibition, including Japan, Norway, Slovenia and Sweden.



More information can be found on the ICC 2013 website (www.icc2013.org). The 27th International Cartographic Conference will take place in Rio de Janeiro, Brazil, in August 2015.



ANNUAL MEETING OF THE JBGIS Potsdam, Germany, 31 August



The Joint Board of Geospatial Information Societies (JBGIS) is a coalition of the Presidents / Secretaries-General / Chief Executives, that represent recognised international organizations involved in the coordination, development, management, standardization or regulation of geospatial information and related matters.

The purpose of the JBGIS is to provide, where possible, a collective and unified voice at the international level regarding geospatial affairs, especially to the United Nations and with other global geospatial information stakeholders. Its second goal is to assist in the coordination of relevant activities between the organizations represented by the members of the JBGIS.

President Robert Ward represented the IHO at the annual meeting of the JBGIS, held in the Albert Einstein Science Campus in Potsdam in August. The following international organizations were also represented: the International Federation of Surveyors (FIG), the Global Spatial Data Infrastructure Association (GSDI), International Association of Geodesy (IAG), the International Cartographic Association (ICA), the IEEE Geoscience and Remote Sensing Society (GRSS), the International Geodetic Union (IGU), the International Map Industry Association (IMIA) and the International Society for Photogrammetry and Remote Sensing (ISPRS).

Prompted by a proposal from Robert Ward, the Joint Board agreed to adjust its statement of operation to make its role and membership clearer. It also re-elected Professor William Cartwright, immediate past President of ICA, as its Chair for the forthcoming year.



Prof. Bill Cartwright

The Board reviewed the progress that had been made; in particular, the success in raising the profile of the participating organizations in the UN Committee of Experts in Global Geospatial Information Management (UN-GGIM) and also the completion and publication of a booklet: Best Practices on Geo-information for Risk and Disaster Management.

It was agreed that the next annual meeting of the JBGIS would take place in New York immediately before the fifth session of UN-GGIM in August 2014.

Details of the JBGIS can be found at: <http://www.fig.net/jbgis/>



SEPTEMBER

59TH SESSION OF THE IMO SUB-COMMITTEE ON SAFETY OF NAVIGATION London, UK, 2-6 September

The 59th and last session of the IMO Sub-Committee on Safety of Navigation (NAV 59) was held at IMO Headquarters in London from 2-6 September 2013. The IHO was represented by Director Gilles Bessero and Assistant Directors Anthony Pharaoh and David Wyatt. Several heads and representatives of hydrographic offices also attended the meeting as part of their national delegation.



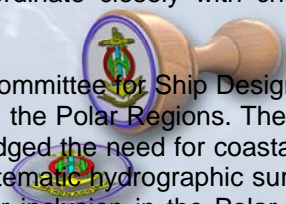
IMO NAV 59 Plenary in session

NAV 59 approved four new or amended Traffic Separation Schemes (TSS) and Routeing Measures, covering the Pacific and Caribbean approaches to the Panama Canal, the Torres Strait and Barrier Reef and Ushant, all of which will now be passed to the Maritime Safety Committee (MSC) for adoption at its 93rd session in May 2014.

NAV 59 continued its work on the development of an implementation plan for e-navigation focussing attention on the report of the intersessional Correspondence Group and numerous documents submitted by Member States. NAV 59 noted the progress with regard to the development of the detailed onboard e-navigation architecture, including the connection with the development and use of S-100, and invited IHO, IALA and other relevant organizations to continue contributing to its further development. NAV 59 re-established its Correspondence Group on e-navigation and instructed it to finalize a draft Strategy Implementation Plan. The Correspondence Group was instructed to provide a consolidated final report to the new Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) in July 2014 (NCSR 1).

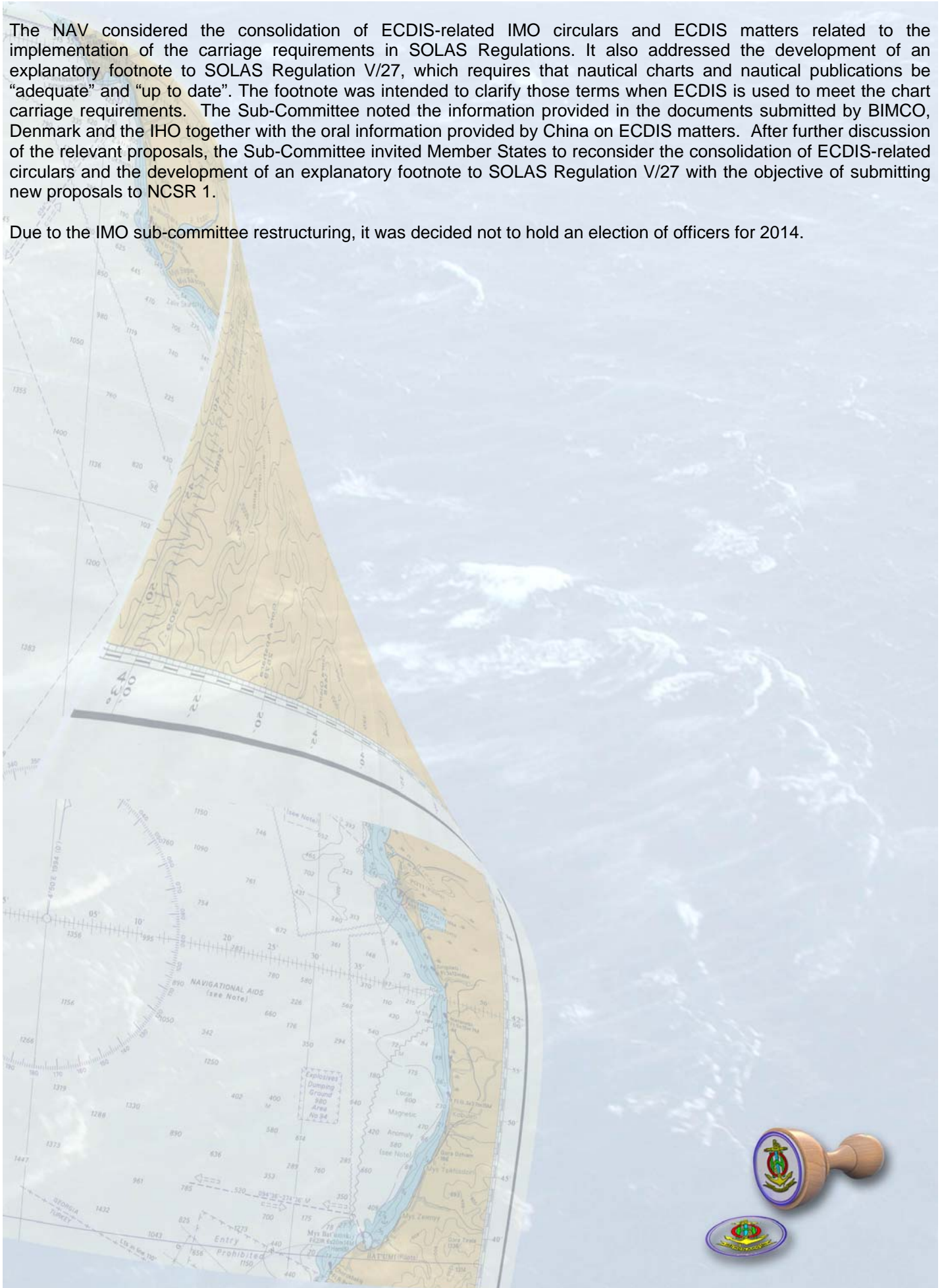
On the topic of AIS Aids to Navigation (AtoN), NAV 59 established a Drafting Group (DG) to finalize the draft policy submitted by the intersessional Correspondence Group on the use of AIS AtoN, including virtual aids. The DG provided a consolidated final draft policy to the Sub-Committee which endorsed it and will now pass it to the MSC for adoption at its 93rd session in May 2014. The draft acknowledges the need to coordinate closely with charting authorities.

The NAV reviewed the information provided by the IHO at the 57th session of the Sub-Committee for Ship Design and Equipment (DE 57) regarding the state of charting and provision of hydrographic data in the Polar Regions. The Sub-Committee took note of the comments from the 92nd session of the MSC and acknowledged the need for coastal and Antarctic Treaty States to fulfil their SOLAS obligations by giving priority for primary systematic hydrographic surveys. NAV 59 endorsed the texts submitted by the IHO concerning the status of charting for inclusion in the Polar Code *Preamble* and Part B *Additional Guidance* by the intersessional Working Group meeting in October.



The NAV considered the consolidation of ECDIS-related IMO circulars and ECDIS matters related to the implementation of the carriage requirements in SOLAS Regulations. It also addressed the development of an explanatory footnote to SOLAS Regulation V/27, which requires that nautical charts and nautical publications be “adequate” and “up to date”. The footnote was intended to clarify those terms when ECDIS is used to meet the chart carriage requirements. The Sub-Committee noted the information provided in the documents submitted by BIMCO, Denmark and the IHO together with the oral information provided by China on ECDIS matters. After further discussion of the relevant proposals, the Sub-Committee invited Member States to reconsider the consolidation of ECDIS-related circulars and the development of an explanatory footnote to SOLAS Regulation V/27 with the objective of submitting new proposals to NCSR 1.

Due to the IMO sub-committee restructuring, it was decided not to hold an election of officers for 2014.



10TH SOUTHERN AFRICA AND ISLANDS HYDROGRAPHIC COMMISSION (SAIHC) CONFERENCE Lisbon, Portugal, 16-17 September

The Portuguese Hydrographic Institute (IHPT) hosted the 10th Southern Africa and Islands Hydrographic Commission (SAIHC-10) Conference in Lisbon, Portugal from 16 to 17 September. Representatives from Angola, France, Portugal, Malawi, Mauritius, Mozambique, Norway, South Africa and the United Kingdom attended the meeting. Industry representatives from CARIS, C-NAV, Fugro, Jeppesen, Kongsberg, QPS, OceanWise and SevenCs also participated in the meeting and provided informative presentations on their products and services. The IHO was represented by President Robert Ward and Assistant Director Anthony Pharaoh.

An International Charting Coordination meeting took place on 16 September. This provided an opportunity for members to review the current status of INT chart and ENC production in the region, to provide updated information (for inclusion in IHO publication S-11) and to discuss proposals for the adoption of new INT charts.

In addition to reports and discussions on national hydrographic activities, reports and presentations were also provided on Satellite Derived Bathymetry (SDB), procedures in response to marine disasters and Spatial Data Infrastructures (SDI). Issues relating to the SAIHC activities affecting the IHO Work Programme and the capacity building programme were also discussed.



Captain Abri Kampfer (South Africa) and Mr. Abdool Nooranee OOZEER (Mauritius) were re-elected to serve as Chair and Vice Chair of the SAIHC for the forthcoming period until the next conference. The next conference will take place in Maputo, Mozambique from 11 to 13 August 2014.



18TH CONFERENCE OF THE BALTIC SEA HYDROGRAPHIC COMMISSION Tallinn, Estonia, 16-18 September

The 18th meeting of the Baltic Sea Hydrographic Commission (BSHC18) was held in Tallinn, Estonia, from 16 to 18 September, under the Chairmanship of Mr. Jukka Varonen (Finland). All full members of the Commission (Denmark, Estonia, Finland, Germany, Latvia, Poland, Sweden and Russian Federation) attended the meeting. The United Kingdom also attended as an Observer. The IHB was represented by Director Mustafa IPTES. The Estonian hosts provided an excellent venue and support for the meeting.

The BSHC18 covered a wide range of regional topics including developments in each of the Member States, the latest status of hydrographic surveying and nautical charting including INT Charts, ENC production and BSHC cooperative projects.

In this context, the work of the BSHC Working Group for Monitoring the Implementation of the Harmonized Re-survey Scheme (MWG) and activities of the Chart Datum Working Group (CDWG) were reviewed. The Baltic Sea Depth Model was considered to be a good practical example of a fundamental component of a regional Marine Spatial Data Infrastructure. The meeting reviewed feedback from the last meeting of the Inter-Regional Coordination Committee (IRCC) and the World Wide ENC Database Working Group (WEND-WG). Germany presented details of a new LIDAR test project and it was decided to organize a LIDAR seminar in Germany in 2014. The BSHC members also agreed to be more active in contributing articles to the International Hydrographic Review on developments in the Baltic Region. The intention is to propose a special Baltic-themed edition of IHR to be published in autumn 2014.

At the end of the meeting, Mr. Taivo KIVIMAE, Estonia, was elected as the new Chair of the BSHC and Mr. Janis KRASTINS, Latvia, as the Vice Chair. It was agreed that the next meeting of the BSHC will take place in Latvia, on 11-12 June 2014. Further details and the papers for the meeting are available on the IHO website. (http://www.iho.int/mtg_docs/rhc/BSHC/BSHC18/BSHC18.htm)



The Participants at the 18th meeting of the Baltic Sea Hydrographic Commission



THE 10TH YEAR OF THE NIPPON FOUNDATION IHO-IOC GEBCO POSTGRADUATE CERTIFICATE IN OCEAN BATHYMETRY (PCOB)

The Nippon Foundation / IHO-IOC GEBCO Postgraduate Certificate in Ocean Bathymetry training program is held at the Center for Coastal and Ocean Mapping/Joint Hydrographic Center at the University of New Hampshire (UNH), USA and is now in its 10th year. Funding for the programme is provided by the Nippon Foundation of Japan. The 12-month course aims to train a new generation of scientists and hydrographers in ocean bathymetry. The Nippon Foundation / GEBCO students of 2013-14 are settling into their academic year.

The GEBCO project and the Nippon Foundation jointly select six students each year out of many applicants on the basis of a number of criteria including previous education; the support and endorsement of their home organization and the likelihood that they will work in ocean mapping upon completion.

Since the programme started, a total of 60 scholars have taken part in the course, representing 31 coastal states (including the current class) helping to create and strengthen GEBCO's links in all regions of the world, and substantially increase the number of hydrographers with deep water training.



Students for 2013-14 (left to right):

- **Nilton Sanchez Espinoza** hydrographer in the Ecuadorian Navy
- **Tomer Ketter** from the department of Geology and Coastal Process of Israel Oceanographic & Limnological Research (IOLR)
- **Gustavo Adolfo Gomez-Pimpollo Crespo** hydrographer in the Spanish Navy
- **Ramli Mohd** hydrographic surveyor in the Royal Malaysian Navy
- **Daishi Horiuchi** hydrographer in the Hydrographic and Oceanographic Department of the Japan Coast Guard (JHOD)
- **Hemanaden Runghen** associate research scientist in the Specialized Unit on Ocean Matters under the Prime Minister's Office of the Republic of Mauritius



PORTUGUESE HYDROGRAPHIC INSTITUTE SEMINAR ON HYDROGRAPHY Lisbon, Portugal, 18 September

On completion of the 10th Southern Africa and Islands Hydrographic Commission Conference, the Portuguese Hydrographic Institute hosted a seminar highlighting the contribution of hydrography to the development and security of coastal States. The seminar also celebrated the 53rd anniversary of the establishment of IHPT.

During the closing ceremony, Ms Berta Cabral, Secretary of State Assistant to The Minister and of National Defense presented the Navy Cross (honorary) to Professor David Wells of the University of New Brunswick and the University of Southern Mississippi in recognition of his long-standing support and contribution to marine survey acoustics and ocean mapping.



