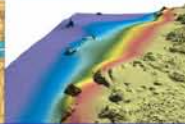
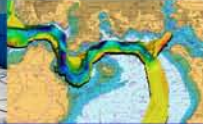




INTERNATIONAL HYDROGRAPHIC BULLETIN



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January - June 2012



REGIONAL HYDROGRAPHIC COMMISSIONS

11th MEETING of the SOUTH WEST PACIFIC HYDROGRAPHIC COMMISSION (SWPHC) Brisbane, Australia, 13-16 February

The 11th meeting of the South West Pacific Hydrographic Commission (SWPHC) took place in Brisbane under the chairmanship of Mr Nicholas Pion (Papua New Guinea). The meeting was organized and hosted by Australia. Six of the eight Member States of the Commission were represented at the meeting, plus observers from the Cook Islands, French Polynesia, Kiribati, Niue, Palau, Samoa, Solomon Islands, Vanuatu, the Pacific Islands Applied Geoscience Commission (SOPAC) and nine representatives from industry and academia. The IHB was represented by Director Ward.



11th meeting of the SWPHC in Brisbane, Australia

The first two days of the meeting were dedicated to a technical workshop on Ports and Shallow Water Bathymetry, funded by the IHO Capacity Building Fund. The workshop covered the principles of hydrographic surveying and included a practical demonstration on board a survey launch from Maritime Safety Queensland. The workshop concluded with a description of the progress being made in Australia on developing Satellite Derived Bathymetry as a technology with the potential for charting in the South West Pacific and elsewhere.

On 15 and 16 February national reports and IHO activities were reviewed at the meeting, especially concerning the International Hydrographic Bureau, the IHO Inter Regional Coordination Committee and the IHO Hydrographic Services and Standards Committee. The Observer States all provided reports on their progress and plans towards establishing in-country hydrographic capabilities that will support their Principal Charting Authorities –Australia, New Zealand, UK and USA.

Recognising that there are Pacific Island States adjacent to the area covered by the SWPHC that share common issues with the SWPHC community, the eligibility for membership of the Commission was extended to cover all States that are members of the Secretariat of the Pacific Community (SPC). As a result of this change, the UK (Pitcairn Islands) became a full member of the SWPHC.



The capacity building objectives for the region were discussed at length and several actions were identified and prioritized. As a result, a number of Capacity Building proposals will be presented to the next meeting of the IHO Capacity Building Sub-Committee.

The UK was elected to chair the Commission for the next term, with Papua New Guinea to serve as Vice-Chair.

The Republic of Vanuatu, currently an Observer State of the SWPHC, offered to host the 12th meeting of the SWPHC in November 2013.

12th NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION MEETING **Colombo, Sri Lanka, 20-23 March**

The 12th Meeting of the North Indian Ocean Hydrographic Commission (NIOHC) took place in Colombo, Sri Lanka from 20 to 23 March. Forty-one (41) delegates from 14 States participated in the meeting. Vice Admiral Alexandros Maratos represented the IHB. During the meeting a one-day "Industry Day" was organized where representatives from 10 companies (Caris, ESRI, Furgo Pelagos, IIC Technologies, Jeppesen, Kongsberg Maritime, Pelydryn, et cetera) participated. The theme of the Industry Day was focussed on Capacity Building and more particularly on the way in which Stakeholders can support the Capacity Building requirements of the NIOHC. New technologies concerning hydrographic activities were also presented. Admiral Maratos updated the participants on the status of voting with regard to the Protocol of Amendments to the IHO Convention and the pending Member States. He also informed the participants about the preparations for the XVIIIth IHC and on matters concerning cooperation with other organizations.



The Minister of Fisheries and Aquatic Resources Development, the Hon. Dr Rajitha Senarathne, was present at the Opening Ceremony and he addressed the Commission. Admiral Maratos gave the Keynote Address emphasizing the importance of Hydrography to the RHCs. The Meeting considered various issues of interest to this region: the status of production of ENCs and the problems that various producers have encountered, the status and progress of International Charts, Capacity Building requirements, the promulgation of Maritime Safety Information, the plan in the region to respond to disasters and national reports were some of the issues that were discussed.

The Hydrographer of India, Rear Admiral Saroj Kumar Jha was elected Chairman of the NIOHC and Rear Admiral Charin Boonmoh (Thailand) was elected Vice-Chairman. Both will serve for a two-year period. After this period the Vice-Chairman will take over as the Chairman of the NIOHC and a new Vice-Chairman will be elected. It was tentatively decided that the next meeting will take place in Myanmar early in 2013, pending confirmation.

6th MEETING OF THE SOUTH WEST ATLANTIC HYDROGRAPHIC COMMISSION (SWAtHC) Montevideo, Uruguay, 15-16 March

The Sixth Meeting of the South West Atlantic Hydrographic Commission was held at the Hydrographic Service of Uruguay (*Servicio de Oceanografía, Hidrografía y Meteorología de la Armada - SOHMA*) in Montevideo, Uruguay, on 15-16 March 2012.

The Hydrographers of Brazil and Uruguay were present, as well as the Hydrographer of Paraguay (Associate Member) and Chile (Observer). Captain GORZIGLIA, IHB Director, represented the IHB accompanied by Captain COSTA NEVES. Regrettably, the Hydrographer of Argentina could not attend the meeting.

Captain PEREYRA, Hydrographer of Uruguay and Chairman of the Commission, welcomed the participants and thanked the observers for having accepted the invitation. The Actions agreed at the last meeting were reviewed and discussions took place particularly on the harmonization of the INT Charts and ENC in bordering areas. Brazil and Uruguay reached an agreement on the bordering ENC cells. The harmonization of inland ENCs was also discussed in the meeting, due to the extensive navigable inland waters shared by the South American countries. Print-on-demand was also discussed and Chile shared its experience in this matter, as well as the advantages and disadvantages.



Captain GORZIGLIA, IHB Director, made a presentation about the coming XVIII IHC matters: the documents issued and their importance, the meaning of each proposal, the agenda, the programme, the way the conference runs and the Directing Committee election process. He also reported on the main subjects under consideration by the IHO since the last meeting of the Commission, in particular staff changes, memoranda of understanding with other international organizations, ENC and the involvement of the IHO with ECDIS, the Capacity Building actions and results, the progress of C-55 and the coming discussions, the Protocol of Amendments of the IHO Convention and IHO membership.

Several reports presented the work of the HSSC and the IRCC, including details of some of their sub-bodies. The contingency plans and tests for NAVAREAs V (Brazil) and VI (Argentina) were presented, both ready to provide mutual support. Uruguay reported the establishment of a recommended route running along the coast from the border with Brazil to the city of Montevideo. Uruguay also reported on the arrangements with Argentina to produce an INT Chart for the La Plata River mouth.

The Commission also discussed the 5-year Capacity Building work plan and the adjustments needed to face the region's challenges. As regards the participation of SWAtHC in the Editorial Board of the International Hydrographic Review, Brazil accepted to propose one Hydrographer to join the Board.

After discussing the overall subjects reported, the Commission identified several actions that need to be undertaken, and an Action List was agreed, including the planned technical visit to Paraguay, the Hydrographic Office and government officials.

In accordance with the Statutes, Argentina was elected Chairman and Brazil Vice-Chairman of the Commission. The Commission decided to hold the next meeting in 2013, and the Chairman was tasked to organize it.

35TH MEETING OF US-CANADA HYDROGRAPHIC COMMISSION **Niagara Falls, Canada, 14 May**

The 35th Meeting of the US-Canada Hydrographic Commission was held in Niagara Falls on 14 May hosted by Canada. The meeting took place immediately before the Canadian Hydrographic Conference that followed the theme: *The Arctic - Old Challenges, New Approaches*.

