



# 18<sup>th</sup> Meeting of the International Ice Charting Working Group

## Executive Summary Report

The 18<sup>th</sup> meeting of the International Ice Charting Working Group (IICWG) was held in Hobart, Tasmania, Australia during September 25-29, 2017. The meeting was hosted by the Antarctic Climate and Ecosystems Cooperative Research Centre and the Antarctic Gateway Partnership. Sixty-one attendees representing 37 organizations from 13 countries participated. The meeting included technical tours of the Institute for Marine and Antarctic Studies of the University of Tasmania, the icebreaker AURORA AUSTRALIS, and the Australian Antarctic Division. An icebreaker reception was hosted at Government House by Her Excellency Professor The Honourable Kate Warner AC, Governor of Tasmania.

The theme for the meeting was “*New technologies, big data, and the future of ice charting and forecasting*”.

### **Significant Outcomes**

#### ***Ice Information in the Southern Ocean***

In consideration of the venue, the meeting naturally focused on the Southern Ocean. One plenary session was devoted to “Observing ice in the Southern Ocean” while a second session dealt with “Monitoring and modelling of Antarctic sea ice”. These information sessions were followed by the presentation of case studies of Antarctic marine incidents which set the stage for a table-top exercise involving a fictitious Antarctic Search and Rescue incident. The exercise was led by the Australian Antarctic Division (AAD) and included a panel of experts from the AAD, the Australian Marine Safety Authority, and masters of AURORA AUSTRALIS. The exercise prompted a lively discussion amongst the audience as it unfolded through various stages of urgency surrounding a ship trapped in Antarctic sea ice. The take-away messages of the exercise stressed the importance of pre-planning and anticipating what may be required beforehand, strategies to deal with communications among all the players involved, and the need for an institutionalized service model that avoids dependence on single individual expertise.

With the above as a backdrop, a discussion session on “Ice information service delivery for Antarctic waters” was held. The participants broke into eight small groups to discuss the key strengths and weaknesses of the current sources of sea ice information and the blocks and pathways to improved customer satisfaction. While no definitive conclusions were made at the meeting, the session did give Scott Carpentier of the Bureau of Meteorology a wealth of information and ideas to develop service delivery proposals for the Southern Ocean.

#### ***Ice Information for the IMO Polar Code***

The IICWG has continued its efforts to support the implementation of the Polar Code. Both the Canadian Ice Service and Danish Meteorological Institute (DMI) presented prototype products for direct use of the Polar Code risk assessment tool POLARIS. The meeting adopted an action to begin work to develop an international standard for Polar Code ice information products.



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### *Polar Tourism*

A session on polar tourism heard from Lisa Kelley of the International Association of Antarctic Tour Operators (IAATO) that tourism in the Polar Regions is on a huge upswing with some 20 new vessels to enter the trade by 2020. Keld Qvistgaard reported on DMI activities to provide ice information support to Arctic cruise ships noting a large number of requests for Polar Code ice information products. The meeting adopted actions to provide IAATO and the Arctic Expedition Cruise Operators (AECO) with information about ice information products and to explore ways to get more in situ ice observations from cruise ships.

### *The Nautical Institute*

NI President David (Duke) Snider presented a brief history of training requirements for ice navigators in the Polar Code and outlined the Nautical Institute's strategies to improve competency requirements for polar navigators. The IICWG agreed to seek ways to assist the Institute in this endeavour. NI Vice-President Jillian Carson-Jackson presented the VHF Digital Exchange System (VDES) to improve communications with ships in polar waters. The IICWG agreed to attempt some trials to broadcast ice charts and information by VDES.

### *PAME Arctic Shipping Best Practices Information Forum*

The Arctic Council's working group on Protection of the Arctic Marine Environment (PAME) is developing a web portal to provide mariners access to the information they need to navigate safely in Arctic waters. Jürgen Holfort reported on the Forum that was held to scope out this portal. Ice information was prominent and the Ice Logistics Portal highlighted as key input to the PAME portal. The meeting adopted actions to identify and work to rectify gaps in ice information including an extension to the Antarctic and addition of historical ice information.

### *Passive Microwave Radiometer Data Gap*

The meeting discussed the lack of an AMSR follow-on mission and the possibility of a PMR data gap. Actions were taken to investigate the operational use of the Chinese MWRI instrument on the FY-3 satellite series and to advise the European Space Agency of our concerns and plans.

### **IICWG-XVIII News Release**

The IICWG issued a news release noting that "Extreme variability, both from place to place and from year to year, makes knowledge of local and regional ice conditions critically important for polar shipping. The IICWG urges all polar vessel operators to include procedures to obtain up-to-date ice information as an integral component of their Polar Waters Operational Manual under the IMO Polar Code." There was considerable local media interest in the meeting with several newspaper articles and television interviews.

### **IICWG-XIX**

The 19<sup>th</sup> Meeting of the IICWG will be held in Helsinki, Finland during September 24-28, 2018 at the invitation of the Finnish Meteorological Institute.