*Professor David Wells
addresses the seminar*



IMO/IHO/IALA REGIONAL AWARENESS SEMINAR ON SAFETY OF NAVIGATION Nouakchott, Mauritania, 23 to 25 September

A regional seminar on safety of navigation was held in Nouakchott, Mauritania, from 23 to 25 September 2013. The seminar was organized by IMO, in collaboration with the International Hydrographic Organization (IHO) and the World Wide Academy (WWA) of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), as part of the United Nations' capacity-building initiative "Delivering as One". The seminar was hosted by the Directorate of Merchant Shipping of Mauritania. The IHO was represented by Director Gilles Bessero who provided briefings on current hydrographic and charting issues, including the provision of hydrographic services, the collection and promulgation of marine safety information, and ECDIS matters. He also presented the role and organization of the IHO and its Capacity Building Programme.

The seminar was intended to raise awareness among regional authorities in charge of maritime safety by providing an overview of methods to improve safety of navigation and the efficiency of maritime traffic in the area. The seminar focused on the obligations placed on coastal States following the entry into force in 2002 of the revised chapter V of the International Convention for the Safety of Life at Sea (SOLAS) and on tools which have been recently developed to assess risks and improve safety of navigation and traffic monitoring.

The seminar was aimed at French-speaking countries bordering the Eastern Atlantic. It was opened by the Minister of Fisheries and Maritime Economy, accompanied by the Minister of Infrastructures and Transport. It was attended by thirty-three senior management and technical administrators in charge of safety of navigation in Benin, Congo, Côte d'Ivoire, Democratic Republic of Congo, Gabon, Guinea, Guinea Bissau, Mauritania, Morocco, Senegal, Togo and two representatives of the Maritime Organization of West and Central Africa (MOWCA). The hydrographic dimension was represented by seven participants from Congo, Côte d'Ivoire, Democratic Republic of Congo, Gabon, Morocco and Senegal.



Some of the participants during a working session



A participant receives his attendance certificate

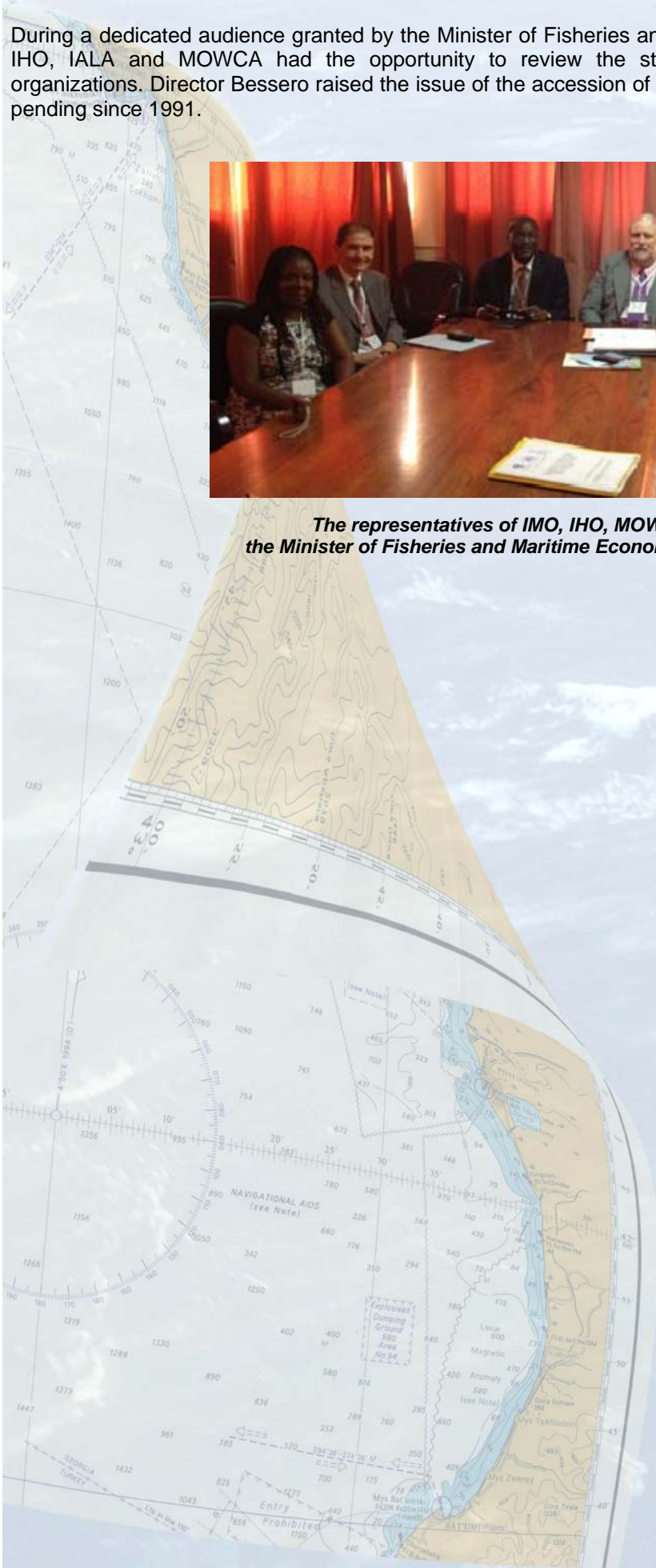
The seminar adopted a series of recommendations including encouragements to participate more actively in IHO endeavours and develop hydrographic services, starting with improving the collection and distribution of nautical information.



During a dedicated audience granted by the Minister of Fisheries and Maritime Economy, the representatives of IMO, IHO, IALA and MOWCA had the opportunity to review the status of the relations of Mauritania with these organizations. Director Bessero raised the issue of the accession of Mauritania to the IHO Convention which has been pending since 1991.



The representatives of IMO, IHO, MOWCA and IALA meet the Minister of Fisheries and Maritime Economy (second from the right)



IMO SYMPOSIUM ON SUSTAINABLE MARITIME DEVELOPMENT

London, UK, 26 September

The International Maritime Organization (IMO) held a one-day symposium to coincide with the celebration of World Maritime Day on 26 September. The Symposium was arranged to provide Member States, industry and other stakeholders an opportunity to discuss and reflect on this year's World Maritime Day theme: "Sustainable Development: IMO's contribution beyond Rio+20".

The seminar considered the Concept of a Sustainable Maritime Transportation System developed on the initiative of its Secretary-General, Mr Koji Sekimizu. The IHB was a contributing partner in the development of the Concept.

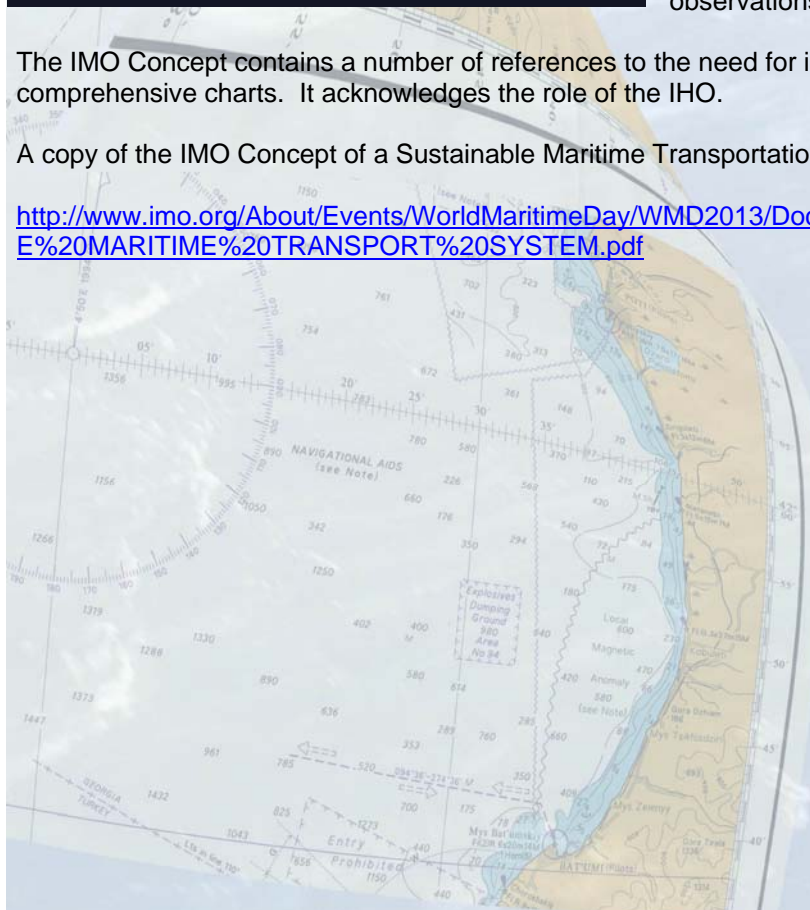
President Robert Ward was invited to speak at the seminar. He explained the underpinning role of hydrography and the mapping and charting of the seas as a fundamental enabler for all human endeavours - and marine transportation in particular. He highlighted the lack of adequate surveys in many parts of the world, as shown in IHO publication C-55 - *Status of Hydrographic Surveying and Nautical Charting Worldwide*. Many, if not most, of those attending the seminar were unaware of this fact.

The President encouraged all representatives to raise awareness and to support the efforts of the national representatives in IHO. He also outlined the potential opportunities to improve hydrographic knowledge in many areas through such things as *crown-sourcing*, the use of professional mariners to submit passage sounding observations on a regular basis.

The IMO Concept contains a number of references to the need for improved hydrographic knowledge and more comprehensive charts. It acknowledges the role of the IHO.

A copy of the IMO Concept of a Sustainable Maritime Transportation System can be downloaded at:

<http://www.imo.org/About/Events/WorldMaritimeDay/WMD2013/Documents/CONCEPT%20OF%20%20SUSTAINABLE%20MARITIME%20TRANSPORT%20SYSTEM.pdf>



PROFESSIONAL YACHTING ASSOCIATION SEA CHANGES SEMINAR IHO, Monaco, 26 September

The Professional Yachting Association (PYA), which has 15 regional offices worldwide with its headquarters in Antibes, France, was founded in 1991 in response to the creation of the Large Commercial Yacht and Passenger Yacht Codes. The PYA is the professional body for yacht crews and the luxury yacht industry. The PYA enjoys recognised observer status with the International Hydrographic Organization (IHO). As part of IHO outreach activities, the International Hydrographic Bureau (IHB) was provided as the venue for the annual PYA Sea Changes Seminar on 26 September 2013. The Seminar was attended by a total of 100 delegates representing yacht crews, shore-based support companies, training organizations and administrative authorities.

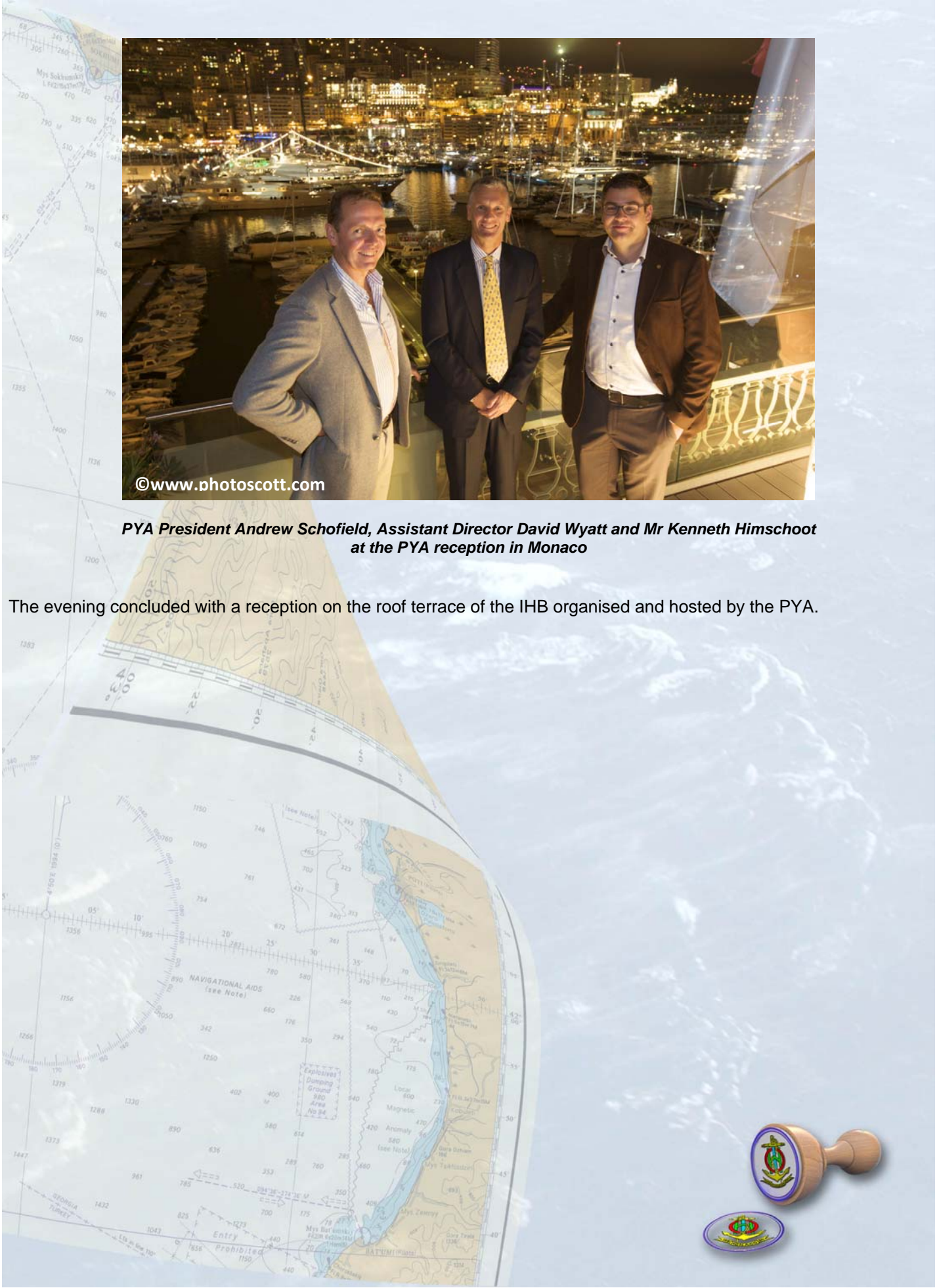


Assistant Director Wyatt answers questions at the PYA seminar

The Seminar was divided into two sessions: a media briefing on GPS spoofing and eLoran followed by a session covering presentations on Maritime Administrations' policies towards the yachting industry, an explanation of Port State Control enforcement with respect to commercial yachts, an up-date on forthcoming UK Maritime Coastguard Agency regulations relevant to yacht crews and PYA training initiatives.

In the absence of the members of the Directing Committee, who were all attending meetings in other countries, Assistant Director Wyatt addressed the Seminar and provided a presentation on the IHO and its relevance to the yachting industry. He also provided details of trials and feasibility studies on Crowd-Sourced Bathymetry (CSB), which had been undertaken in collaboration with Captain Andrew Schofield, President of the PYA and Master of *MY White Rose of Drachs* throughout the summer season. Details of the next phase of the study were provided, where it is hoped to include more super-yachts. The study is the beginning of a project aimed at expanding the data portal and capacity of the IHO Data Center for Digital Bathymetry (DCDB) to enable the upload, viewing and downloading of all its data including crowd-sourced data collected by all professionally manned vessels around the world.