As is the custom, the meeting was co-chaired by the Dominion Hydrographer of Canada and the Director, Office of Coast Survey of the USA; Dr Savi Narayanan and Captain John E. Lowell respectively.

The meeting reviewed the excellent progress made between the two States and in particular the conclusion of further agreed production boundaries and cooperative production arrangements for the trans-boundary areas between Canada and the USA. The principles that have been established could also be models for use in other regions. At the end of the meeting the two national Hydrographers signed an extension to the formal agreement on trans boundary ENC production that incorporated principles developed during the intersessional period.



Dr Savi Narayanan, Dominion Hydrographer and Captain John Lowell, Hydrographer of the USA sign the extension to the ENC Trans boundary ENC Production Agreement

Discussion also took place on the contribution that the two States were making in the Arctic and their work in the neighbouring Arctic Regional Hydrographic Commission, including ENC and chart scheming activities. The Commission discussed and agreed various positions on issues that would be discussed at the forthcoming meeting of the Inter-Regional Coordination Committee, particularly relating to ongoing studies of IHO publication C-55 - *Status of Charting and Surveying Worldwide* and the topic of Marine Spatial Data Infrastructures (MSDI).

At the end of the meeting, Dr Narayanan paid tribute to Captain Lowell who would be retiring shortly after the meeting. The 36th meeting of the Commission will be hosted by the USA in New Orleans, in March 2013 and will coincide with the next US Hydrographic conference to be held at the same venue.

NORDIC HYDROGRAPHIC COMMISSION

Copenhagen, Denmark, 22-23 May

On 22 and 23 May 2012, the 56th Meeting of the Nordic Hydrographic Commission was hosted in Copenhagen by Kort & Matrikelstyrelsen (the National Survey and Cadastre), part of the Danish Ministry of Environment. KMS is responsible for the planning and production of nautical charts of the waters surrounding Denmark, the Faroe Islands and Greenland. The meeting took place in the Danish Royal Academy of Sciences and Letters.

Mr Sigvard Stampe Villadsen, Head of the Hydrographic Division of KMS, chaired the meeting. All RHC Members were represented: Denmark, Finland, Iceland, Norway and Sweden. Director Ward represented the IHB as an observer.



56th Meeting of the Nordic Hydrographic Commission

The meeting reviewed hydrographic progress in the region and the various developments affecting the region and agreed on a number of actions to further enhance cooperation and the development of hydrographic services among the members. These are described in the records of the meeting posted on the IHO website at: www.iho.int → *committees & WGs* → *RHCs*. As well as the presentation of national reports on progress and notable developments in the past year, discussion points included: hydrographic office involvement in Maritime Spatial Data Infrastructures, lessons learned from contract support for hydrographic surveys, data copyright, national policies on the accessibility of high-resolution bathymetry, and improvements in data exchange arrangements between adjacent HO's.

At the end of the meeting Sweden took up the Chair of the Nordic RHC. The 57th meeting of the NHC will be in Sweden in April 2013.

30th MEETING OF THE NORTH SEA HYDROGRAPHIC COMMISSION

Alesund, Norway. 18-21 June

The 30th Meeting of the North Sea Hydrographic Commission (NSHC) took place in Alesund, Norway from 18 to 21 June, under the Chairmanship of the French Hydrographer, Ingénieur général Bruno Frachon. Twenty-three representatives participated from the following ten Members of the Commission: Belgium, Denmark, France, Germany, Iceland, Ireland, Netherlands, Norway, Sweden, and UK. Commodore Theodosiou, the Director of the Greek Hydrographic Service, was invited to participate in his capacity as Chairman of the MBSHC, for the subject of cooperation with the EU. Representatives from Jeppesen, Kongsberg Maritime and Pôle Mer Bretagne were invited to participate and to make presentations on topics of interest to the Commission. Vice-Admiral Alexandros Maratos represented the Bureau.



The work of the Commission and the subjects discussed were organized based on the three work programmes of the Organization: Corporate Affairs, Hydrographic Services and Standards and Inter Regional Coordination and Support. Issues of interest to the Commission were discussed and the following can be highlighted: the status of the ratification of the Protocol of Amendments to the Convention on the IHO and pending applications for IHO membership, cooperation with the EC after the signing of the MoU at the XVIIIth IHC, the follow-up actions to the IHC decisions, ECDIS and ENC issues and the progress of the implementation of programmes in cooperation with the EU, like BLAST and MOREANO, the review of the IRCC actions and violations of copyright of Danish charts. The President of the Directing Committee outlined the progress and actions taken on various issues on the Agenda.

Commander Evert Flier, Director of the Norwegian Hydrographic Service, was elected as the new Chairman of the NSHC. The next meeting of the NSHC will be held early in 2014 in The Netherlands.



COMMITTEES / SUB-COMMITTEES / COMMISSIONS

23RD TRANSFER STANDARD MAINTENANCE AND APPLICATIONS DEVELOPMENT (TSMAD) WORKING GROUP MEETING Wellington, New Zealand, 11-15 January

The Transfer Standard Maintenance and Applications Development (TSMAD) held its 23rd meeting in Wellington, New Zealand between the 11th and 15th of January 2012. The meeting was attended by members from Australia, Brazil, Canada, Finland, France, Germany, Japan (JHA), New Zealand, Norway, Sweden, Turkey, UK, USA (NOAA) and USA (NGA). Other stakeholder organizations attending the meeting included; the Inland ECDIS Harmonization Group, CARIS (Canada), Jeppesen Marine, KESTI (Korea Rep.), IC-ENC, IIC Technologies, L-3 Nautronix (Australia) and SevenCs (Germany).



One of the primary tasks of the TSMADWG is the development of the S-101 ENC Product Specification. A status report was provided on the progress made on this document and issues related to the associated S-101 encoding, portrayal and distribution were discussed. A discussion on the potential impact that S-101 ENC production, distribution and implementation will have for all stakeholder communities was held. It was concluded that further information was required in order to gain a better understanding of what the impact will be.

Other issues discussed included several proposals for new constructs in S-101, and the production of new editions of the S-58 and S-64 publications.

The next TSMAD meeting is scheduled to take place at the IHB, Monaco between the 7th and 11th of May 2012.

JAPAN CAPACITY BUILDING PROJECT 7th COORDINATION MEETING UKHO, Taunton, UK, 6 February

The 7th Coordination Meeting was held on 6 February at the UKHO, under the chairmanship of Mr. Jeff Bryant. Those present were: Dr. Nishida and Mr. Kanazawa from the JHA; Mr. Matsumoto from JHOD; Mr. Westcott and Mr. Bryant (joined by Mrs P. Hocking after lunch) from the UKHO and Captain Hugo Gorziglia from the IHB.

The UK National Hydrographer, Admiral Nick Lambert, opened the meeting and welcomed the delegates. Dr. Nishida stated that the JHOD were looking for ways to persuade the Nippon Foundation to extend its support for another 5 years. To achieve this they would require evidence of success, ongoing demand for the training and a recommendation concerning the next steps.



**First row: Mrs. Hocking (UKHO); Dr. Nishida (JHA); Mr Matsumoto (JHOD) Mr Kanazawa (JHA)
Second row: Captain Gorziglia (IHB); Mr Westcott (UKHO) and Mr Bryant (UKHO)**

The Agenda included the assessment of the overall progress of the Project and lessons learned from the 3rd Course. Peter Westcott made a presentation on the evaluation of the last training course, including the selection criteria and the overall progress of the course that ended successfully in December 2011. The importance of the participation of Dr. Kato, Hydrographer of Japan and Dr. Nishida from the JHA was emphasized at the opening ceremony of the Course. Also the motivational visit paid by Captain Gorziglia and Mr. Yamao from the IHB during the second module of the Course. A copy of the report has been posted on the IHB website.

