



## INTERNATIONAL ICE CHARTING WORKING GROUP (IICWG)

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### *IICWG-XVIII – Secretariat Report*

In addition to looking after minor action items and e-mail correspondence, I addressed a number of issues of interest to the IICWG:

1. In December 2016, I prepared a section on ice information for a Riviera Maritime Media publication entitled “Decoding the Polar Code”. The entire publication addresses many of the major aspects of the Polar Code in plain language for mariners. The Ice Charting section is very prominent. It was published in January 2017 and is available at [https://issuu.com/rivieramaritimemedia/docs/dpc\\_2017\\_issuu](https://issuu.com/rivieramaritimemedia/docs/dpc_2017_issuu).
2. In collaboration with several Ice Service Heads, I prepared an Information Paper and presentation for the Arctic Council PAME Arctic Shipping Best Practices Information Forum which was held in London June 5-6. This was a joint submission from the IICWG and the JCOMM Expert Team on Sea Ice. The paper and presentation are on the IICWG website. The main output of the Forum is a web portal that is to contain a comprehensive suite of links to polar marine information websites. Unfortunately, the presentation to be given by Marianne Thyrring was not included in the agenda. However, Jürgen Holfort did attend the Forum and was able to highlight the importance of ice information for polar shipping. The Ice Logistics Portal was demonstrated as a link from the Forum portal.
3. At ESA’s request, I participated in the Polar Science Colocation Workshop at ESA-ESRIN June 28-30. This was primarily a workshop to bring scientists working in polar cryospheric fields (sea ice, ice shelves, glaciers, snow) together to discuss, at a high level, the requirements for the next generation of earth observations satellite missions. I was asked to provide some operational context to the otherwise science presentations. I distributed a report by e-mail on July 26 which is available on the IICWG website.
4. Based on a comprehensive review and recommendations for improvement by Gabrielle McGrath and Penny Wagner, we have started a re-design of the IICWG website, which has grown somewhat unwieldy. Thanks to the support of the National Snow and Ice Data Center, the IICWG website runs very smoothly. Ann Windnagel, the website administrator, provides us with excellent service.
5. I submitted a letter of collaboration to the U.S National Science Foundation Office of Polar Programs, Antarctic Sciences Section, in support of Dr. Cathleen Geiger’s project proposal entitled "*Leveraging 3-D observations of sea ice material behavior to improve navigation in and around the US McMurdo Station in Antarctica*". The letter indicated my intent to engage the participants in the IICWG to collaborate and/or commit resources to the project. No decision has been made by the NSF yet. If it is approved, the start date will be January 1, 2018.
6. At the invitation of the U.S. Arctic Research Commission and the National Ice Center, I attended the 7<sup>th</sup> Symposium on the Impacts of an Ice-Diminishing Arctic on Naval and Maritime Operations in Washington, D.C. July 18-20. As the rapporteur, I have prepared the meeting summary to be posted on the Symposium website.



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7. Further to my participation at the ESA workshop and the 7th Symposium, I circulated a note concerning the potential loss of Passive Microwave Radiometer (PMR) data from space. The people I spoke with at both events were unaware of any approved plans to replace the AMSR missions at the end of their life. The purpose of my note was to bring this to raise awareness in the operational community. A session on this issue is planned at the December meeting of the American Geophysical Union (“*The Looming Gap in Microwave Radiometer Coverage and its Potential Impact on Climate Records*”). The Polar Space Task Group is addressing this from the perspective of continuity of climate records. Mark Drinkwater (ESA Chair of Polar Space Task Group) has indicated it is now unlikely that any new satellite mission will be financed and developed prior to the expected end of the AMSR-E/AMSR-2 instrument lifetime. He suggests that the PMR data from the Chinese MWRI instrument on their operational FY-3 satellite series are currently providing equivalent daily sea-ice extent/concentration data products which deserve further attention. These data are available publicly in near real time and, while this does not solve the measurement continuity problem (i.e. for <10km res. products), no user has demonstrated a reason why they are unsuitable for operational use. I recommend that the ice services undertake an evaluation of these data and report – ideally in time for the AGU meeting.

John Falkingham  
September 4, 2017