PYA President Andrew Schofield, Assistant Director David Wyatt and Mr Kenneth Himschoot at the PYA reception in Monaco

The evening concluded with a reception on the roof terrace of the IHB organised and hosted by the PYA.



26TH MEETING OF THE GEBCO SUB-COMMITTEE ON UNDERSEA FEATURE NAMES Tokyo, Japan, 23-27 September

The 26th Meeting of the GEBCO Sub-Committee on Undersea Feature Names (SCUFN) was hosted by the Japanese Hydrographic and Oceanographic Department (JHOD) in Tokyo, Japan, from 23-27 September 2013. SCUFN is tasked to select the names to appear in the products of the IHO-IOC General Bathymetric Chart of the Ocean (GEBCO) and on International nautical charts. The meeting, chaired by Dr Hans Werner SCHENKE from the Alfred-Wegener-Institut für Polar und Meeresforschung (AWI – Germany), was attended by 28 participants, including nine of the 12 SCUFN Members (from Argentina, Brazil, China, Germany, Japan, Rep of Korea, New Zealand, Russia and USA). The meeting took note of the absence of the IHO nominated Member - Cdr. Muhammad BASHIR (Pakistan) – for the second consecutive meeting who, in accordance with the SCUFN Terms of Reference, is now considered to have resigned from the Sub-Committee. Nominations to fill the vacancy will be sought before the next meeting.



Attendees at SCUFN 26, Tokyo, Japan

The Sub-Committee considered and discussed 107 undersea feature names in total, including 22 names pending from previous meetings, 53 newly proposed names and 32 names proposed for adoption by the New Zealand Geographical Board (NZGB). Of these, 84 new names were selected by the Sub-Committee for inclusion in the GEBCO Gazetteer of undersea feature names, subject to the approval of its parent body, the GEBCO Guiding Committee.

A web Gazetteer interface (Internet version of the GEBCO Gazetteer) was presented at the meeting. It provides access to any undersea feature name in the Gazetteer and its associated details, including showing the feature geometry

on a background bathymetric map. Name search can be made through a specific term, such as *Cook*, or a generic term / type, such as *Seamount*. Development of the web Gazetteer interface has been overseen by the IHO Data Centre for Digital Bathymetry (DCDB), hosted at the US National Geophysical Data Center (NGDC) in Boulder, Colorado. Presentation of the web Gazetteer, which was formally released during SCUFN-26 (see : http://www.gebco.net/data_and_products/undersea_feature_names/), was very well received by the meeting. The underlying Gazetteer database is maintained by a network of appointed editors (SCUFN Members in the future) under coordination of an administrator who is currently the SCUFN Secretary from the IHB.

The Sub-Committee considered the comments made by IHO Member States, following the circulation of a new edition of publication B-6 - Standardization of Undersea Feature Names, which had been finalized intersessionally by the SCUFN Members. No new issues arose from those comments.

The next meeting of SCUFN is scheduled to be held at the IHO headquarters in Monaco from 16-20 June 2014.



18TH MEETING OF THE MEDITERRANEAN AND BLACK SEAS HYDROGRAPHIC COMMISSION Istanbul, Turkey, 25-27 September

The 18th Meeting of the Mediterranean and Black Seas Hydrographic Commission (MBSHC18) was held in Istanbul, Turkey, from 25 to 27 September under the Chairmanship of Commodore George MATARANGAS (Greece). Forty-six representatives from Algeria, Croatia, Cyprus, France, Georgia, Greece, Israel, Italy, Lebanon, Libya, Malta, Montenegro, Morocco, Romania, Russian Federation, Slovenia, Spain, Tunisia, Turkey, Ukraine, and United Kingdom attended the meeting. Representatives of the Intergovernmental Oceanographic Commission (IOC), IC-ENC, PRIMAR, CARIS and FUGRO also attended as Observers. The IHB was represented by Director Mustafa IPTES and Assistant Director Alberto COSTA NEVES.



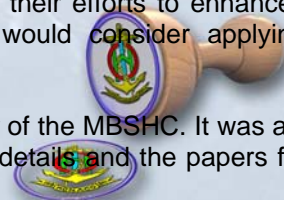
*The Participants at the 18th meeting of the Mediterranean
and Black Seas Hydrographic Commission*

Director IPTES reported on the IHO Work Programme and the Organization's activities during the intersessional period. He reviewed the cooperation with other international organizations, and in particular with IMO, IOC and IALA, and the issues being progressed by subsidiary bodies of the Organization. The status of the adoption of the amendments to the IHO Convention and the way in which the approval procedure could be accelerated were also discussed. The preparation for the 5th Extraordinary International Hydrographic Conference (EIHC5) to be held in October 2014 was considered.

The MBSHC18 covered a wide range of regional topics including developments in each of the Member States, the latest status of hydrographic surveying and nautical charting including INT Charts and ENC production. In this context, Region F International Charting Coordination Working Group (ICCWG) activities, status of the Region International Chart Catalogue and the promulgation of Maritime Safety Information (MSI) in NAVAREA III were reviewed. The activities of the Working Group for the Safety of Navigation in the Black and Azov Seas (BASWG) and developments concerning the establishment of a Caspian Sea Working Group in the future were discussed. The MBSHC members also reviewed feedback from the last meetings of the Capacity Building Sub-Committee (CBSC), Inter-Regional Coordination Committee (IRCC) and the World Wide ENC Database Working Group (WEND-WG). Rules for the designation of MBSHC representatives to the IHO Council that will be established under the amended Convention were also discussed and agreed by the MBSHC members. Lebanon and Libya noted their efforts to enhance their hydrographic capabilities through bilateral arrangements, and indicated that they would consider applying for membership of the Organization.

At the end of the meeting, Captain Erhan GEZGIN, Turkey, was elected as the new Chair of the MBSHC. It was agreed that the next meeting of the MBSHC will take place in Georgia, in June 2015. Further details and the papers for the meeting are available on the IHO website.

http://www.iho.int/mtg_docs/rhc/MBSHC/MBSHC18/MBSHC18_Docs.htm.



OCTOBER

MEETING OF THE INTERSESSIONAL WORKING GROUP FOR THE DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING IN POLAR WATERS (ISWG PC) London, UK, 30 September, 4 October

The meeting of the Intersessional Working Group for the Development of a Mandatory Code for Ships Operating in Polar Waters (ISWG PC) was held at the IMO Headquarters in London from 30 September – 4 October. The Working Group (WG) has been tasked with the development of a mandatory code for ships operating in Polar waters, which includes inputs and submissions from other IMO committees and sub-committees as well as other interested organizations and authorities. Assistant Director David Wyatt represented the IHO.

Of particular interest to the IHO was one submission, DE 57/11/24, which was circulated to Member States under IHO CL 07/2013 dated 21 January 2013. This IHO document was re-introduced as part of the report by the Sub-Committee on Ship Design and Equipment to the 92nd session of the Maritime Safety Committee (MSC 92); it was subsequently passed to the 59th session of the Sub-Committee on Safety of Navigation (NAV 59) where it received broad support from IMO Member States and non-Governmental Organizations. The NAV Sub-Committee took note of the comments from the MSC 92 and endorsed the text submitted by the IHO concerning the status of charting for inclusion in the Polar Code *Preamble* and Part B *Additional Guidance*.

Unfortunately the WG did not have time to discuss the IHO text or the outcome of the NAV 59, which will now be reported to the first session of the Sub-Committee on Ship Design and Construction (SDC 1) under reports from other bodies when it is anticipated it will be agreed to include the IHO text. The final draft Polar Code document will be submitted to the relevant bodies for endorsement prior to approval by the IMO Assembly.

At the meeting it was announced that an IMO/WMU/Arctic Council International Conference on “Safe and Sustainable Shipping in a Changing Arctic Environment” would take place in Malmö in late August 2014. IHO Member States are encouraged to participate.



The meeting of ISWG PC at IMO in London



WORLD-WIDE NAVIGATIONAL WARNING SERVICE SUB-COMMITTEE Monaco, 1-4 October

The 5th meeting of the WWNWS Sub-Committee (WWNWS-5) was held at the IHB in Monaco, from 1 to 4 October under the chairmanship of Mr Peter Doherty of the United States of America. The meeting was opened by President Robert Ward. The meeting was attended by 43 delegates from 22 IHO Member States, the International Hydrographic Bureau (IHB), the World Meteorological Organization (WMO), the *Agence Nationale de Fréquences* (France), the IMO NAVTEX Panel, the International Mobile Satellite Organization (IMSO), Inmarsat and Iridium. The delegates included representatives of 18 NAVAREA Coordinators, one Sub-Area Coordinator and one National Coordinator.



WWNWS5 Meeting at IHB, Monaco, 1-4 October 2013

Following the developments in the International Maritime Organization (IMO) and the work done at the 11th meeting of the Document Review Working Group on the IMO Assembly Technical Resolutions, WWNWS-5 continued its review of all the related documentation to ensure consistency in the guidance and terminology used in all the documents. The revision of the Joint IHO/IMO/WMO Manual on Maritime Safety Information (MSI) and other documents was endorsed by the Sub-Committee.

The Sub-Committee received MSI self-assessment reports from all 21 NAVAREAs and from the Baltic Sea Sub-Area. Reports were also received from all the organizations and industry represented at the meeting. The IHB presented an overview brief on the S-100 Framework to allow the Sub-Committee to progress the development of MSI data transfer standards. A Correspondence Group on S-100 was created to identify and report the initial MSI requirements to HSSC-5. The Sub-Committee also decided to create a Correspondence Group to standardize the promulgation of piracy-related warnings via SafetyNET.

The meeting received updated information on the delivery of MSI training courses and the need for the NAVAREA Coordinators to work closely with the Capacity Building (CB) Coordinators to help developing nations to achieve Phase 1 (the collection and circulation of nautical information, required to maintain existing charts and publications up to date) of the IHO CB Strategy. The Sub-Committee received a briefing on MSI Training conducted in Trinidad and Tobago in May 2013 and the positive outcomes related to improved skills and communication among the participants. The next MSI training was to be delivered in South Africa in December 2013. The IHB briefed the participants on the development of the self-training MSI course that is being supported by the CB Fund.

The Sub-Committee also sponsored a special session on emerging technologies and the impact on the present and future of the WWNWS. It included presentations on satellite communication systems Inmarsat and Iridium and on NAVDAT, considered as the next generation NAVTEX.

The next WWNWS meeting will be held in New Zealand in August 2014, possibly collocated with the first METAREA Coordinators meeting (organized by WMO), where a joint session of the two groups could be included.

When finalized, the report of WWNWS-5 will be posted in the IHO website, where all the meeting documents are already available (www.iho.int > Committees & WG > WWNWS-SC > WWNWS5)



IHO-IOC GENERAL BATHYMETRIC CHART OF THE OCEANS (GEBCO) MEETINGS Venice, Italy, 7 – 11 October

A series of meetings of several of the bodies of the IHO-IOC GEBCO (General Bathymetric Chart of the Oceans) were held at the *Istituto di Scienze Marine, Consiglio Nazionale delle Ricerche*, Venice from 7 – 11 October 2013:

- 7 and 9 October: Joint Technical Sub-Committee on Ocean Mapping (TSCOM) and Sub-Committee on Regional Undersea Mapping (SCRUM) meeting;
- 8 October: GEBCO Science Day;
- 10 October: GEBCO-Nippon Foundation Training Programme Management Committee meeting and Task Group meetings; and
- 11 October: GEBCO Guiding Committee (GGC).

The International Hydrographic Bureau was represented at the TSCOM and SCRUM meetings and the GEBCO Science Day by Assistant Directors Anthony Pharaoh and David Wyatt, at the Nippon Foundation - GEBCO Training Programme Management Committee meeting by Director Mustafa Iptes and at the GGC by Director Iptes and Assistant Directors Pharaoh and Wyatt.

TSCOM and SCRUM

The GEBCO Technical Sub-Committee on Ocean Mapping (TSCOM) and the Sub-Committee on Regional Undersea Mapping (SCRUM) held joint meetings on 7 and 9 October 2013. The meetings were chaired by Dr. Martin Jakobsson (IOC-Sweden) and Dr Bruce Goleby (IOC-Australia), and included reports and presentations on the status of ocean mapping activities in the following regions: the Baltic Sea, Arctic, Antarctic, the Caribbean Sea and the Gulf of Mexico and the Indian Ocean. These were followed by progress reports on the development of GEBCO's bathymetric grids, the Global Multi-Resolution Topography (GMRT), **European Marine Observation and Data Network (EMODnet)**, Google Ocean and the future GEBCO outreach programme. Assistant Director Wyatt provided a briefing on a possible IHO crowd-sourced bathymetry project. Breakout groups were convened to discuss issues concerning: the formation of a new GEBCO 100+ grid; updating, publishing and inclusion of regional compilations; outreach programmes and future initiatives; metadata, including a content model, a common data store and distribution formats.

Science Day

For the eighth consecutive year, the GEBCO project held a "Bathymetric Science Day" which took place on 8 October also at the *Istituto di Scienze Marine*. The Science Day, which included a poster session and involved contributions from a pleasing number of Nippon Foundation scholars, featured presentations on a diverse range of topics, including: a new view on Antarctic bathymetry, developing a harmonised digital bathymetry for the European waters, "what's new in Google Ocean", a new Baltic bathymetry grid programme, "bring ocean data to the Cloud", attribution and tracking provenance for the GMRT synthesis, vertical transformations exploring a GIS approach, the Vega 2013 Greenland expedition, post-seismic crustal movement of the 2011 Tohoku earthquake, AUV dives on a volcanic caldera, summary of 2012-13 operations in the high Arctic, application of LIDAR on exposed and awash rocks, active tectonic, morphology and submarine deformation in the northern Gulf of Eilat/Aqaba, high resolution bathymetry of the

lagoon of Venice, bathymetric uncertainty estimation for interpolators and the Italian experience of handling very large amounts of high resolution bathymetric data at a national scale. The associated presentations can be downloaded from the GEBCO web site at; (http://www.gebco.net/about_us/meetings_and_minutes/gebco_meetings_2013.html)

The TSCOM, SCRUM and Science Day meetings were well attended by members from the IOC and IHO.





IHO-IOC GEBCO Science Day

Nippon Foundation - GEBCO Training Programme Management Committee

The meeting was chaired by Dr Robin Falconer, chair of the GEBCO Guiding Committee. He highlighted the overall status of the programme and new projects. Feedback on working with GEBCO scholars in the regions, the future of the programme and celebratory events to mark ten years of the Nippon Scholars programme was also discussed. Director Iptes provided information on the IHO Capacity Building Programme, on-going relationships with the Nippon Foundation and the prospect of signing an overarching MOU between the IHO and the Nippon Foundation later in the year.

GEBCO Guiding Committee

All current IHO members of the Guiding Committee were present. The chair, Dr Robin Falconer (IOC- New Zealand) highlighted the contributions of members who had recently stood down; these included Ingénieur Général Etienne Cailliau (IHO-France), Dr Kunio Yashima (IHO-Japan) and Dr Chris Fox (IHO-USA), all of whom he thanked for their significant contributions to the GEBCO Project and the GGC over the years. He noted there was a vacancy for the Vice-chair position. He also announced his intention to step down as Chair of the GGC at the end of the meeting but to remain as a committee member until the next meeting in 2014. Mr Shin Tani (IHO-Japan) and Dr Martin Jakobsson (IOC-Sweden) were elected as Chair and Vice-chair respectively to fill the vacancies.