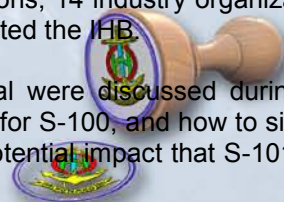
The Meeting discussed and agreed on some improvements to be considered for the future courses and also agreed to announce the 4th Japan Capacity Building Project course, as the Nippon Foundation has confirmed its support for it. The Course will run from 03 September to 14 December 2012 at the UKHO.

In discussing the future extension of the Project, it was agreed that the JCB project should continue to focus on marine cartographic training but perhaps consider the inclusion of a Cat. A element in the future, an initiative that requires careful consideration. Also it was agreed that evidence of the success of the three courses together with supporting documentation, conclusions and recommendations should be prepared to be presented to the NF by August 2012. The UKHO agreed to produce a draft Progress Report for discussion at the 8th Coordination meeting that will take place at the IHB in April 2012.

JOINT TSMAD24 AND DIPWG4 MEETING Monaco, 7-11 May

A joint meeting of the IHO Transfer Standard Maintenance and Application Development Working Group (TSMAD) and the Digital Information Portrayal Working Group (DIPWG) took place at the IHB, Monaco from 7 to 11 May 2012. The meeting was co-chaired by Mr. Barrie Greenslade (TSMAD Chair, UK) and Mr. Colby Harmon (DIPWG Chair, USA) and was attended by some 50 participants from 15 IHO Member State organizations, 14 industry organizations and two international organizations. Mr. Michel Huet and Mr. Anthony Pharaoh represented the IHB.

A number of important topics pertaining to S-100 / S-101 development and portrayal were discussed during the meeting. These included discussions and presentations on an optimum portrayal model for S-100, and how to simplify the existing S-52 conditional symbology procedures. The meeting also discussed the potential impact that S-101 may have on the IHO stakeholders' community and what mitigating action should be taken.





Combined TSMAD24 / DIPWG4 Meeting

Other topics discussed included the development of a GML encoding format for S-100, a proposal to establish product specification for surface currents, the use of sea ice information in ECDIS, the inclusion of additional tests in S-64, the use of additional attributes to simplify S-101 portrayal and the status of the S-101 Data Classification and Encoding Guide.

As this was the first meeting following an International Hydrographic Conference, the Working Group members were obliged to elect new office bearers. Mr. Barrie Greenslade and Ms. Julia Powell (USA) were re-elected as Chair and Vice Chair of the TSMADWG. Mr. Colby Harman was re-elected as Chair of the DIPWG while Mr. Tom Mellor (UK) was elected as Vice Chair. It is anticipated that the next TSMAD25 meeting will take place during early January 2013 in Tokyo, Japan, and the next joint TSMAD26/DIPWG5 meeting will take place in May 2013 in Silver Spring, MA, USA.

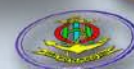
35th MEETING OF THE FIG/IHO/ICA INTERNATIONAL BOARD ON STANDARDS OF COMPETENCE FOR HYDROGRAPHIC SURVEYORS AND NAUTICAL CARTOGRAPHERS IBSC35

Buenos Aires, Argentina, 21-31 May

The 35th meeting of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) was held at the Argentinean Navy School of Marine Sciences in Buenos Aires from 21 to 31 May 2012. The meeting was attended by nine Board members. The IHB was represented by Captain Alberto COSTA NEVES (Assistant Director, CBSC + IBSC Secretary).



Official photograph of the IBSC35 Meeting



The Board assessed twelve programmes: seven in Hydrography, four in Nautical Cartography and one Regional Scheme for Recognition of Individuals for competency in Hydrography. This is a formal system that reviews and assesses individuals' experience and education in order to award them with Recognition of Individual Competency. The Board also developed the procedures for the on-site reviews, the process to assess the status of recognized programmes.

The Board also reviewed some parts of the Standards in order to clarify and improve them. Three working groups were created to restructure the Standards of Competence. Dr. Delf EGGE (IHO, Germany) was elected Vice Chairman 1 in place of Dr. Luciano SURACE (Italy) who resigned after the last meeting. The next meeting will be held in Portugal in April 2013. The full report of the meeting will be published on the IHO website.

10th MEETING OF THE IHO CAPACITY BUILDING SUB-COMMITTEE IHO-CBSC10 Singapore, 4-6 June

The tenth meeting of the Capacity Building Sub-Committee was held at the Regent Hotel in Singapore from 4 to 6 June 2012. The meeting was attended by 13 members and 15 observers from eight countries. The IHB was represented by Captain Hugo Gorziglia (IHB Director) and Captain Alberto Costa Neves (Assistant Director, CBSC Secretary).



Official picture of the CBSC10 Meeting

The Sub-Committee (SC) examined the previous action list and the status of the CB Fund. The SC acknowledged the significant contributions made by the Republic of Korea and Japan to the IHO Capacity Building. The need to search for external funding for CB activities was also discussed, especially with respect to funding agencies and external stakeholders. The SC also acknowledged the support of Norway in the development of the CB Management System and the Performance Indicators. The CB Management System is considered a vital tool to support the administration of the IHO CB activities.

The following were also discussed: performance of the assessment and provision projects; the way forward with the IHO Publication C-55; the need to improve MSDI courses and ways to improve the CB Procedures. The SC decided to establish two ad hoc working groups to study C-55 and the Performance Indicators and to report back to the SC.

The SC exchanged experiences as regards the implementation of the 2011 and 2012 CBWP, reviewed the activities associated with the 2012 IHO CBWP and, based on new information received from the RHCs, the 2012 CBWP was adjusted. The SC also reviewed the CB projects submitted by the RHCs and adopted the 2013 IHO CBWP that will be included in the general IHO Work Programme for 2013.

Mr. Thomas Dehling (Germany) was re-elected Chairman and Mr. Olumide Omotoso (Nigeria) was elected Vice Chairman, both by acclamation. The next meeting will be held back to back with IRCC5 on 30 May to 1 June 2013, venue to be decided. The full report of the meeting will be published on the IHO website.

4th MEETING OF THE IHO INTER-REGIONAL COORDINATION COMMITTEE IHO-IRCC4 Singapore, 7-8 June

The fourth meeting of the Inter-Regional Coordination Committee was held at the Regent Hotel in Singapore on 7-8 June 2012. The meeting was attended by the Chairs or representatives of all the Regional Hydrographic Commissions, Sub-Committees and other bodies, except for MBSHC and WWNWS, as well as by delegates from individual IHO Member States. The IHB was represented by Captain Hugo Gorziglia (IHB Director and IRCC Secretary) and Captain Alberto Costa Neves (Assistant Director). In total 35 participants attended the meeting.

The Committee examined its achievements since the first meeting in 2009, especially the capacity building assessment and provision, the completion of the RHC full coverage of the global oceans, the establishment of five new NAVAREAS in the Arctic Region, the IHO membership and new applications for membership, the partnership established with numerous international and regional organizations, the range of recognized programmes on standards of competence, the coordination of INT Charts and ENC production, the harmonization of re-survey schemes and the provision of common tidal surfaces.

