

IHO Hydrographic Commission on Antarctica 13th Meeting, Cadiz, Spain 3-5 December 2013

The *Instituto Hidrográfico de la Marina* (IHM), of 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 Temboury, 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 in 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 to 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 organisations. 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.*

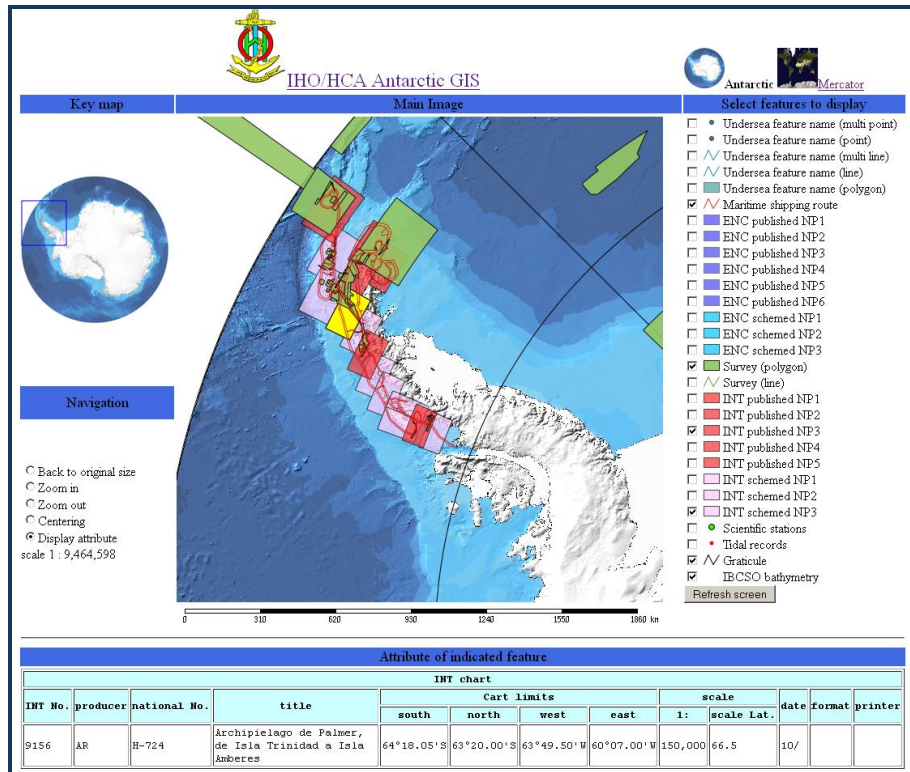
In this context, the outline proposal paper (HCA13-07.2A) presented at HCA-13 is an example that might fulfill such requirements.”

The usefulness of maintaining a liaison with ATCM, through the provision of IHO reports to, 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 ENC’s), took place during HCA-13. As a consequence, revised schemes for small and medium scale ENC’s (usage bands 1, 2 and 3) were agreed, as well as new schemes for large scale ENC’s (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 ENC’s out of the some 150 ENC’s 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, ENC’s, 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.



The HCA on-line Antarctic GIS

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