The GGC received brief reports from its Sub-Committees and endorsed the work which they had undertaken. The GGC also received reports from key personnel performing functions on behalf of GEBCO as well as reports from its parent bodies, IHO and IOC, on activities since the previous meeting.

The GGC reviewed its Work Programme for the period 2013 – 2017 which had been approved by the IHO’s Inter-Regional Coordination Committee (IRCC) and commenced development of its Work Plan for 2014-15. The Committee also reviewed its Terms of Reference and Rules of Procedure for submission to IHO and IOC Member States for approval.



GEBCO Guiding Committee Members



INDEMER SYMPOSIUM ON INTERNATIONAL LAW OF THE SEA VERSUS EUROPEAN UNION LAW Monaco, 17-18 October

Director Gilles Bessero and Assistant Director David Wyatt represented the IHO at the Symposium: International Law of the Sea versus European Union Law, organized by the Monaco Institute of Economic Law of the Sea (INDEMER) on 17 and 18 October. The event was hosted by the Oceanographic Museum of Monaco and attracted about sixty participants. About seventy students followed the debates in whole or in part. The Symposium was opened by Mr José Badia, Minister of Foreign Affairs of Monaco, and the closing session was attended by HSH Prince Albert II.

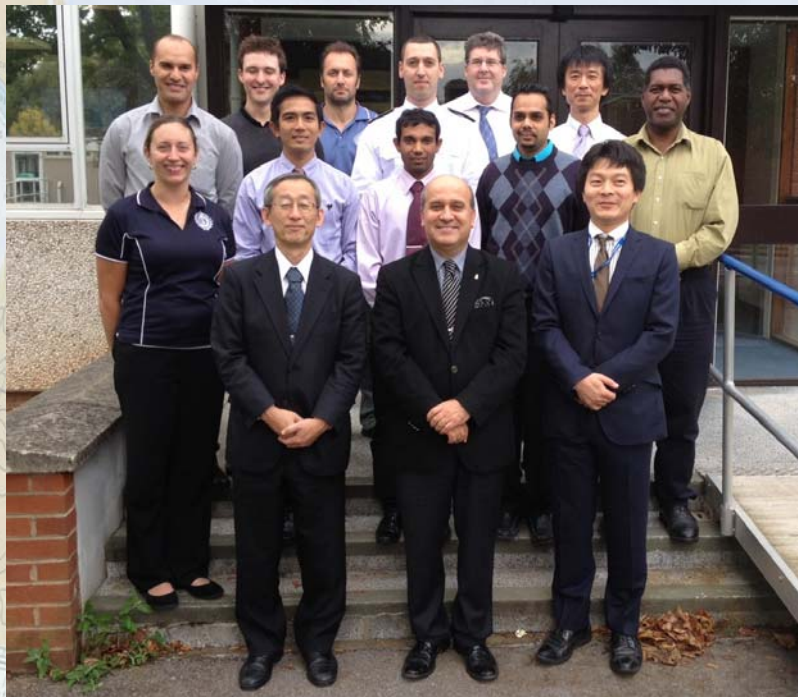
The Symposium addressed a number of issues such as fisheries, maritime safety and security, piracy, protection of the marine environment, conservation and exploitation of the biodiversity, dispute settlement procedures and international jurisdictions. The speakers identified some contradictions between EU regulations and International Law as established by the United Nations' Convention on the Law of the Sea. However most of them agreed that both systems were generally complementary.

The Proceedings of the Symposium will be published by INDEMER (www.indemer.org).



**LIAISON VISIT TO THE NIPPON FOUNDATION CATEGORY B COURSE
FOR NAUTICAL CARTOGRAPHERS
AT THE UNITED KINGDOM HYDROGRAPHIC OFFICE
Taunton, UK, 18 October**

IHB Director Mustafa Iptes and Mr Satoshi Yamao (Project Officer seconded to the IHB from Japan) visited the United Kingdom Hydrographic Office (UKHO) on 18 October to meet and brief the trainees attending the fifth Category B Nautical Cartography Training Programme of the Japan Capacity Building Project (JCBP) funded by the Nippon Foundation. The visiting team also included Mr Teruo Kanazawa from the Japan Hydrographic Association (JHA).



The JCBP Nautical Cartography course is composed of three modules: Marine Cartography; Hydrographic Data Processing and Marine Cartography; and Electronic Navigational Chart. The course started on 2 September 2013 and the first module finished on 4 October. The entire course will end on 13 December.

Director Iptes discussed various topics with the ten students from Algeria, Australia (three students for Module 3 only), Bulgaria, Japan, Thailand, Trinidad and Tobago, Solomon Islands and Sri Lanka. The students discussed their experiences and thanked the Nippon Foundation, UKHO, JHA and IHO for the opportunity to improve their knowledge in the field of nautical cartography. Following the exchange of views, Director Iptes provided a presentation that covered the areas of influence of hydrography and the responsibilities of Governments with regard to the provision of hydrographic data, information, products and services. The vital coordination and standardization role of the IHO and its Capacity Building Programme was also highlighted. The students were encouraged to keep in touch with each other and maintain an alumni relationship after they return home. At the end of the presentation, the UKHO Training Team was congratulated for its contribution to the successful completion of the first module.

Finally, Director Iptes and Mr. Kanazawa presented the completion certificates for Module 1 of the course to the students and thanked the UKHO and its instructors for their important contribution to improving the levels of international hydrographic cooperation and nautical charting knowledge.

Director Iptes also called on Rear Admiral Tom Karsten, UK National Hydrographer, and held a general discussion about the IHO activities and the conduct of the JCBP course.



VISIT TO VASSIVIÈRE ERASMUS INTENSIVE PROGRAMME IN HYDROGRAPHY AND GEOMATICS

Vassivière, France, 22 October

At the invitation of the programme coordinator, Director Gilles Bessero contributed to the Vassivière Erasmus Intensive Programme in Hydrography and Geomatics which was held on the Vassivière Lake, near Limoges in the centre of France, from 14-25 October.

The Erasmus Programme (European Community Action Scheme for the Mobility of University Students) is a European Union student and teacher exchange programme established in 1987. An Erasmus Intensive Programme is a short programme of study (two to six weeks of subject-related work) which brings together students and staff from higher education institutions in at least three participating countries.

The Erasmus Intensive Programme in Hydrography and Geomatics was initiated in 2012 by Nicolas Seube, Head of the Hydrographic Department at ENSTA Bretagne (France) and current Chair of the FIG-IHO-ICA International Board on Standards of Competence, in partnership with *HafenCity Universität, Hamburg* (Germany), and *Universitet Ghent* (Belgium). The Programme enables students to confront the realities of hydrographic surveying in a stimulating learning environment. Divided into several project teams the students had to prepare, conduct and process a survey addressing a specific scientific or technical problem.

The 2013 edition brought together 52 students from the three partner institutions and also from the University of the West Indies (Trinidad and Tobago). It was supported by 13 industry sponsors.

During his visit, Gilles Bessero gave a lecture on the IHO and its activities, with a focus on Capacity Building and Standards of Competence, and had the opportunity for discussions with the students who presented their projects. The visit was combined with a presentation of the programme to the local media.



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4TH MEETING BETWEEN THE IHO AND THE EUROPEAN COMMISSION

Brussels, Belgium, 24 October

In accordance with the Memorandum of Understanding between the European Commission (EC) and the IHO on establishing co-operation on maritime affairs, the 4th EC-IHO meeting was hosted by the Flemish Hydrographic Office of Belgium (Vlaamse Hydrografie) in Brussels, on 24 October 2013. The meeting was chaired by France, as chair of the North Sea Hydrographic Commission Working Group on European Union Marine and Maritime Policies (NSHC/EU2MPWG). The meeting was attended by two representatives from the European Commission (DG Mare), thirteen representatives from IHO Member States (France, Belgium, Germany, Greece, Netherlands, Norway, Spain, Sweden, United Kingdom), the IHB, and three observers from Ireland (Geological Survey) and Italy (Istituto Superiore per la Protezione e la Ricerca Ambientale). Director Gilles Bessero represented the IHB.

The HOs, IHB and observer representatives met separately before the EC-IHO plenary meeting. They reviewed HO and IHO activity concerning various European initiatives (European Sustainable Shipping Forum; UN-GGIM Europe, etc.) and the progress being made in developing a proposal for a design study to support a future joint European coastal mapping programme.



The plenary meeting reviewed progress in developing IHO initiatives that could attract EU support. The main initiative under discussion related to a future joint European coastal mapping project. A proposal for a design study is being developed under the leadership of France (SHOM) and should be completed in time to respond to a request for proposals from the EC in September 2014. Other initiatives, dealing with the development of an accurate vertical reference framework and the impact of sea-floor dynamics on re-survey strategy, have a longer timeframe. The meeting was informed that further input on the respective roles of HOs and industry in the future development of the European

Marine Observation and Data Network (EMODnet) would be welcomed by the EC. DG Mare emphasized that “blue growth” would be a common thread for future EU regional funding.

It was agreed to hold the next IHO-EC meeting in February or March 2014, back to back with another related event if possible.

The meeting report, together with the presentations, will be posted on the IHO website (Home > Committees & WG > IRCC > EC - IHO Cooperation) when available.



20TH MEETING OF THE ADVISORY BOARD ON THE TECHNICAL ASPECTS OF THE LAW OF THE SEA Muscat, OMAN, 28-29 October

The Advisory Board on the Technical Aspects of the Law of the Sea (ABLOS) is a joint board of representative experts from the International Hydrographic Organization (IHO) and the International Association of Geodesy (IAG). The ABLOS comprises four representatives from IHO Member States and four representatives from the IAG. The UN Division for Ocean Affairs and Law of the Sea (UN-DOALOS) and the secretariat of the IHO (IHB) provide one ex-officio member each. The ABLOS is charged with providing advice, guidance and, where applicable, offering expert interpretation of the hydrographic, geodetic and marine geo-scientific aspects of the Law of the Sea to the parent Organizations, their Member States or to other organizations on request. It also reviews State practice and jurisprudence on Law of the Sea matters which are relevant to the work of the Board to enable it to provide expert advice when needed. The ABLOS also studies, promotes and encourages the development of appropriate techniques in the application of the technical provisions contained within the UN Convention on the Law of the Sea (UNCLOS).



The 20th meeting of ABLOS was hosted by the Royal Navy of Oman (RNO) and the Oman National Hydrographic Office (ONHO), under the patronage of His Excellency Ambassador Salim al Alawi, Chief of the Office of the Continental Shelf and Maritime Affairs at the Ministry of Foreign Affairs, and held at the Park Inn in Muscat, Oman, on 28 – 29 October 2013. It was followed by a seminar titled 'Harmonization with UNCLOS: Experiences and Observations'.

All ABLOS members and IHO appointed observers from Australia, Brazil, Bangladesh, Canada, Chile, Denmark, India, Indonesia, Japan, Republic of Korea and the United Kingdom were present. They were joined by two RNO

observers, who are engaged in LOS matters. The Chair, Professor Sunil Bisnath (IAG – Canada), welcomed the new Board members and observers to the meeting, noting it was the best attendance for a number of meetings.

The meeting began preparations for the 8th ABLOS Conference, which is planned to be held in Monaco in late October 2015. Detailed information for the Conference will be announced by IHO Circular Letter and on the ABLOS page of the IHO web site nearer the time.

The meeting received a report on progress towards approval of the revised Manual on Technical Aspects of the United Nations Convention on the Law of the Sea - 1982 (TALOS Manual - C-51) - which will be Edition 5.0.0. Edition 5 is expected to be submitted to

IHO Member States for approval towards the end of the year. The meeting discussed the next round of revisions for the TALOS Manual, highlighting sections that were identified as requiring revision during the final stages of review of Edition 5.

ABLOS members and observers discussed notable topics from the various conferences, seminars and workshops that they had attended and undertaken since the previous Business Meeting. The meeting also discussed the material for the ABLOS capacity building training course and reviewed ways to develop it further.

The meeting reviewed the Terms of Reference and Rules of Procedure for the ABLOS, and developed several amendments to be presented to the next meeting of the IHO Hydrographic Services and Standards Committee, which is its parent IHO body. Two Board members, whose terms are due to end in October 2014, expressed a desire to continue to serve for a further four-year term. The Board unanimously supported the applications and recommended that the IHO approve the additional terms.

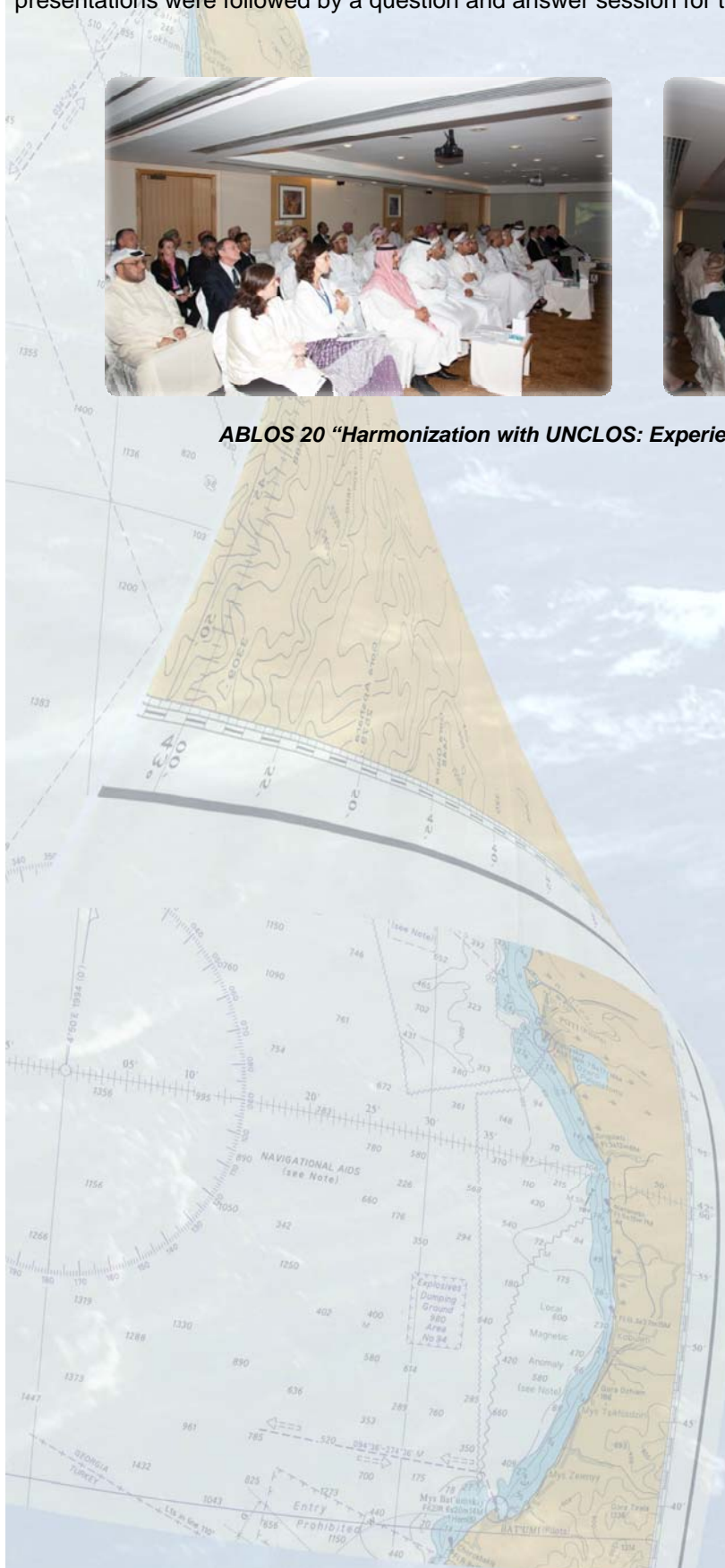
The ABLOS meeting was followed by a Law of the Sea seminar, which was attended by approximately 90 delegates from across the region, including Kuwait, Qatar and the Kingdom of Saudi Arabia, as well as representatives from a wide selection of Oman government ministries, RNO and ONHO.