IRCC also examined the reports submitted by the RHCs and its bodies, the outcomes of the XVIII IHC, the way forward with IHO Publication C-55, the Capacity Building Work Programme, the possibilities of external funding for capacity building, the growing technologies such as crowd sourcing and satellite bathymetry, the need to improve and encourage survey activities, future actions to improve MSDI around the world, the engagement with external stakeholders, the input to the IHO Strategic Planning Mechanism, among others.

Mrs. Savi Narayanan (Canada) and Admiral Nicholas Lambert (UK) were elected IRCC Chair and Vice Chair, respectively, by acclamation. The next meeting will be held on 3-4 June 2013, venue to be decided. The full report of the meeting will be published on the IHO website.



WORKING GROUPS

S-101 DATA CLASSIFICATION AND ENCODING GUIDE SUB-WORKING GROUP MEETING

Wollongong, Australia – 11-13 January

The TSMAD S-101 Data Classification and Encoding Guide sub Working Group held an editing meeting in Wollongong between the 11th and 13th of January 2012 at the Australian Hydrographic Office - Wollongong. The meeting was attended by members from Australia, Canada, France, New Zealand, Norway USA (NOAA) and the UKHO. Other participants included members from Inland ECDIS Harmonization Group, IC-ENC, Jeppesen and the IHB.



The objective of this TSMAD sub Working Group is to produce a document that will provide guidance on the encoding of S-101 ENC data. The new document will complement the S-101 ENC Product Specification, and will include information about how real world features should be encoded and how they will be portrayed in an ECDIS system. Although the function of this document is similar to the S-57 Use of the Object Catalogue, it will have a different structure and format, and will be more comprehensive.

The next meeting of the DCEG sub Working Group is scheduled to take place in May 2012 at the IHB, Monaco.

TIDAL AND WATER LEVEL WORKING GROUP (TWLWG) Fish Hoek, Republic of South Africa, 8-10 May.

The 4th meeting of the TWLWG was held at the Calders Hotel and Conference Centre, Fish Hoek, Republic of South Africa from 8 to 10 May 2012. Representatives from Australia, Brazil, China, Finland, France, Japan, Korea, Mozambique, Namibia, Norway, Peru, Spain, South Africa, UK, USA and the IHB attended the meeting. Steve Shipman, IHB, represented the IOC-GLOSS Group of Experts.

Captain Theo Stokes SAN, Commanding Officer SAS PROTEA, welcomed all participants on behalf of the Hydrographer of South Africa, Captain Abri Kampfer SAN, who visited the meeting on 10 May.





TWLWG4 on the steps of the Calders Hotel and Conference Centre

Topics discussed 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 in non-tidal areas and the revision of IHO resolutions concerning tides and water level. The meeting report and all papers and presentations are available from the TWLWG section of the IHO web site.

The meeting agreed to hold TWLWG5 at the IHB in Monaco in the period April to early May 2013 unless a State offers an alternative venue.



OTHER BODIES

IMO COMSAR 16 & WNWNS DOCUMENT REVIEW WG10 London, UK, 12 - 16 March

The 16th session of COMSAR was held at the IMO HQ in London from 12 – 16 March 2012. The President, Assistant Director (Shipman) and the Chairman of WWNWS represented the IHO. The Coordinators from: NAVAREA I (UK); NAVAREA II (France); NAVAREAs IV and XII (USA); and NAVAREA XIX (Norway) were represented.

The Sub-Committee considered three submissions by the IHO, it noted the outcome of WWNWS3, approved a revision to Annex 8 of the GMDSS Master Plan on SafetyNET Services, and approved the cancellation of COMSAR Circ. 36 on the broadcast of warnings for tsunamis and other natural disasters following the entry into force of all the revised WWNWS documentation.

COMSAR 16 completed its scoping exercise on the review of the GMDSS and prepared a draft Work Plan for the review and modernization of the GMDSS for consideration by the Maritime Safety Committee in May 2012. COMSAR also continued its work on e-Navigation and completed the Gap Analysis for matters within its area of expertise. This will now go to the Sub-Committee on Safety of Navigation for inclusion in its work.

Members of the WWNWS Sub-Committee's WG (France, Italy, UK, USA, Inmarsat, WMO and IHB) reviewing the WWNWS documentation met in the week following COMSAR. The WG prepared draft amendments to Resolutions A.705(17), as amended "*Promulgation of Maritime Safety Information*"; and A.706(17), as amended, "*World-Wide Navigational Warning Service*" and prepared some preliminary amendments to the joint IMO/IHO/WMO MSI Manual, the International SafetyNET Manual and the NAVTEX Manual for further consideration at WWNWS4.



A short break during the Document Review WG meeting



8TH IC-ENC/PRIMAR JOINT TECHNICAL EXPERTS WG (JTEWG) MEETING

Stavanger, Norway, 28 March

Mr Kjell Olsen welcomed participants to Stavanger and the meeting which was attended by twenty-six members from sixteen IHO Member States, seven members from RENC organizations and one stakeholder member. Richard Fowle (IC-ENC) chaired the meeting and the IHB was represented by IHB Assistant Director Pharaoh.

Some of the issues discussed during the meeting included the improved technical co-operation between the RENCs organizations which had resulted in better provision of services. Also discussed were the anomalies that had been reported with S-58 validation checks. This has resulted in a new version of the standard being produced.

Several presentations were provided during the meeting. IC-ENC presented instances of inconsistencies with the use of ancillary (text and picture) files. Julia Powel NOAA provided a presentation on the S-101 ENC product specification development and highlighted the importance of including the stakeholder community in the development and testing process. Jeppesen provided a presentation on their strategy for implementing the S-100 standard and product specifications. Some of the challenges identified included: how to be sufficiently diverse to support new product specifications; how to secure an effective production scheme and how to ensure a high level of quality control.

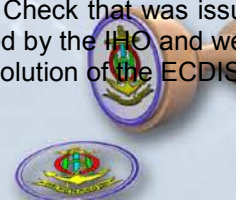
CIRM ANNUAL MEETING

Rome, Italy, 16-17 April

The Comité International Radio-Maritime (CIRM) held its annual Conference in Rome on 16 and 17 April. CIRM is the body representing the maritime electronics industry in the development of relevant international regulations and standards and is recognised by the IHO as a Non- Governmental International Organization. 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 on various HSSC Working Groups.



Director Robert Ward represented the IHO at the Annual Meeting of CIRM and provided an update on issues and activities of interest to CIRM members, and in particular the IHO's role in addressing various operating anomalies in ECDIS that have been brought to the attention of the IMO. He provided a progress report on the analysis of the reports received from sea using the IHO ENC ECDIS Data Portrayal and Performance Check that was issued in late 2011. During the meeting, the CIRM members took into account the information provided by the IHO and were able to formulate a number of policy positions on how their members could best assist in the resolution of the ECDIS issues.





Alongside Director Ward, the Secretaries-General of the International Maritime Pilots' Association (IMPA) and the International Association of Lighthouse and Aids to Navigation Authorities (IALA), and representatives of the International Chamber of Shipping (ICS), and the International Electro-technical Commission (IEC) also attended the meeting as observers.



90th IMO MARITIME SAFETY COMMITTEE (MSC90) IMO Headquarters, London, UK, 16 – 25 May

The 90th session of the IMO Maritime Safety Committee (MSC90) was held at the IMO Headquarters in London from 16 – 25 May 2012. The President, Director Ward and Assistant Directors Shipman and Wyatt represented the IHO.

WWNWS

MSC approved the withdrawal of Radiocommunications and Search and Rescue Sub-Committee (COMSAR) Circular 36 concerning the broadcast of warnings for tsunamis and other natural disasters following the recent revision of the Worldwide Navigation Warning Service (WWNWS) documentation. MSC also approved a revision of Annex 8 to MSC/Circ.1382 concerning the questionnaire on shore-based facilities for the global distress and safety system (GMDSS).