The seminar covered presentations on: Oman maritime boundaries, harmonising baselines, the role and work of DOALOS, Korea's submission to the Commission on the Limits of the Continental Shelf (CLCS), boundary issues in the South China Sea, UNCLOS related surveys at the Japanese Hydrographic and Oceanographic Department, the experience of Brazil's submission to the Commission on the Limits of the Continental Shelf (CLCS), observations to define baselines on a remote island and an overview of the Oman Continental Shelf Extension Project. The presentations were followed by a question and answer session for the ABLOS members.



ABLOS 20 "Harmonization with UNCLOS: Experiences and Observations" Seminar



HIGH LEVEL VISITS TO THE UNITED ARAB EMIRATES AND REPUBLIC OF MALDIVES

27 October - 01 November

IHB Director Mustafa Iptes paid high level official visits to the United Arab Emirates (UAE) and the Republic of Maldives from 27 October to 01 November 2013 to advise on and encourage the further development of hydrographic activities in both countries.

The purpose of the visit to UAE was to assist the countries in establishing a federal Hydrographic Service. Although the UAE has been a member of the IHO since 1992 and has good hydrographic capacity (survey vessels, modern equipment, staff, finance, etc.), there is, as yet, no formal Hydrographic Office structure and organization.

Director Iptes called on H.E. Dr. Abdulla Belhaif Al Nuaimi, the Minister of Transport as well as Brigadier Ali Mohammed Musleh Al Ahababi, Director of the Maritime Security Executive Committee and Mohamed Al Yousef, Executive Director of the Department of Transport of Abu Dhabi, and Hamad Al Magrabi, General Manager of Abu Dhabi Port. He also visited Col Dr. Adel Khalifa Alshamsi, Head of Mapping and Surveying Services who is the principal coordinator of hydrographic activities in the UAE.



Director Iptes and H.E. Dr. Abdulla Belhaif Al Nuaimi, Minister of Transport of the UAE, accompanied by officials of the maritime sector.



During his visit to the Republic of Maldives, Director Iptes called on Mr Mohamed Nazim, Minister of Defence and National Security, Major General Ahmed Shiyam, Chief of National Defence Force, and Brigadier General Ahmed Shahid, Coast Guard Commandant. He provided an overview briefing to the Senior Staffs of the Joint Headquarters covering the role and activities of the IHO and the importance of hydrography in the context of the “Blue Economy”.

In all his meetings Director Iptes encouraged the application of the Maldives to become a Member State of the IHO.



Director Iptes exchanges gifts with Mr Mohamed Nazim, Minister of Defence and National Security of the Republic of Maldives.



Director Iptes at the meeting with Senior Staff of the Maldivian National Defence Force Joint Headquarters.



PRESENTATION OF THE ALEXANDER DALRYMPLE AWARD Southampton, UK, 28 October

World Hydrography Day (WHD) was celebrated at an evening reception hosted by the UK Hydrographic Office (UKHO) at the National Oceanographic Centre in Southampton and was attended by a number of British organizations involved in the provision of hydrographic services in support of the Blue Economy - the WHD theme for 2013. The national Hydrographers of France and the Netherlands were also present. During the evening, the UKHO Alexander Dalrymple Award was presented to Mr William Heaps, Assistant Marine Advisor and Hydrographic Manager of the UK's leading port group, Associated British Ports (ABP). The award is dedicated to Sir Alexander Dalrymple who established the UK's first Hydrographic Office in 1795. The award is a symbol of recognition for outstanding dedication and contribution to world hydrography. The award was presented to Mr Heaps by IHO Director Gilles Bessero, who is a former recipient of the award.



William Heaps expressing his thanks in the presence of IHB Director Gilles Bessero and UKHO Chief Executive Ian Moncrieff



CONFERENCE ON DIGITAL HYDROGRAPHY ON THE MARITIME WEB Southampton, UK, 29-30 October



organised by

in association with



A Conference “*Digital Hydrography on the Maritime Web / Embracing the Challenges and Opportunities*”, organized by the Hydrographic Society UK (THS UK) took place in Southampton on 29 and 30 October. The Conference was supported by the IHO and the International Federation of Hydrographic Societies (IFHS) as a means of outreach and engagement with their common stakeholders.

The Conference was attended by 64 delegates from seven countries, with a widespread background from industry, academia, government and non-governmental organizations. Three IHO Member States were represented - Germany, Netherlands, UK. Director Gilles Bessero and Assistant Director Alberto Costa Neves represented the IHB.

The Conference reviewed the steps being taken by hydrographic surveyors and the maritime community to support the move towards an e-Navigation digital information environment. The four sessions in the programme covered “The users’ perspective”, “Presentation and quality of products”, “Innovations in surveying” and “Training” and included a question and answer period.

The first session gathered feedback from mariners highlighting the benefits and the complexity of dealing with multiple systems on the bridge. Participants discussed the transition from paper to electronic charts and its benefits and disadvantages, and considered the increase in workload and various safety aspects of an increase in dependence on technology. It was noted that traditional mariners have much less empathy for Electronic Navigational Charts (ENCs) than for paper or raster charts.

The second session highlighted the problems related to some users relying on technology without fully understanding the limitations and the characteristics of the systems that they are operating. The better use of metadata and data integration in hydrographic products and systems was discussed. Participants were presented with the first UKHO ENC cell that has been published without a corresponding paper chart in a very dynamic river environment. The development of port ENCs was also reviewed. The subsequent forum discussion highlighted that the full use of ECDIS requires accurate and reliable data and noted a need to improve digital hydrographic products with human-centered design tools to meet future requirements, including the use of 3D overlays. The need to anticipate future technological developments in training programmes was also mentioned.

The forum concluded that future developments need to reduce the mariner’s workload, improve situational awareness, use the maritime cloud to implement the concept of “post once use many times” and help mariners to be aware of the threats and avoid over reliance on technology. Participants agreed that technology can help to drive costs down but the cost of cultural changes and governance should not be ignored.

The third session reviewed the requirements for hydrographic products and services in support of the Blue Economy in general and of government work in particular. It dealt with the benefits, limitations and future developments of satellite multispectral imagery along with the possibility of developing bathymetric applications based on other satellite techniques, such as synthetic aperture radar. A framework for data quality assessment and the usefulness of crowd-sourcing was discussed. The need to “educate”, rather than “train” future surveyors so that they can adapt to and foster innovation was stressed.

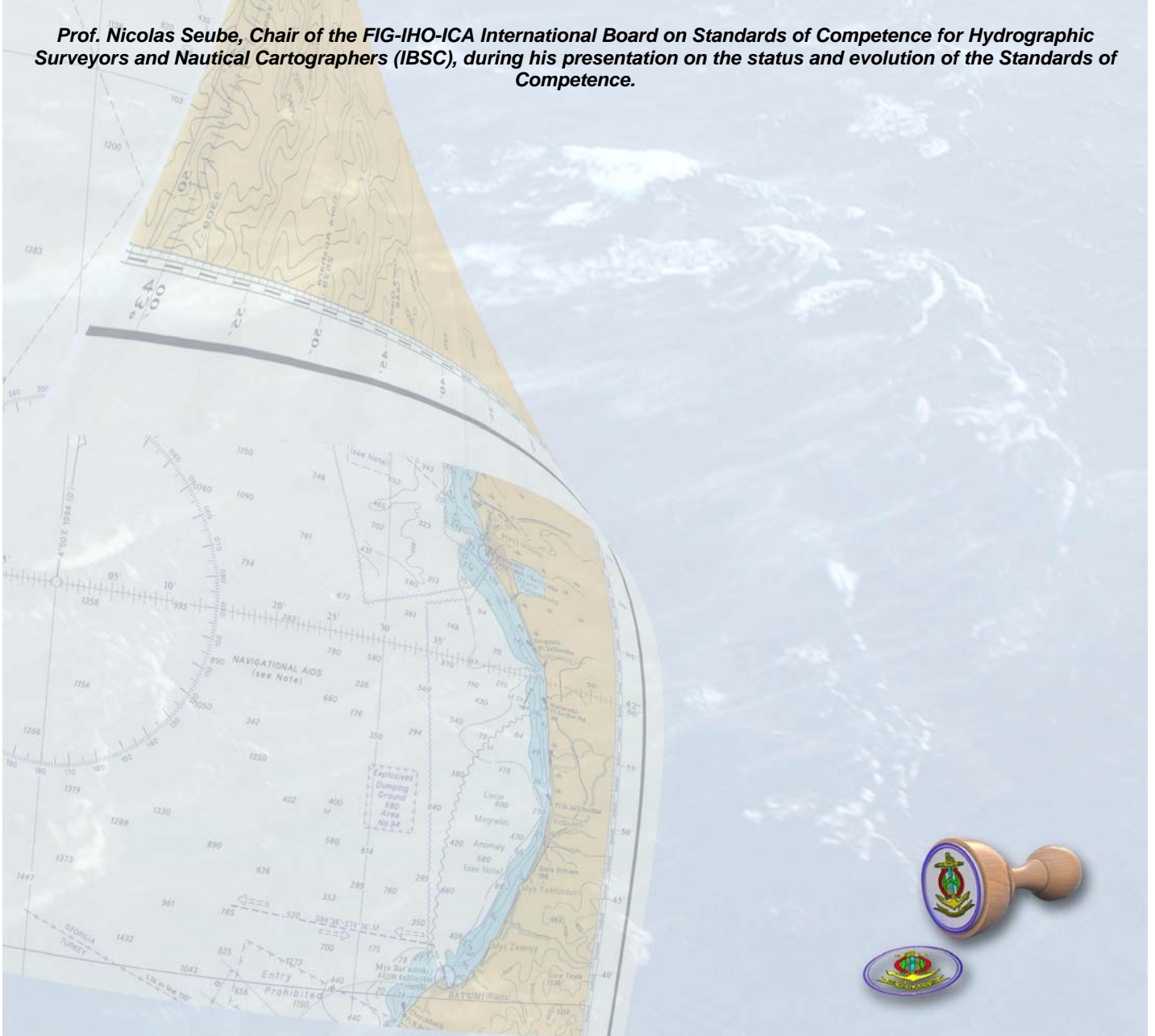
The fourth session focused on qualified training. The session began with a keynote address by the Chair of the FIG-IHO-ICA International Board on Standards of Competence reviewing the status and the evolution of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers. Questions were raised during the forum on the merits of global or regional schemes for the recognition of individuals and the perspectives to set up a central register were discussed.

The Conference was an excellent opportunity to bring together a number of stakeholders in the hydrographic and maritime community. The discussions helped all participants to better understand the work environments and constraints of others.





Prof. Nicolas Seube, Chair of the FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC), during his presentation on the status and evolution of the Standards of Competence.



NOVEMBER

5th MEETING OF THE IHO HYDROGRAPHIC SERVICES AND STANDARDS COMMITTEE (HSSC) Shanghai, China, 4-8 November

The fifth meeting of the Hydrographic Services and Standards Committee (HSSC) took place in Shanghai, China, hosted by the Maritime Safety Administration of China (China MSA), from 4 to 8 November 2013. Mr Chen Xiao Guang, Deputy Director General of Shanghai MSA, welcomed delegates at the beginning of the meeting which was chaired by Dr Mathias Jonas (Germany). 62 representatives from 25 Member States, PRIMAR Regional ENC Coordinating Centre, the IHB, and 6 international organizations accredited as observers were present. FIG (International Federation of Surveyors) was represented for the first time. President Robert Ward, Director Gilles Bessero and Assistant Directors Michel Huet and Tony Pharaoh represented the IHB.



HSSC5 participants

The Committee reviewed the activities, proposals and work plans of its working groups and the decisions of other bodies and organizations affecting its work. The Committee endorsed three draft new editions of IHO publications (draft Edition 4.0.0 of S-57 - Appendix B1 - Annex A - *Use of the Object Catalogue for ENC*, S-57 Supplement 3 - *IHO Transfer Standard for Digital Hydrographic Data*, Supplementary Information for the Encoding of S-57 Edition 3.1 ENC Data, draft Edition 5.0.0 of C-51 - *Manual on Technical Aspects of the United Nations Convention on the Law of the Sea 1982 [TALOS]*) and invited the IHB to circulate them to Member States for approval.

The Committee reviewed the progress in preparing other draft new editions of IHO documents (draft Edition 6.1.0 of S-52 - *Specifications for Chart Content and Display Aspects of ECDIS*, draft Edition 4.0.0 of the Presentation Library [Annex A to S-52], draft Edition 5.0.0 of S-58 - *ENC Validation Checks* and draft Edition 3.0.0 of S-64 - *IHO Test Data Sets for ECDIS*) and agreed to endorse them by correspondence after finalization by the relevant working groups. The significant effort devoted to enhancing these IHO publications is intended to address various issues related to ECDIS operational anomalies and was conducted in close liaison with the International Electrotechnical Commission (IEC) and the Comité International Radio-Maritime (CIRM). An approval process by correspondence was agreed by the Committee to ensure that new editions of S-52, S-52 Presentation Library and S-64 can be approved by IHO Member States by the end of October 2014, in line with the target date for the publication of the associated new edition of the IEC standard 61174 - *Operational and performance requirements, methods of testing and required test results for ECDIS*. The Committee also agreed the actions that will be required to coordinate the implementation of these revised editions of the standards with the International Maritime Organization (IMO).





HSSC in session

Progress in developing the next generation of standards for digital hydrographic products and services, the S-100 Universal Hydrographic Data Model and associated Product Specifications, was reviewed. The Committee agreed on an S-100 master plan for framing this development. The Committee approved a technology roadmap intended to guide the completion of the S-101 ENC product specification, which has encountered some delay due to resource constraints. The elements requiring further work and the establishment of a thorough test bed programme are now progressing well. Several test bed projects presented by the Republic of Korea will provide a significant contribution to the development programme. The opportunities offered by a new phase of the Marine Electronic Highway Project in the Straits of Malacca and Singapore that will incorporate dynamic tides in ECDIS and the presentation of chart quality indicators were also acknowledged.

The Committee adopted a standardised method for identifying S-100 based product specifications and endorsed the development of a new standard - IHO S-121 - *Maritime Limits and Boundaries Product Specification*, to be progressed by Geoscience Australia on behalf of the IHO. The Committee also supported the development of IHO S-124, a new Product Specification for Navigational Warnings, to be progressed by the IHO World Wide Navigational Warning Service Sub-Committee (WWNWS) in liaison with the Transfer Standard Maintenance and Application Development Working Group (TSMAD). The Committee reviewed the coordination of S-100 related activities with the development of the IMO e-navigation strategy implementation plan which should be the main driver for the uptake of S-100 based products and services.

The Committee discussed the re-structuring of its working groups to acknowledge the changing focus from paper to digital data based products and services and to best use limited resources. The Committee agreed principles aimed at improving its efficiency and facilitating inputs from industry and other stakeholders through a reduction in the number of long-term working groups and the establishment of time-limited project teams. The proposed new structure will be further developed intersessionally and presented to the next meeting for implementation. Taking into account the central role that S-100 will play in future standards developments within the IHO as well as outside the IHO, the new structure will include a dedicated S-100 working group.