MSC noted that COMSAR, in relation to the development of an e-navigation strategy and the gap analysis, had endorsed the final draft list of gaps relevant to radiocommunications and search and rescue and instructed it to be forwarded to the 38th session of the Sub-Committee of Standards of Training and Watchkeeping (STW38) and the next session of the Sub-Committee on Safety of Navigation (NAV) for final consideration.

e-Navigation

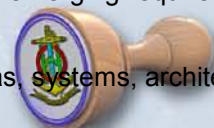
MSC noted the progress made on the development of an e-navigation strategy and the establishment of a correspondence group to further progress the work. MSC endorsed:

1. the current overarching e-navigation architecture;
2. the proposed way forward for developing a Common Maritime Data Structure; and
3. the use of IHO's S-100 standard as the baseline for creating a framework for data access and services under the scope of SOLAS.

The Chairman of the IMO correspondence group on e-navigation reported that, as part of the development of the e-navigation concept, the Norwegian Coastal Administration (NCA), assisted by the Maritime and Port Authority of Singapore (MPA) and IMO's Marine Electronic Highway (MEH) project in the Straits of Malacca and Singapore, had hosted a two-day test bed workshop in Singapore from 19 to 20 April 2012, using the IHO S-100 standard as the data model. The workshop showed that:

1. the IHO S-100 standard could be extended and further developed to meet the emerging requirements of e-navigation;
2. the development of the MEH should draw from aspects of e-navigation; such as systems, architecture and IHO S-100 standard, to generate maximum synergies.

In addition, Norway expects to carry out a similar test-bed project in the high Arctic region. The test-bed would also be based on the IHO S-100 standard, and would include LRIT infrastructure, which might be suitable for a shore based e-navigation network in the future.



The MSC authorised the establishment of a joint IMO/IHO Harmonisation Group on Data Modelling and approved its terms of reference. The principal objectives of the group will be to provide the overarching coordination to ensure the creation and maintenance of a robust and extendable maritime data structure.

Operating Anomalies in ECDIS

The MSC considered various documents relating to operating anomalies identified within ECDIS, including a status report from the IHO. MSC recognised there was a need to continue to raise the awareness of mariners to the operating anomalies in some ECDIS and the advice of the possible need to continue to carry paper charts in some cases.

MSC agreed that this matter should be considered further by the 58th session of the Safety of Navigation Sub-Committee (NAV58) which will be held at the IMO headquarters in London from 2-6 July 2012. MSC also agreed that NAV58 should consider two new work items to consolidate various ECDIS-related IMO circulars and to develop clarification to SOLAS Regulation V/27 in relation to up to date ECDIS systems. These new work items should be completed over two sessions of the sub-committee.

In his closing address the Secretary General of IMO thanked all those who were retiring; he particularly thanked Vice-Admiral Maratos, Captain Hugo Gorziglia and Commander Steve Shipman for their work and the engagement of the IHO with the IMO and wished them well.

62ND SESSION OF THE IMO TECHNICAL CO-OPERATION COMMITTEE (TCC62) **IMO Headquarters, London, UK, 6-8 June**

The 62nd session of the IMO Technical Co-operation Committee (TCC62) was held at the IMO Headquarters in London from 6 – 8 June 2012. The IHO was represented by Assistant Director Wyatt.

Although the IHO did not submit any documents, a statement was read during the meeting under Agenda Item 3. This statement highlighted the IHO Capacity Building achievements since TCC61 in June 2011 and those activities planned for the next 12 months. Particular attention was paid to those activities which have benefited or will benefit from direct funding of the IMO TC Fund.

The statement emphasized that Capacity Building is a key strategic objective of the IHO and the IHO is very grateful for the support and co-operation of the IMO TC Fund, the Republic of Korea, Japan and the Nippon Foundation in its Capacity Building efforts. The co-operation of IOC, WMO, FIG, IAEA and IALA in the co-ordination of the Capacity Building programme was also acknowledged. The TCC thanked IHO for its Capacity Building programme and its efforts in co-operation with the IMO.

The TCC considered TC 62/INF.5, which was submitted and introduced by IALA. The document reported on the establishment of the IALA World Wide Academy. The TCC noted the initiative and invited IALA and IHO to keep the committee updated on their Capacity Building initiatives.

TCC62 provided the opportunity to meet and discuss Capacity Building matters with representatives of numerous maritime administrations and members of the Technical Co-operation Division of the IMO.

The Committee re-elected Mrs Nancy Wakarima Karigithu of Kenya as the Chair and Dr Youngsun Park of Korea as the Vice-Chair for 2013.



XXXV ANTARCTIC TREATY CONSULTATIVE MEETING (ATCM) Hobart, Australia, 10-20 June

The XXXVth Antarctic Treaty Consultative Meeting took place in Hobart, Australia, from 10 to 20 June, coinciding with the celebration of the 100th Anniversary of the first Australian expedition to Antarctica. Antarctic Treaty Parties and related Antarctic international bodies met as they do annually, to discuss matters relating to the management of the Antarctic Treaty area and to further develop the Antarctic Treaty System.



Participants allocated time to consider and discuss 64 Working Papers (WP), 84 Information Papers (IP), 41 Background Papers (BP) and 15 Secretarial Papers (SP) submitted by various countries, international organizations related to the Antarctic and the AT Secretariat. Over 300 people representing the Consultative Parties, the non Consultative Parties and international organizations were present, including the IHO. Captain Hugo Gorziglia represented the IHO during the first five days. It is worth mentioning that two new countries became members of the ATS: Malaysia and Pakistan.

Mr. Richard ROWE, Senior Legal Adviser to the Australian Department of Foreign Affairs and Trade was elected Chairman of the meeting. The meeting was opened by the Hon. Tony BURKE MP, Australian Minister for Sustainability, Environment, Water, Population and Communities who welcomed all the participants and highlighted the importance of the Antarctic and the involvement of Australia in the last 100 years. He emphasized the success of the Antarctic Treaty System in keeping the Antarctic free of conflicts, collectively well managed and environmentally protected.

The Meeting established the following three Working Groups which were chaired by those indicated:

- Legal and Institutional Affairs: Professor René Lefeber of The Netherlands;
- Tourism and Non-governmental Activities: Ambassador Donald Mackay of New Zealand and
- Operational Matters: Dr José Retamales of Chile.

During the first plenary session, Captain Gorziglia introduced IP 70, the IHO report on "*Cooperation in Hydrographic Surveying and Charting of Antarctic Waters*". He thanked the ATCM for having invited IHO to report on the status of hydrographic surveys and nautical charting progress made since the last ATCM. It was emphasized that the XVIIIth International Hydrographic Conference approved the carrying out of a risk assessment for the Antarctic region aiming at developing a work programme to improve Antarctic charting. It was also highlighted that the Hydrographic Committee on Antarctica (HCA) had been proactive in complying with ATCM Resolution 2 (2010) and had participated in several ATCM contact groups. The IHO invited the ATCM to consider how the IMO Polar Code, when introduced, would be implemented regarding hydrographic activities in Antarctica. The report was very well received by the audience. The representative of Uruguay warmly invited all relevant Member States to the October 2012 IHO/HCA meeting in Uruguay.

Out of the numerous papers presented and discussed, the following are considered to be particularly relevant to the IHO:

SP 9 “Report of the ICG on Review of ATCM Recommendations on Operational Matters”

This report recommended various actions, including the deletion of some recommendations that are obsolete and not in force. Nevertheless there were several requiring further thoughts before agreeing on how to proceed. The IHO representative offered to review those recommendations dealing with Hydrography as had been done in the previous period, aiming at preparing a consolidated text covering Hydrography. The Meeting welcomed IHO's offer and requested that such a consolidated text be provided to the ATCM XXXVI for consideration. COMNAP, which was tasked to lead the overall revision process, expressed its readiness to submit a WP together with the IHO to the next ATCM on Hydrographic related recommendations. This matter will be addressed at the next HCA meeting for consideration and progress.

WP 13 “Understanding Risk to National Antarctic Program Operations and Personnel in Coastal Antarctica from Tsunami Events”

This paper was prepared by COMNAP and SCAR. The Meeting supported COMNAP's recommendation that organisations with expertise in tsunami detection, modelling, research and warning system management should work together with COMNAP and SCAR on the next phase of this project, namely, to develop a simple, cost-effective, practical tsunami warning communications plan and tsunami awareness education materials. Due to the vital role that bathymetry plays in this matter, the IHO representative offered assistance if needed; this offer was appreciated by ATCM.

WP 17 “Compiling Yacht Guidelines to Complement Safety Standards of Ship Traffic around Antarctica”

This paper contains the outcome of the work conducted by the ICG led by Germany on the subject, to which the IHO through the IHB contributed ensuring that such guidelines include the availability of an appropriate, relevant and up-to-date nautical chart set covering the area to be sailed. The Meeting agreed on Resolution 10 (2012) recommending the Parties to use the “*Checklist of yacht specific items for preparing safe Antarctic voyages*” when assessing proposed yacht visits to Antarctica.

WP28 “Jurisdiction in Antarctica”.

Following discussions, the ATCM agreed on Resolution 2(2012) recommending that Parties cooperate to institute discussion on issues related to the exercise of jurisdiction in the Antarctic Treaty Area. An intersessional contact group (ICG) was established to progress cooperation on related questions. The IHO as expert participant at the XXXV ATCM would be invited to provide input to the ICG.

IP 70 “Report by the IHO on Cooperation in Hydrographic Surveys and Charting of Antarctic Waters”

Following a strong intervention made by the IHO representative at the Operational Matters Working Group and despite IP was presented in plenary the first day of the meeting, the WG decided to give close consideration to IP 70.

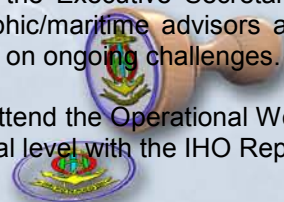
The IHO representative called on Parties to recognise the importance of the IHO/HCA work, noting that an increased exchange of hydrographic information by Parties was crucial to its aim to improve hydrography and nautical charting for the safety of navigation and protection of the marine environment in Antarctica. It was recalled that the 11th Meeting of the IHO HCA held in October 2011 agreed that improving coordination at a national level should be an ongoing practice amongst Parties. Also attention was drawn to the IHO's 2013-2017 Work Programme, which included a risk assessment for the Antarctic region and the development of a work programme to improve Antarctic charting (2013/14).

The Parties welcomed the report and thanked the IHO for its work. The Meeting noted the importance of hydrographic charting to avoid loss of life and serious vessel incidents. New Zealand reported that it was actively seeking to collaborate with other National Antarctic Programmes to complete hydrographic survey coverage of shipping lanes in the Ross Sea and supported the IHO's request to Parties to encourage voluntary participation in data activities. The United Kingdom noted that while it fully supported the work of the IHO and its HCA in particular, it questioned whether, since the Polar Code was still in development, now was the time for the ATCM to communicate on the specific matter of voluntary participation in data collection.

The Meeting offered the opportunity to have interesting informative discussions with the Executive Secretaries of IAATO and COMNAP, as well as with delegations that included navigation/hydrographic/maritime advisors among their components. This valuable contact offered the opportunity to enhance coordination on ongoing challenges.

As the Meeting was much shorter than in the past, the IHO representative was able to attend the Operational Working Group meeting, which offered the opportunity to reach the political as well as the technical level with the IHO Report.

The next ATCM Meeting will take place in Brussels, from 20 to 29 May 2013.



45th IOC EXECUTIVE COUNCIL Paris, France, 25-28 June

The 45th Executive Council (EC) of IOC met in Paris, France from 25 to 28 June 2012 to review the progress with, and to adopt resolutions pertaining to, the IOC Programmes. The 40 Member States, members of the Executive Council were represented, plus 7 other States and several international organizations. Since the last Assembly, four new States have joined the Commission — Honduras, Kiribati, Montenegro, and Saint Kitts and Nevis. This brings IOC membership to 144 States. Among the delegations, the following Hydrographers were also present: Brazil, Canada, Chile, Ecuador, Germany, Peru and Turkey. The IHO was represented by Captain Gorziglia, IHB Director.

The Executive Secretary reported on the progress of the programme implementation as well as on the budget situation. Concern was expressed as regards the impact of UNESCO's financial difficulties on the delivery of the IOC programmes with a reduction in the IOC budget of close to 30%. UNESCO has allocated resources to the IOC from the Emergency Fund to allow programme implementation at an essential level.

High priority was given by the EC to both the finances and operational oceanography, establishing a sessional Committee and a Working Group to deal with these matters, respectively. It was decided to establish an inter-sessional consultation of all Member States to identify scientific and technical issues within the IOC mission and mandate, in order to improve IOC's activities in the area of sustained ocean observations and services.

Following discussion, the Council decided that IOC/ABE-LOS would continue its work focused on priorities as tasked by the IOC governing bodies in line with the Terms of Reference, mobilizing extra-budgetary resources when necessary.

With regard to the recent summit known as Rio+20, the EC noted the document 'The Future we want', which constitutes the outcome of the Conference and invited IOC Member States to support the development of a Sustainable Development Goal on Oceans.

It was agreed that the 27th IOC Assembly would start on 25 June 2013; the duration will be determined, depending on the items on the agenda to be considered. The Executive Council at its Forty-sixth Session, acting as the Steering Committee of the Assembly, will meet on 24 June 2013.

Ms Irina Bokova, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), addressed the participants on the closure of the Meeting on 28 June. She highlighted the importance of international cooperation aiming at the protection of the oceans, which was a clear and strong message given by Rio + 20, the final document of which indicates in paragraph 158 "*We recognize that oceans, seas and coastal areas form an integrated and essential component of the Earth's ecosystem and are critical to sustaining it*".

Back to back with the EC, a very productive meeting took place with the Executive Secretary and her team at the IOC Secretariat; on this occasion details of the joint IHO – IOC activities were discussed. In this context, the IHO representative commented on the GEBCO structure and the need to be better informed on financial issues affecting GEBCO; he also explained the procedure followed in order to prepare and approve the ToR and RoP of the "*Sub-Committee on Regional Undersea Mapping (SCRUM)*" by the GEBCO Guiding Committee and the IHO and the new publication "IHO-IOC GEBCO Cook Book (B-11)". IOC will adopt the necessary measures to grant approval of SCRUM and B-11.



CONFERENCES / SEMINARS / WORKSHOPS

WORKSHOP ON “ECDIS-ENC SOFTWARE ISSUES” Monaco, IHB, 25-26 January

The IHO hosted a workshop on “ECDIS-ENC Software Issues” at the IHB on 25 and 26 January 2012. The Workshop was attended by 30 representatives from: IHO and IMO Member States; Intergovernmental Organizations, Non-Governmental International Organizations, ECDIS manufacturers, data service providers and the IHB.