The Committee endorsed several revisions to IHO Resolutions dealing with tidal matters and invited the IHB to circulate them to Member States for approval. The Committee endorsed a number of new definitions proposed by the Hydrographic Dictionary Working Group to be circulated to Member States for approval.

The Committee warmly thanked China for the excellent meeting arrangements and the support provided to the participants and acknowledged that this support contributed significantly to the success of the meeting.

The next meeting of the HSSC will take place from 10 to 14 November 2014, in Valparaiso, Chile.

Further information is available at http://www.iho.int/mtg_docs/com_wg/HSSC/HSSC5/HSSC5Docs.htm.



12TH CONFERENCE OF THE SOUTH WEST PACIFIC HYDROGRAPHIC COMMISSION Port Vila, Vanuatu, 12-14 November

The Government of Vanuatu hosted the 12th Conference of the South West Pacific Hydrographic Commission (SWPHC) from 12 to 14 November. Representatives from six of the eight Member States of the Commission, and three out of nine Associate Members attended the meeting. Four international organizations and nine representatives from industry also participated. The IHO was represented by President Robert Ward.

The meeting was opened by the Acting Prime Minister of Vanuatu, the Honourable Ralph Regenvanu, and chaired by Rear Admiral Tom Karsten (UK).

A recurring theme throughout the meeting was the relevance of the “*Blue Economy*” and in particular the significant dependence that the Pacific Islands States have on sea transportation and cruise ship tourism. In this regard, the poor state of surveying and charting continues to be of major concern.

The Hydrographer of New Zealand described the recent development and implementation of a risk-based method of analysis that identifies areas of critical charting concern. An analysis had been undertaken of Vanuatu waters and another is underway for the Cook Islands. New Zealand, under the sponsorship of the NZ Aid programme, will follow this with an analysis of the waters of Tonga. The Commission agreed that New Zealand’s risk-based analysis method should be adopted for use across the whole area of the Commission, and may also be useful in other Regional Hydrographic Commissions.

The activities of the Applied Geoscience Division (SOPAC) of the Secretariat of the Pacific Community (SPC) and its improved capability to conduct hydrographic surveys that can be used to improve charts were presented and discussed. The aim is to further develop and use the SOPAC hydrographic capability as a regional resource - especially in those countries that have little or no in-country capability.



At the end of the meeting, the members agreed that Australia would assume the Chair from February 2014 and Papua New Guinea will continue to occupy the Vice Chair position.

Subject to final confirmation, the next meeting will be held in the Cook Islands in February 2015.



THE 37TH ISO/TC 211 PLENARY AND WORKING GROUP MEETINGS Redlands California, USA, 11 to 15 November

The Economic and Social Research Institute (ESRI) hosted the 37th meeting of the International Standards Organizations Technical Committee 211 (ISO/TC211) dealing with the development of standards and specifications for the geospatial domain. The ISO/TC211 19100 standards and specifications are relevant to the IHO as they have been used for the development of the S-100 standard. The IHO is a Class A liaison member of ISO/TC211 and participates in its standards development and maintenance work.

In addition to the ongoing development and maintenance work that took place during the meeting, two new projects were registered. These included: NP 19160-4, Addressing – Part 4 (International postal address components and template languages) and NP 19159 - Part 2: Lidar, (Calibration and validation of remote sensing imagery sensors).

In response to the draft decision 3/106 of the UNCE-GGIM⁸, dealing with establishment and implementation of standards for the global geospatial information community, ISO/TC 211 has established a task force to liaise with OGC⁹ and IHO, and possibly other standards developing organizations, to draft a report on core essential standards. It is proposed to present the report to the 4th session of UNCE GGIM in New York, August 2014. The task group will also support the UN-GGIM Secretariat in preparing a side event on essential standards and the value and good practice of adopting them.

A “Standards in Action Workshop” also took place during the meeting. The workshop included presentations on the following subjects: FGDC and USGS ISO Metadata Standards Activities; Address and Metadata Standards; the Implementation of ISO TC 211 Standards in the Geospatial Web Service Environment; TIGERweb & WMS Standard and the ASPRS History of Measurement.

Additional information on the ISO/TC211 work and the 19100 standards/specifications development activities is available from the TC211 web site (www.isotc211.org).

⁸ United Nations Committee of Experts on Global Geospatial Information Management

⁹ Open Geospatial Consortium



IHB STAFF MEMBERS RECEIVE THE MONACO SERVICE MEDAL

Monaco, 15 November

The Government of Monaco awards the Service Medal annually as an important part of the festivities organized for the National Day of Monaco. This year three members of the IHB Staff were honoured. Mr Daniel Menini (France) was awarded the Silver Medal in recognition of 30 years of service at the IHB and Ms Mary Paz Muro (Spain) and Ms Isabelle Rossi (France) were awarded the Bronze Medal for 20 years of service devoted to the IHB.

The ceremony was held at the Oceanographic Museum of Monaco and presided over by SEM Michel Roger, Minister of State of Monaco, assisted by Mr Stéphane Valeri, Government Minister for Social Affairs and Health, and attended by numerous other Monaco authorities. Our warm congratulations to Daniel, Mary Paz and Isabelle!



(left to right) Director Mustafa Iptes, Ms. Mary Paz Muro, Mr. Daniel Menini, Ms. Isabelle Rossi and Director Gilles Bessero



MOWCA / IHO SUB-REGIONAL WORKSHOP ON DEVELOPING HYDROGRAPHIC SERVICES Pointe-Noire, Republic of the Congo, 18-19 November

A sub-regional workshop on developing hydrographic services was held in Pointe-Noire, Republic of the Congo, on 18 and 19 November 2013. The workshop was organized by the Maritime Organization of West and Central Africa (MOWCA), in cooperation with the Eastern Atlantic Hydrographic Commission (EAtHC) and the International Hydrographic Bureau (IHB). The workshop was hosted by the General Directorate of Merchant Shipping of Congo. The IHO was represented by Ingénieur Général Bruno Frachon, France, Chair of EAtHC, and Director Gilles Bessero from the IHB.

The workshop was intended to raise awareness among authorities in the region in charge of maritime safety by providing an overview of the importance of hydrography, the organization, role and activities of the IHO, the provision of hydrographic services and the advantages of joining the IHO and the relevant Regional Hydrographic Commission (RHC).

The workshop was a follow-up to an action agreed at the 12th EAtHC Conference in 2012 which called for setting up a meeting between the IHO, MOWCA and the EAtHC members of the sub-region. It was aimed at the twenty Coastal States which are currently members of MOWCA: Angola, Benin, Cameroon, Cabo Verde, Republic of the Congo, Democratic Republic of the Congo, Côte d'Ivoire, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, Liberia, Mauritania, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone and Togo.

The workshop was opened by the Minister of the Republic of the Congo in charge of Merchant Shipping. About fifty senior management and technical administrators from Angola, Republic of the Congo - which formed the largest delegation by far - Gabon, Mauritania and Senegal attended the workshop. Representatives were expected from Cameroon, the Democratic Republic of the Congo, Côte d'Ivoire and Liberia but did not come.



Some of the participants during a working session



From left to right: Mr Bruno Frachon, EAtHC Chair, Gilles Bessero, IHB Director, and Alain Michel Luvambano, MOWCA Secretary General

The workshop adopted a recommendation inviting MOWCA Member States to participate in the activities of the relevant RHC and to join the IHO. Another recommendation suggested that the MOWCA Secretariat should investigate, along with the IHB, the EAtHC and the regional maritime academies, the possibility of creating a regional training programme in hydrography. The workshop also considered a draft Memorandum of Understanding on cooperation between MOWCA and the IHO.

In his closing remarks, the Minister from the Republic of the Congo in charge of Merchant Shipping announced that he had initiated the inter-ministerial process which should result in the Congo joining the IHO.



7TH JOINT IHO/IMO/WMO/IOC/IALA/IAEA/FIG CAPACITY BUILDING COORDINATION MEETING Monaco, 20-21 November

The 7th Joint IHO/IMO/WMO/IOC/IALA/IAEA/FIG Capacity Building (CB) Coordination Meeting was held on 20-21 November 2013, at the IHB, in Monaco. The annual meeting brought together 11 representatives from IHO, IMO, IOC, IALA, IAEA and FIG. The WMO representative was not able to attend the meeting. The IHO was represented by Mr. Thomas Dehling (Germany), Chair of the CB Sub-Committee (CBSC). Director Mustafa Iptes represented the IHB.

The meeting brought together the partner organizations in order to coordinate joint projects and share experience. A particular goal was to maintain a common view for the future and to develop a stronger inter-organization CB Strategy and Work Programme.

Participants presented their organization's CB strategies, provided an update on their CB activities in the last year, shared lessons learned, particularly on strengths and shortcomings, opportunities and advantages in the implementation process, and offered information regarding their standardization procedures. IHO and IOC presented their revised Capacity Building strategies. The CBSC Chair reported on the IHO's latest institutional education and training program developments, and, in particular, the recently inaugurated Category A Hydrography Programme in cooperation with the University of Southern Mississippi and funded by the CB Fund through the kind contribution from the Republic of Korea.

Partner organizations presented lessons learned, their procedures, mechanisms, challenges and outcomes in dealing with funding agencies. Participants also committed to offer assistance among the members in obtaining high level contacts in countries where the organizations need to improve awareness.

Each organization presented its 2014 Capacity Building Work Programmes (CBWP) followed by a panel session to assess the priorities and joint policies that could reinforce each CB programme. Participants examined a number of existing and potential projects that could be further developed under a joint partnership. A common vision for the future is to bring disciplines together in order to create an inter-disciplinary CB approach. This would help by providing a broader view and more efficient responses in cases of natural disasters, for example. Participants also agreed to investigate joint projects to deliver 'green' seminars, to increase activity and awareness in terms of marine spatial planning and to develop a case study for West Africa. Representatives also agreed to consider presenting a joint paper to the next session of the IMO Technical Co-operation Committee regarding joint CB activities.

The next CB Coordination Meeting will take place in the last week of November 2014 in Copenhagen, Denmark, and will be hosted by FIG.



*The Participants at the 7th Joint IHO/IMO/WMO/IOC/IALA/IAEA/FIG
Capacity Building Coordination Meeting*



28TH SESSION OF THE IMO ASSEMBLY London, UK, 25 November - 4 December

The Assembly is the highest governing body of the International Maritime Organization (IMO). It consists of all Member States and meets once every two years in regular sessions, but may also meet in an extraordinary session if necessary. The Assembly is responsible for approving the work programme, the budget and determining the financial arrangements of the IMO. The Assembly also elects the IMO Council. The 28th session of the IMO Assembly was held at the IMO Headquarters in London from 25 November to 4 December. Assistant Director Wyatt represented the IHO.



IMO dressed overall for Assembly 28

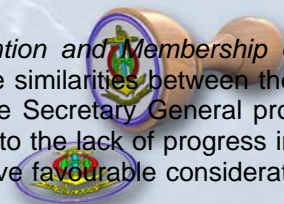
Of particular interest to the IHO: the Assembly noted document A28-21(c), *External Relations – Relations with intergovernmental organizations*, the contents of which were circulated to Member States in IHO CL 08/2013 dated 22 January, *Proposed Agreement of Cooperation between the International Hydrographic Organization and the International Maritime Organization*. The Assembly unanimously approved the Agreement contained in the document. Additionally the Assembly approved the re-organization of the IMO Sub-Committees as reported to Member States in IHO CL 40/2013 dated 25 June, *Report on the 92nd Session of the IMO Maritime Safety Committee and on the IMO Symposium on the Future of Ship Safety*.



IMO Assembly 28 in plenary session

The Assembly also considered documents A28-9, A28-9-1 and A28-9-2, all related to progress on the transition from the Voluntary IMO Member State Audit Scheme to the IMO Member States Mandatory Audit Scheme. The scheme includes the assessment of the provision of national hydrographic services in countries being audited. The Assembly adopted key resolutions and amendments relating to the IMO's Mandatory Audit Scheme, paving the way for the scheme to come into effect by 2016. The Assembly re-iterated its invitation to Member States, that have not yet volunteered for audit, to do so as and when they are ready and as early as possible.

During his introduction of document A28-22 - *Report on the status of the Convention and Membership of the Organization*, the Secretary General re-iterated his support for the IHO, highlighting the similarities between the IMO and IHO and their common purpose for the improvement of safety of navigation. The Secretary General provided comparative figures between IMO and IHO Member State numbers and drew attention to the lack of progress in IMO Member States joining the IHO; he ended by strongly urging IMO Member States to give favourable consideration to joining the IHO.



The Assembly unanimously elected Mr Ünal Çeviköz of Turkey as President, Dr Dalhatu Tafida of Nigeria as first Vice-President and Ms Ana Irene Delgado of Panama as second Vice-President of the Assembly for the biennium 2013-2015.

The next session of the Assembly will take place at IMO Headquarters in the autumn of 2015.



DECEMBER

27TH TRANSFER STANDARD MAINTENANCE AND APPLICATION DEVELOPMENT (TSMAD) WORKING GROUP IHB, Monaco, 2-6 December

The 27th TSMAD took place at the International Hydrographic Bureau, Monaco from 2 to 6 December 2013. Forty-four participants from fourteen Member States' organizations and thirteen stakeholder organizations participated in three separate working group meetings that were held simultaneously during the course of the week.



Participants at the 27th TSMAD Meeting

The S-100/S-101 Group which was chaired by Julia Powell continued work on the development on the S-101 product specification for ENC's and its associated Data Capture and Encoding Guide. Issues relating to the production of the next edition of the S-100 standard were also considered during this meeting.

A Geographic Markup Language (GML) Group made good progress with the development of a profile of the GML encoding standard for inclusion of the next edition of the S-100 standard. The profile will complement the existing ISO 8211 encoding format, and will be used for the development of S-100 based product specifications.

Work continued on the next edition of the S-64 (IHO Test Data Sets for ECDIS) publication. The new edition will include an explanatory test document with a comprehensive suite of test datasets. The final draft document and test datasets are due to be available for review in early 2014.

Other items that were discussed during the course of the meeting included: extensions to the S-100 metadata schema, a review of the S-100 change proposals and the next edition of the S-100 standard, S-100 portrayal, remodeling navigational lights, the Marine Environment MIO Project of EAHC, Weather Information Overlays and development projects being carried out by the Korean Hydrographic and Oceanographic Association. Further information on these projects is available from the TSMAD 27 web page on the IHO web site.



IHO HYDROGRAPHIC COMMISSION ON ANTARCTICA 13th Meeting, Cadiz, Spain, 3-5 December

The *Instituto Hidrográfico de la Marina* (IHM) in Spain, hosted the 12th Meeting of the IHO Hydrographic Commission on Antarctica (HCA) in San Fernando near Cadiz from 3 to 5 December 2013. HCA comprises 23 Member States that are also signatory nations to the Antarctic Treaty. The HCA seeks to improve the quality, coverage and availability of nautical charting and other hydrographic information and services covering the Antarctic region. The meeting was chaired by IHO President Robert WARD. IHB Assistant Director Michel HUET attended as HCA Secretary.