The principal aim of the workshop was to review an analysis of the replies received from ships at sea following the issue of the IHO ECDIS Check Data Set to mariners in 2011. The workshop also provided the opportunity for a review of other tasks already undertaken, or being undertaken, by the IHO and other organizations to overcome those issues already identified.



Director Ward was the moderator for the workshop discussions

There was general agreement that the IHO work programme already contained the necessary items to address those issues which are under the responsibility of the IHO. Updating IHO Publication S-64- *The IHO Test Data Set for ECDIS*, was identified as the priority task, so as to provide greater clarity to ECDIS manufacturers and equipment testing authorities.

The basic outline and content of an IHO submission to the 90th session of the IMO Maritime Safety Committee (MSC) reporting on the outcome of the IHO ECDIS Check Data Set and the workshop were discussed. As a result, a number of the organizations represented at the workshop are likely to submit supplementary documents, taking the IHO's submission into account.



6th INTERNATIONAL CONFERENCE ON HIGH RESOLUTION SURVEYS IN SHALLOW WATER

Wellington, New Zealand, 20-23 February

The 6th International Conference on High Resolution Surveys in Shallow Water was held in Wellington, New Zealand. The Conference was attended by 200+ delegates and opened by the Hon Maurice Williamson, Minister for Land Information. A number of technical workshops preceded the formal Conference. Despite the economic downturn, there were a significant number of delegates and exhibitors from around the world and a high proportion of them were hydrographic surveyors that had attained their qualifications through a recognised IHO-FIG-ICA Category A training course.

The Conference followed the established format for other Shallow Survey conferences that have been held around the world. In advance of the Conference, survey companies and sensor manufacturers were invited to survey various locations in the Wellington region using different technologies and processing techniques. All the data was then pooled in a common data set and made available for peer review and analysis.

The Conference centred on discussion and comparison of the results from the common data set, together with other papers on new developments and applications related to surveying in shallow waters. While there was an overall emphasis on multi beam echo sounding, LIDAR and satellite derived bathymetry were also discussed during the conference. It was notable that in previous conferences target and bottom detection were key areas of discussion, whereas the focus for the 6th conference was on backscatter measurements, determination of the nature of the seafloor and on data collected in the water column.



*Mr Adam Greenland, Hydrographer of New Zealand (2nd left),
and staff from Land information New Zealand at Shallow survey 2012*

The IHB was represented by Director Ward, who provided an overview of the IHO's role in standards setting and development and a more detailed description of S-100 and its potential significance to those attending the conference.

The next Shallow survey conference is planned to be held in UK in 2015.



E-NAVIGATION UNDERWAY CONFERENCE MV Crown of Scandinavia, at Sea, 18-20 January

As part of the European Union EfficienSea Project, a 2nd international conference on e-Navigation was organised on the Baltic Sea ferry *Crown of Scandinavia* by the Danish Maritime Authority (DMA), under the theme “*From a bird’s eye perspective to practical applications*”. In particular, the conference addressed the implications of IMO’s e-Navigation strategy implementation plan, and the need for harmonization of test bed methodology.



Mr. Omar Frits Ericsson, Danish Maritime Authority, welcoming participants

The conference, hosted by Mr. Andreas NORDSETH, DMA Director General, was attended by 143 delegates from many parts of the world. Mr Gary PROSSER, Secretary-General of IALA, gave an opening address to the conference. Mr John-Erik HAGEN (Norway), Chairman of the IMO Correspondence Group on e-Navigation also participated. Speakers representing various stakeholder groups provided their different perspectives on e-Navigation. The second day of the conference, during which the venue ferry continued to sail on its route between Copenhagen and Oslo, a number of planned and operational test-beds were described.

Discussions on the third day of the conference resulted in a number of conclusions regarding the regulatory aspects of e-Navigation and on how test-beds should be coordinated and used to help test and improve e-Navigation concepts as they are developed. Amongst the conclusions reached was that the IMO INS performance standards should be used as the basis for the shipboard integration of existing and future navigational aids, as a component of e-Navigation.

Michel Huet represented the IHO at the conference.



1ST GEOMARITIME CONFERENCE

London, UK, 13-14 June

GeoMaritime
Geospatial Information in the Maritime Domain

Director Ward represented the IHO at the inaugural Geo Maritime Meeting in London on 13 and 14 June. Geo Maritime is one of the few commercially organised conferences in Europe where industry, defence, government and commercial organizations can gather to learn about the benefits of maritime geospatial information and the current issues facing the maritime surveillance sector. Geo Maritime is expected to become an annual event.

Geo Maritime 2012 was opened with a keynote speech delivered by the UK National Hydrographer, Rear Admiral Nick Lambert, and was followed by a range of speakers drawn from hydrographic offices, associated industry partners, and representatives from defence and other maritime sectors. Over 200 participants considered the strategic, technical and operational implications and challenges of ensuring the effective availability and management of hydrographic, oceanographic, meteorological and environmental data in the maritime domain.

The Chairman of the IHO Transfer Standards and Applications Development Working Group (TSMAD), Mr Barrie Greenslade, explained the significance and applicability of the IHO S-100 standard in the maritime sphere. The subject of S-100 was then a recurring topic during the discussions that followed.

Early in the conference, a panel comprising Director Ward and representatives from the International Maritime Organization (IMO), the International Association of Aids to Navigation and Lighthouse Authorities (IALA), and the GIS industry led discussions and provided answers and advice on Maritime Geospatial Standards & Directives.

Geo Maritime 2013 will begin on 1 June 2013 in London.

RIO+20 CONFERENCE

Rio de Janeiro, Brazil, 11-23 June

The United Nations Conference on Sustainable Development, known worldwide as the “Rio+20 Conference” was held in the city of Rio de Janeiro, Brazil, from 11-23 June 2012.



A major focus of the conference was the oceans and their biodiversity.

The Oceans, covering 72% of the Earth's surface, constitute the main part of the planet that sustains life and affects climate and hydrological cycles, as well as providing key resources.

The Oceans have provided at least 15% of animal protein for about 3 billion people, the marketing of fish and aquatic plants brings in more than \$ 106 billion, the fishing industry provides a livelihood to more than 540 million people.

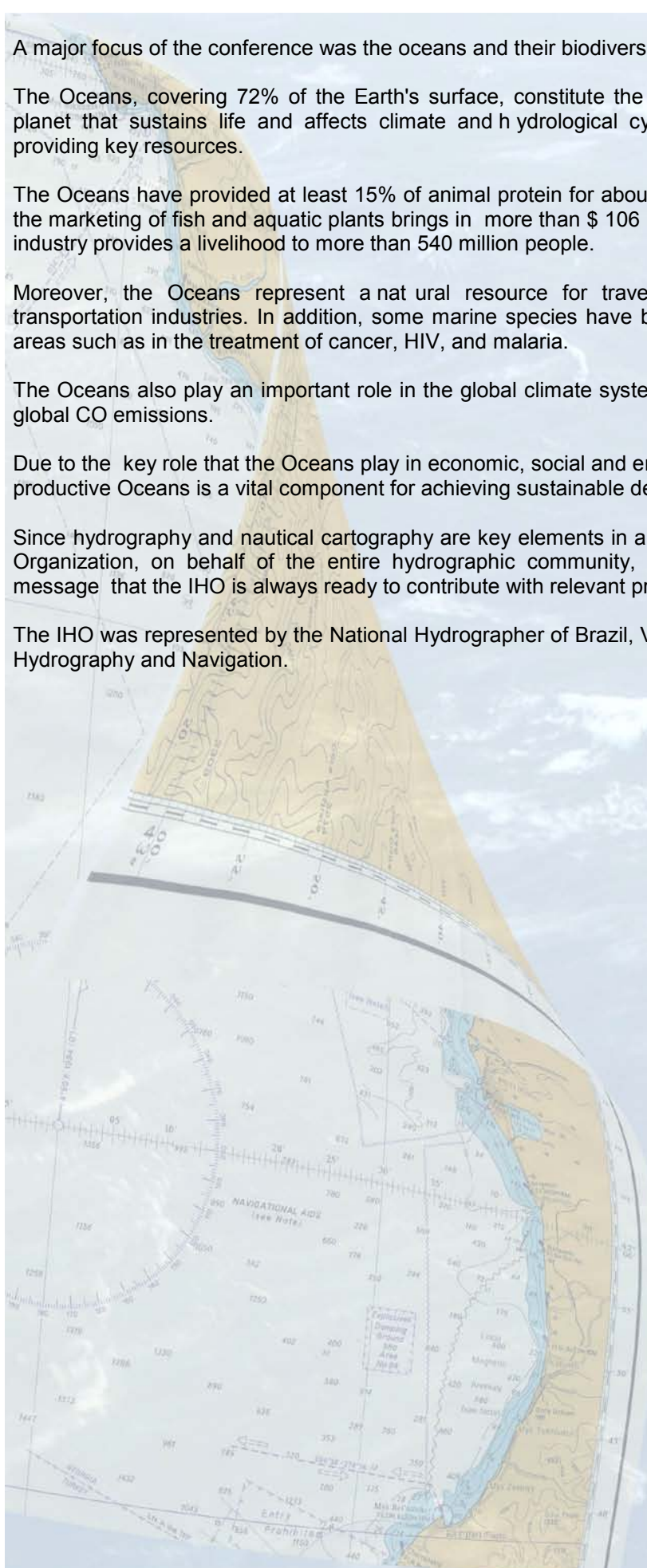
Moreover, the Oceans represent a natural resource for travel and tourism, mining, telecommunications and transportation industries. In addition, some marine species have been studied and tested for pharmaceutical use in areas such as in the treatment of cancer, HIV, and malaria.

The Oceans also play an important role in the global climate system generating oxygen and absorbing about 30% of global CO emissions.

Due to the key role that the Oceans play in economic, social and environmental issues, focus on ensuring healthy and productive Oceans is a vital component for achieving sustainable development.

Since hydrography and nautical cartography are key elements in any maritime activity, the International Hydrographic Organization, on behalf of the entire hydrographic community, was present at the Conference, passing on the message that the IHO is always ready to contribute with relevant projects related to the sea.

The IHO was represented by the National Hydrographer of Brazil, Vice Admiral Marcos Nunes de Miranda, Director of Hydrography and Navigation.



NEW HYDROGRAPHERS

NEW HYDROGRAPHER OF COLOMBIA Rear Admiral Ernesto Durán González

He took over the post of Maritime Director General of Colombia in December 2011.

NEW HYDROGRAPHER OF ECUADOR Captain Rafael Cabello Peñafiel



Captain Rafael Cabello Peñafiel graduated from Naval Academy in 1983. After being commissioned as an officer in the Ecuador Navy he served in several ships with experience in Weapons Systems, Electronic Warfare Systems and acoustics, guided missiles, torpedoes and mines. He exercised the tactical level of naval operations (ASW, ASUW and AAW). Capt. Cabello also executed design, planning, execution and control of the instruction and operational-training model.

During his career he attended several courses: Training Course on board Destroyer Squadron; Training Course in Corvettes; Hydrography and Oceanography Course; Naval Command Course; Naval Staff Course; Enterprises Management; Strategic Planning Course; Master Degree on Market Investigation; Post graduate in Human Resources and Master Degree on Enterprises Management.

His experience in the academic sector includes: Chief of Statistics, Chief of Academic Control and Head of Research Department (Naval Academy), Head of Research Department (Naval College), Director of the Hydrography School (Oceanographic Institute), Executive Officer of the tall ship "Guayas" and Director of the Coast Guard School. During these periods he developed curriculums and the professional profile of the Navy Officer, planning, implementation and monitoring of Hydrography courses. He was also Professor at the Naval College, Naval Academy, Merchant Marine Academy and Naval War College.

In the maritime affairs field, his experiences include: Head of Survey Team and Head of Cartography Division, Head of Marine Science, Head of Hydrography Department, Executive Officer and Technical Executive Officer (Naval Oceanographic Institute), Commanding Officer of the Research Vessel RIGEL, Member of the XII Antarctic (PROANTAR Brazil), Head of Development (Maritime Affairs Administration), Commanding Officer of the Research Vessel Orion, Head of the IX Antarctic Expedition (PROANTEC Ecuador). During these periods he participated in research on Climate Change, which included the occurrence of El Niño in the equatorial Pacific. He also led technical studies to extend the continental shelf of Ecuador and works in the observation of potential tsunamigenic events and generation of flood maps according to the characteristics of the phenomenon.

In the Ecuador Maritime Authority he worked as Manager of the Energy Sovereignty Plan (Merchant Marine Administration), Executive Officer (Coast Guards Staff) and Liaison Officer Joint Interagency Task Force. His tasks included: planning, execution and control of operations against the smuggling of fuel; maritime interdiction operations against smuggling; search and rescue operations; operations management training marine pollution; planning, coordination and control of combined operations and / or coincidental (Ecuador-USA) on maritime interdiction against smuggling. He also worked as a Peace Mission Member at ONUSAL.

NEW HYDROGRAPHER OF LATVIA

Mr. Aigars Gailis took over the post of Head of the Hydrographic Service of Latvia in March 2012.



NEW HYDROGRAPHER OF THE SULTANATE OF OMAN Muqaddam Duncan S.J. TILLEY, Royal Navy of Oman

Duncan TILLEY was born in England in 1960 and joined the British Royal Navy as a Midshipman in 1978. After initial training at the Britannia Royal Naval College, he qualified as a Junior Warfare Officer and joined the aircraft carrier – *Illustrious* – as an Aircraft Controller. In 1986 his career changed course when he volunteered for hydrographic survey training. After completing the IHO Cat.B Course at the RN School of Hydrographic Surveying, where he was the highest scoring RN student, he served in a number of seagoing surveying roles, including a period as Senior Watchkeeper in the Ocean Survey Ship – *HMS Herald*. In 1990 he returned to the Hydrographic School and graduated top of the IHO Cat. A Hydrographic Long Course. He went on to command HM Survey Motor Launch *Gleaner* before serving in the Radio Navigation Warnings section at the UKHO.

In 1992 Duncan was re-appointed to HM Survey Ship *Herald*, this time as Executive Officer and Second in Command. This was followed by command appointments including a hydrographic Naval Party, NP1008, embarked in *MV Marine Explorer*, and HM Survey Ship *Bulldog* conducting surveys for safety of navigation in the Irish Sea. On being promoted to the rank of Commander in 1999, he returned to *HMS Herald* as her final Commanding Officer before seeing her decommissioned in Portsmouth Naval Base in 2001.

For the last 12 years Duncan has served in strategic shore appointments, including 4 years in the UK MoD's Directorate of Naval Surveying, Oceanography and Meteorology in London, and 3 years at the UK Hydrographic Office in Taunton. He has also served as the Executive Commander of RNAS *Yeovilton*, Europe's busiest military air station, and as the Staff Commander to the Director of Naval Personnel in the Navy Command Headquarters in Portsmouth, England.

In 2011 Duncan was loaned to the Royal Navy of Oman to serve in the Sultanate as National and Royal Omani Navy Hydrographer for 2 years, after which he expects to retire after 35 years of service with the Royal Navy.