President WARD and Captain José Ramón FERNÁNDEZ de Mesa y Tembory, Director of IHM, welcomed the participants representing fifteen IHO Member States (Argentina, Australia, Brazil, Chile, Colombia (as observer), France, Germany, New Zealand, Norway, Peru, Republic of Korea, South Africa, Spain, United Kingdom and United States), three observer organizations (the Council of Managers of National Antarctic Programs (COMNAP), the International Association of Antarctic Tour Operators (IAATO) and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA)), two international projects (the General Bathymetric Chart of the Oceans (GEBCO) and the International Bathymetric Chart of the Southern Ocean (IBCSO)), one observer from the IHO Maritime Spatial Data Infrastructure Working Group (MSDIWG) and three expert contributors from Caris, Fugro-Pelagos and Kongsberg Maritime.



Participants at the 13th HCA Meeting

The Commission reviewed progress since the previous meeting and received reports from COMNAP, IAATO, IALA, GEBCO and IBCSO, as well as from the IHO Member States in the Commission. Presentations were also given by the expert contributors and the observer from the MSDIWG. Each focused their presentations on the Antarctic environment.

Discussion at the meeting centred on the need to get more bathymetric data in the region, through collecting new data and identifying existing data, further noting that the waters surrounding Antarctica are over 95% unsurveyed. To this end, better coordination of surveys is required as well as the introduction of programmes using *ships of opportunity*. In this connection, a document entitled "*IHO guidelines for the collection and rendering of hydrographic data by Ships of Opportunity operating in the Antarctic Region*", developed by a sub-group led by New Zealand, was adopted by the Commission. President Ward introduced details of a pilot project to use the concept of crowd-sourcing to address the lack of hydrographic data in all regions of the world, including Antarctica. The pilot project, led by the IHO Secretariat as a proof of concept study, will involve the collection of basic hydrographic data from a small number of vessels equipped with a simple, very low-cost data logger (costing about USD200). The data will then be uploaded into the IHO Data Center for Digital Bathymetry (DCDB) where it will be made publicly available for subsequent viewing and use.

A concept proposal described by the expert contributor from Fugro-Pelagos to undertake LIDAR bathymetric surveys in selected areas of the Antarctic Peninsula, using a combination of government and commercial resources was favourably received by the meeting. In this context, the Commission adopted the following declaration:

“In considering how to achieve its agreed survey and charting priorities for the Antarctic region, HCA encourages multi-party multi-disciplinary collaborative projects that involve government, IGO’s, NGO’s, industry and donor organizations. Such projects should, wherever possible:

- *maximise the benefits for all parties*
- *minimise costs by harnessing existing infrastructure*
- *incorporate multi-parameter data collection programmes from the same platform.*

In this context, the outline proposal paper (HCA13-07.2A) presented at HCA-13 is an example that might fulfill such requirements.”

The usefulness of maintaining a liaison with ATCM, through the provision of IHO reports, and participation in ATCM meetings, was discussed. President Ward noted the lack of concrete results regarding ATCM actions and decisions to support hydrographic activities in Antarctica. However, the meeting agreed that continuing a campaign to raise awareness at the ATCM was important and that the engagement of national Hydrographers with their respective national delegates to ATCM was essential. It was decided improved support from ATCM would be sought through Argentina paying a visit to their secretariat in Buenos Aires and through the involvement of the ATCM Operational WG.

A meeting of the HCA Hydrographic Priorities Working Group (HPWG), in charge of coordinating hydrographic surveying and nautical charting (INT charts and ENCs), took place during HCA-13. As a consequence, revised schemes for small and medium scale ENCs (usage bands 1, 2 and 3) were agreed, as well as new schemes for large scale ENCs (usage bands 4 and 5). Also, the inclusion of six new INT charts in the scheme, in the Antarctic Peninsula and in the area of the Larsemann Hills, was agreed. As of December 2013, 71 INT charts had been published, out of 111 charts in the scheme, and 87 ENCs out of the some 150 ENCs that are expected eventually.

An on-line Antarctic GIS (<http://hca.iho.int/>), developed by the IHO Secretariat in Monaco, was demonstrated. It enables selected layers of hydrographic-related information to be displayed on top of an Antarctic coastline and bathymetry background. The underlying database currently comprises metadata on hydrographic surveys, INT charts, ENCs, Maritime Shipping Routes (MSR), tide records, scientific stations, and undersea feature names. The system allows layers to be selected as needed and provides functions such as zooming in and out, and displaying the attributes associated with a feature (for example, the INT number, title, limits and producer of a given INT chart). A typical utilization of the GIS could be to examine, as part of a chart production plan exercise, the area delimited by a planned INT chart and see where surveys have already been conducted, by whom and when. This should be helpful in any decision making regarding the need for future surveys in the area concerned. The next steps will be to update the survey metadata contained in the GIS database and add a new layer on surveys planned in Antarctica in the next two years or so by HCA Member States.

IHO/HCA Antarctic GIS

Antarctic Mercator

Select features to display:

- Undersea feature name (multi point)
- Undersea feature name (point)
- Undersea feature name (multi line)
- Undersea feature name (line)
- Undersea feature name (polygon)
- Maritime shipping route
- ENC published NP1
- ENC published NP2
- ENC published NP3
- ENC published NP4
- ENC published NP5
- ENC published NP6
- ENC schemed NP1
- ENC schemed NP2
- ENC schemed NP3
- Survey (polygon)
- Survey (line)
- INT published NP1
- INT published NP2
- INT published NP3
- INT published NP4
- INT published NP5
- INT schemed NP1
- INT schemed NP2
- INT schemed NP3
- Scientific stations
- Tide records
- Craticule
- IBCSO bathymetry

Refresh screen

Attribute of indicated feature

INT No.	producer	national No.	title	Chart limits				scale		date	format	printer
				south	north	west	east	1:	scale Lat.			
9156	AR	B-724	Archipiélago de Palmer, de Isla Trinidad a Isla Anderson	64°10.05' S	63°20.00' S	63°49.50' W	60°07.00' W	150,000	66.5	10/		

The HCA on-line Antarctic GIS

The 14th meeting of the HCA has tentatively been scheduled for March or April 2015 in Ecuador.

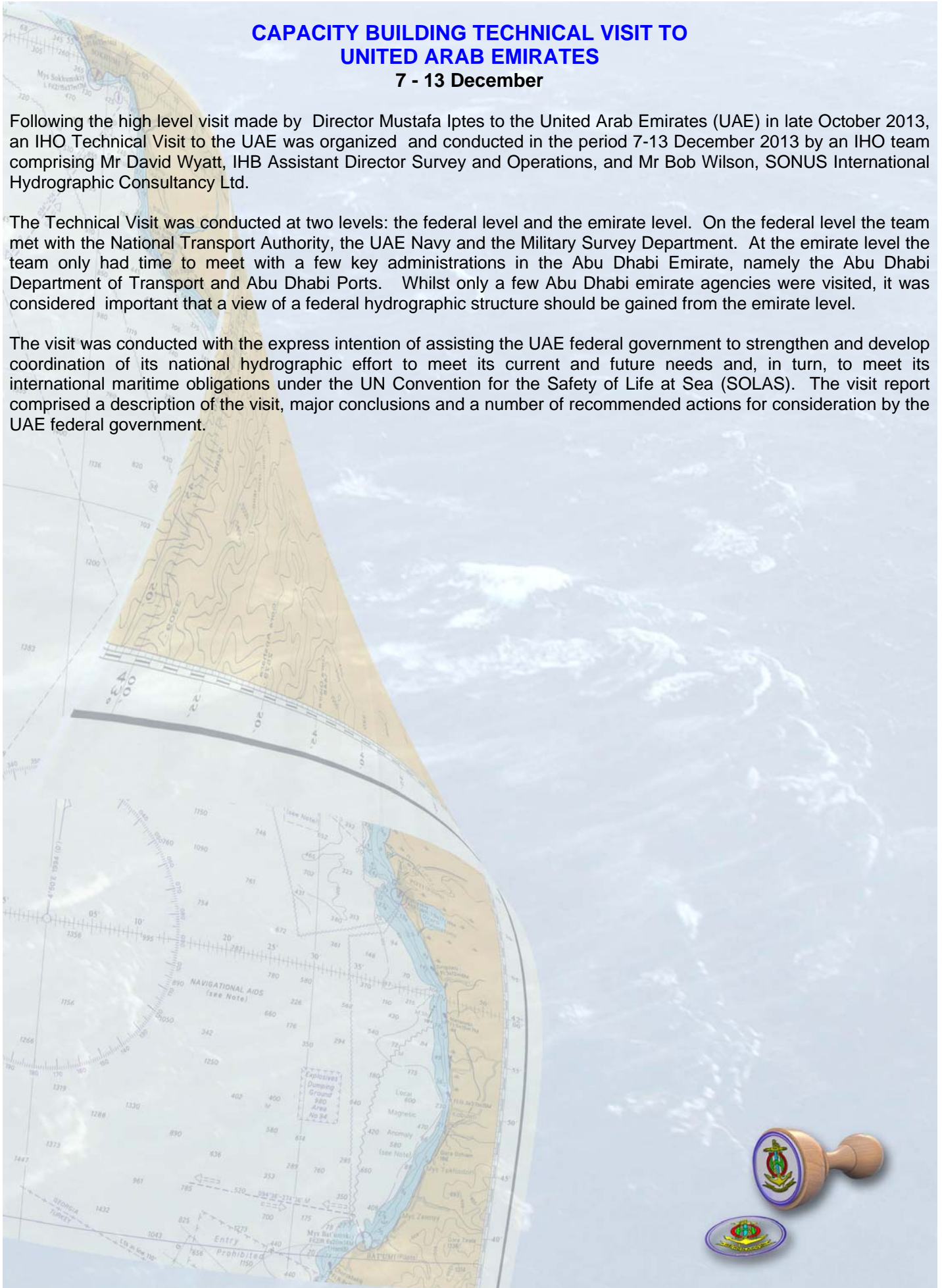
CAPACITY BUILDING TECHNICAL VISIT TO UNITED ARAB EMIRATES

7 - 13 December

Following the high level visit made by Director Mustafa Iptes to the United Arab Emirates (UAE) in late October 2013, an IHO Technical Visit to the UAE was organized and conducted in the period 7-13 December 2013 by an IHO team comprising Mr David Wyatt, IHB Assistant Director Survey and Operations, and Mr Bob Wilson, SONUS International Hydrographic Consultancy Ltd.

The Technical Visit was conducted at two levels: the federal level and the emirate level. On the federal level the team met with the National Transport Authority, the UAE Navy and the Military Survey Department. At the emirate level the team only had time to meet with a few key administrations in the Abu Dhabi Emirate, namely the Abu Dhabi Department of Transport and Abu Dhabi Ports. Whilst only a few Abu Dhabi emirate agencies were visited, it was considered important that a view of a federal hydrographic structure should be gained from the emirate level.

The visit was conducted with the express intention of assisting the UAE federal government to strengthen and develop coordination of its national hydrographic effort to meet its current and future needs and, in turn, to meet its international maritime obligations under the UN Convention for the Safety of Life at Sea (SOLAS). The visit report comprised a description of the visit, major conclusions and a number of recommended actions for consideration by the UAE federal government.



14TH MEETING OF THE MESO-AMERICAN AND CARIBBEAN SEA HYDROGRAPHIC COMMISSION (MACHC) Sint Maarten, Kingdom of the Netherlands, 9-13 December 2013

The 14th Meeting of the MesoAmerican and Caribbean Sea Hydrographic Commission (MACHC) was held in Sint Maarten (Netherlands) from 9 to 13 December 2013 with 60 participants from ten Member States, two Associate Members, one observer country, seven observer organizations, and ten companies. President Robert Ward and Assistant Director Alberto Costa Neves represented the IHB.

The meeting was informed of significant progress on a proposal under the leadership of Antigua and Barbuda to develop sub-regional hydrographic services in the waters of the Member States of the Organization of Eastern Caribbean States (OECS). The project is a direct result of the local and political interest and support generated from a Capacity Building training course (Introduction to Hydrographic Surveying and Nautical Charting) held in Antigua in 2011, with active participation of industry (CARIS, Fugro Pelagos, Kongsberg Maritime). Once donor funding has been obtained, the project will enable the development of a Regional Hydrographic Service in the Eastern Caribbean.

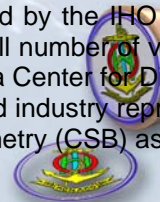
The meeting was briefed on the significant progress in ENC coverage in the region. Cuba has developed its own ENC production capacity and its first eight ENCs have been validated by the IC-ENC RENC and are now being distributed worldwide. An additional four were already delivered and are in the process of validation. Further developments also happened in the INT Charts in the region. New INT Charts from Mexico were incorporated in the Pacific side of the region. During the event Cuba handed the new chart catalogue. This, and other collaborative activities, reflected the growing levels of technical cooperation between all MACHC States in the region.



Mr. Diógenes López Almeida (right) from Cuba provides the latest Cuban nautical chart and catalogue to Mr. John Nyberg (USA), Chair of the MACHC Integrated Chart Committee

During the meeting plans were made to further improve nautical charts, particularly by resolving outstanding overlaps and gaps in ENC coverage. From an initial 26 overlaps in ENCs, 19 have been resolved and work is underway to resolve the remaining seven. The Commission was informed of the development of a risk-based methodology being used to help identify and prioritize the need for surveys, based on a number of factors such as environmental sensitivity, traffic volume, priority ports and available survey quality.

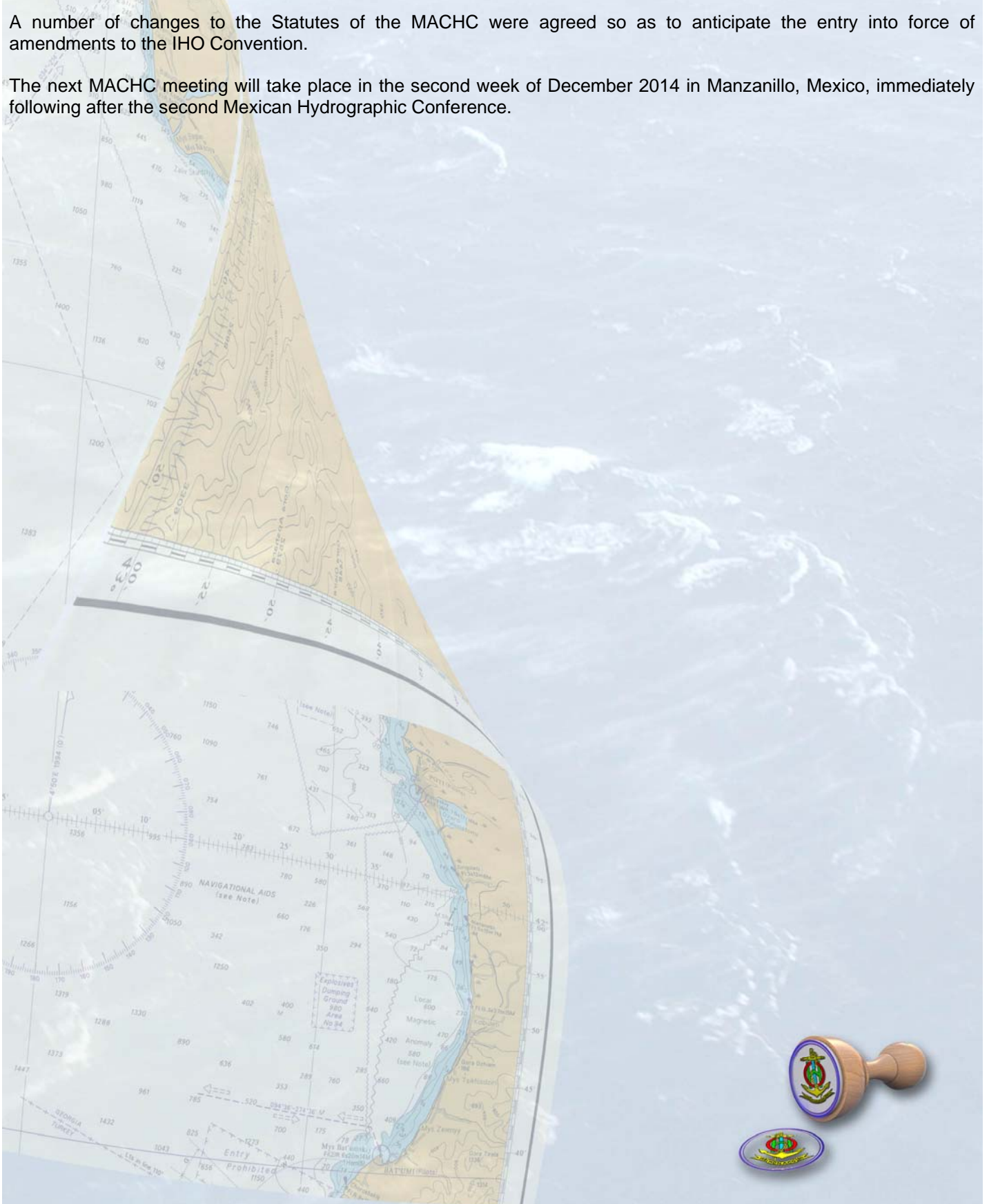
IHO President Robert Ward presented details of a pilot project to use the concept of crowd-sourcing to address the lack of hydrographic data in many regions, including the MACHC. The pilot project, led by the IHO secretariat as a proof of concept study, will involve the collection of basic hydrographic data from a small number of vessels equipped with a simple, very low-cost data logger. The data will then be uploaded to the IHO Data Center for Digital Bathymetry (DCDB) where it will be publicly available for subsequent viewing and use. Members and industry representatives also updated the Commission on a number of other developments in Crowd-Sourced Bathymetry (CSB) as well as Satellite Derived Bathymetry (SDB).



The Commission noted the progress made with its Maritime Economic Infrastructure Programme (MEIP), which aims to be part of a regional Marine Spatial Data Infrastructure (MSDI) that supports the blue economy in the region. A Stakeholders' Seminar was held during the meeting. The participants learned of the contribution made by Industry in the region through its support to Capacity Building, and helping to optimize survey capacity by taking advantage of platforms that are deployed in neighbouring countries. During the seminar a proposal to create a Hydrographic Society in the region was agreed and plans were developed to progress this initiative further.

A number of changes to the Statutes of the MACHC were agreed so as to anticipate the entry into force of amendments to the IHO Convention.

The next MACHC meeting will take place in the second week of December 2014 in Manzanillo, Mexico, immediately following after the second Mexican Hydrographic Conference.



HIGH LEVEL OFFICIAL VISIT TO MALTA

10-11 December

IHB Director Mustafa Iptes paid a high level official visit to Malta from 10 to 11 December 2013 to invite and encourage Malta to apply to become a Member State of the IHO.

Director Iptes called on H.E. Joe Mizzi, Minister for Transport and Infrastructure, and Dr. Albert Caruana, Director General of the Continental Shelf Department of the Ministry. He presented the activities of the IHO and underlined the importance of hydrography, the provision of national hydrographic services and the benefits of becoming a full Member State of the IHO.

Director Iptes was informed that Malta, as an important maritime country and significant Flag State of the IMO, has a positive desire to join the IHO in the near future.

Director Iptes also had meetings with Captain David Bugeja, Chief Officer, Ports and Yachting Department, and Mr Joseph Bianco, Hydrographer of Malta, during his visit. He also made a courtesy visit to Mr. Anthony Miceli DeMajo, Ambassador-designate of Malta to Monaco.



Director Iptes and Mr. Anthony Miceli DeMajo, Ambassador-designate of Malta to Monaco.



STAKEHOLDER WORKSHOP FOR OIL SPILL RESPONSE COMMON OPERATING PICTURE (COP) ExxonMobil, Leatherhead, United Kingdom, 19 December



The screenshot shows the OGC website interface. The header includes the OGC logo and the tagline "Making location count." Below the header is a navigation menu with options like Home, Standards, Programs, Participate, News & Events, About OGC, and Member Login. The main content area is titled "OGP / IPIECA Oil Spill Response Common Operating Picture (COP)". It includes a "Current status" section stating "Registration for two Stakeholder Workshops is now open." and an "Objectives" section stating "The OGC project supports OGP and IPIECA to develop a recommended practice for GIS mapping in support of oil spill response and for the use of GIS technology and geo-information in forming a Common Operating Picture (COP) for management of the response." A "Background" section follows, explaining the need for a common picture of reality for different organizations.

As part of an industry process to produce a recommended practice for Geographic Information System (GIS) mapping, the Open Geospatial Consortium (OGC) issued a "Request for Information (RFI) on a Common Operating Picture (COP) for oil spill response". The IHO provided some background information and this was reported to IHO Member States in Circular Letter 52/2013. The activity is co-sponsored by the International Association of Oil & Gas Producers (OGP) and the global oil and gas industry association for environmental and social issues (IPIECA). The OGC invited the organizations that had responded to the RFI to attend one or both of two one-day "Stakeholder Workshops", held in the United Kingdom and in the USA respectively. Director Gilles Bessero represented the IHO at the first workshop which took place on 19 December at ExxonMobil UK headquarters, in Leatherhead, near London.

The workshop participants were welcomed by Richard Wylde, Geodetic Advisor for ExxonMobil, Rob Cox, Technical Director of IPIECA, and Roger Abel, Shell, Chair of the Geo-information Sub-committee of the OGP Geomatics Committee. The workshop was chaired by George Percivall, OGC Chief Engineer, and attracted about fifty participants, mainly from the industry (oil and gas companies, service providers, and consultants). Besides the IHO, non-industry participants included the European Maritime Safety Agency, the Finnish Environment Institute and SINTEF, a Scandinavian research organization based in Norway.

The objectives of the workshop were to review the responses to the RFI and engage the stakeholder community in discussion to guide the further development of a recommended practice. Nine organizations, out of the 18 which had responded to the RFI, presented the highlights of their contributions. After recalling the lack of modern surveys in many parts of the world and describing the role and structure of the IHO, Director Bessero highlighted the contribution of national hydrographic offices in establishing the COP, the link with the IHO framework for response to marine disasters, the issue of land-sea integration in the context of spatial data infrastructures, and the relevance of standards developed by the IHO, notably the S-100 Universal Hydrographic Model and the associated product specifications. The IHO presentation was well received.

The discussions that followed were structured in three parallel groups which reviewed the "enterprise viewpoint", the "information viewpoint" and the "delivery viewpoint" respectively. The discussions focused mainly on requirements and shortcomings drawn from past experiences.

The project team will consider the way forward and potential additional requests for stakeholders' inputs after the second workshop, scheduled on 9 January 2014.



NEW HYDROGRAPHERS

NAMES	COUNTRY	DATE
<u>Commodore Brett BRACE</u>	AUSTRALIA	January 2013
<u>Commodore Ashraf EL MOGHANNY</u>	EGYPT	January 2013
<u>Rear Admiral Fernando PEÑARANDA Muñoz</u>	PERU	January 2013
<u>Vice Admiral Agostinho RAMOS DA SILVA</u>	PORTUGAL	January 2013
<u>Mr. Gyeong-Cheol PARK</u>	REPUBLIC OF KOREA	April 2013
<u>Commodore George MATARANGAS</u>	GREECE	July 2013
<u>Vice Admiral Antonio Reginaldo PONTES LIMA Junior</u>	BRAZIL	August 2013
<u>Captain Sergey V. TRAVIN</u>	RUSSIA	October 2013
<u>Mr Rainer MUSTANIEMI</u>	FINLAND	December 2013



NEW HYDROGRAPHER OF AUSTRALIA



BSc. (Hons), Grad. Dip. (Hydrography), Grad. Cert. (Mgmt), MEngSc. (SIS), MA (Strategic Studies), Cert. Prof. Hydrographic Surveyor Level 1, SSSI.

Commodore Brett Brace joined the Royal Australian Navy in 1984. After initial naval training he gained a Bachelor of Science with honours from the University of New South Wales (UNSW) and later specialized in Hydrography. His further education includes the Royal Australian Navy Staff Course, a Graduate Diploma in Hydrography, a Graduate Certificate in Management from Queensland University of Technology (QUT), a Master of Engineering Science in Spatial Information Systems from UNSW, and graduation from the Centre for Defence Strategic Studies where he obtained a Master of Arts in Strategic Studies from Deakin University.

His seagoing experience spans 16 years and encompasses hydrographic surveying operations around Australia and Papua New Guinea. Highlights of his career include sea Commands of HMA Ships MERMAID, LEEUWIN and MELVILLE, with hydrographic shore positions as Staff Officer Operations, Staff Officer Quality Control, OIC RAN Hydrographic School, Head of Data Management, and Deputy Hydrographer. In 2010 and 2011, he undertook specialist employment with the Australian Maritime Safety Authority (AMSA) as the Principal Advisor Under Keel Clearance and Pilotage, focusing on Torres Strait.

In January 2013 Commodore Brace was appointed Hydrographer of Australia and Director General, Navy Hydrography and METOC Branch. He is Chairman of the Australasian Hydrographic Surveyors Certification Panel, the Permanent Committee on Tides and Mean Sea Level, and Ports Australia Hydrographic Surveyors Working Group.



NEW HYDROGRAPHER OF REPUBLIC OF KOREA

Mr Gyeong-Cheol PARK was appointed as Acting Director General of the Korea Hydrographic and Oceanographic Administration (KHOA), Ministry of Oceans and Fisheries on 22 April 2013. He took office as KHOA's 37th Director General on 31 December 2013.

A career public servant, Mr PARK has a Master of Science degree in Public Administration from Seoul National University. Since 2006, he has held a number of senior positions in the Ministry of Oceans and Fisheries and the Ministry of Land, Transport and Maritime Affairs. His roles have included Team Leader for Policy Planning, Team Leader for Logistics Planning, Director of Port Logistics Division, Director of Ports and Logistics Planning, Director of Shipping Policy Division, Director of Motor Vehicles Policy Division.

ACADEMIC BACKGROUND

- August 1999: Master of Science in Public Administration, Graduate School of Public Administration, Seoul National University.
February 1991: Bachelor of Science in Public Administration, Yonsei University.

PROFESSIONAL CAREER

- December 2013 - Present: Director General, Korea Hydrographic and Oceanographic Administration, Ministry of Oceans and Fisheries.
April - December 2013: Acting Director General, Korea Hydrographic and Oceanographic Administration, Ministry of Oceans and Fisheries.
March 2011 - March 2013: Director of Motor Vehicles Policy Division, Office of Transport Policy, Ministry of Land, Transport and Maritime Affairs.
November 2009 - February 2011: Director of Shipping Policy Division, Office of Logistics and Maritime Affairs, Ministry of Land, Transport and Maritime Affairs.
May - October 2009: Director of Ports and Logistics Planning, Office of Logistics and Maritime Affairs, Ministry of Land, Transport and Maritime Affairs.
March 2008 - April 2009: Director of Port Logistics Division, Office of Logistics and Maritime Affairs, Ministry of Land, Transport and Maritime Affairs.
February 2007 - February 2008: Team Leader for Logistics Planning, International Planning Division, Ministry of Maritime Affairs and Fisheries.
July 2006 - January 2007: Team Leader for Policy Planning, Office of Policy Public Relations Management, Ministry of Maritime Affairs and Fisheries.



NEW HYDROGRAPHER OF GREECE



Commodore George MATARANGAS HN joined the Hellenic Naval Academy in 1980 and graduated in June 1984, receiving his commission as an Ensign.

Since then, he has been promoted in accordance with Hellenic Navy regulations and in 2013 where he has been promoted to the rank of Commodore.

He has served in different types of surface military vessels and has assumed a multitude of Operational and Technical duties.

He has moreover been appointed as Commanding Officer in the following ships:

- Coastal Patrol Boat PANAGOPOULOS I.
- Coastal Patrol Boat STAMOU
- Guide Missile Fast Attack Boat SIMITZOPOULOS
- Frigate SPETSAI

He has also been placed in a number of staff positions, among them:

- Hellenic Naval Staff and Command College – Studies Director
- NATO SHAPE – Ops and Int. Officer in National Military Representation
- NMIOTC – Chief of Staff
- Hellenic Navy Hydrographic Service – Deputy Director
- Naval Attaché of Greece in the United States of America (Washington DC)

Since July 2013, he is Director of the Hellenic Navy Hydrographic Service.

He is a graduate of the Navigation School from the Training Centre of Palaskas, the Naval War College and the Hellenic National Defense College (HNDC).

He has been honoured with the following decorations:

- Golden Cross of the Order of Phoenix
- Golden Cross of the Order of Honour
- Commander's Cross of the Order of Phoenix
- Commander's Cross of the Order of Honour
- Medal of Military Merit third and second Class
- Honours of Staff Officer Services second Class
- Honours of participation in a peace-keeping mission

Since 1993, he is married with Xrysanthi Paxinou and he has two children Dionysis and Despina.



NEW HYDROGRAPHER OF BRAZIL



Vice-Admiral Antonio Reginaldo PONTES LIMA, Jr. took over as Head of the Brazilian Hydrographic Service in August 2013.

He was born in São Paulo, SP, Brazil, in March 1958. In 1977 he joined the Brazilian Naval Academy on Villegagnon Island, Rio de Janeiro and upon graduation in 1980, he was commissioned as Ensign and assigned to the Brazilian Naval Fleet. He specialized in Naval Armament.

He attended various military courses, including the Command and Staff Course at the Brazilian Naval War College and the Defence Higher Studies course (*Alti Studi per La Difesa*) in Rome, Italy.

He served on the following Brazilian Navy ships: Training Ships CUSTÓDIO DE MELLO and BRAZIL, Aircraft Carrier MINAS GERAIS, Frigate NITERÓI; and was Commanding Officer of the Coastal Patrol Boat PIRAJÁ. His shore billets included: Head of South East Naval Ships Group, Commanding Officer of Naval Command Control of Maritime Traffic, Head of the Naval Analysis Systems Center, Commanding Officer of Surface Force Command.

Among the numerous decorations he received are the following medals: Naval Order of Merit, Military Order of Merit, Gold Military Service, Air Force Order Merit, and Seaman Merit.



NEW HYDROGRAPHER OF RUSSIA

Captain Sergey V. Travin took over as Chief of the Hydrographic Service of the Russian Navy from Captain Alexandr Shemetov on 10 October 2013.

Captain Travin was born in January 1972. He studied at the Naval College for boys from 1987-1989 before entering the hydrographic faculty of the Higher Naval College in Saint-Petersburg. He graduated from the Naval College in 1994 and served as a hydrographer onboard various hydrographic vessels.

In 1996 and 1997 he followed the Navy Higher? Senior? Officer Classes before serving as an officer and later as a senior officer in a number of different divisions of the Department of Navigation and Oceanography of the Russian Ministry of Defense. In 2004 he was appointed as Chief of the Navy Repair Plant of Technical Navigation Equipment.

In 2006 he defended his scientific thesis and was awarded a PhD degree. He has also been awarded several national medals.

Captain Travin, PhD is married and has a daughter.

