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| **WWMIWS Committee Meeting 1** | **WWMIWS-1** |
| **Monaco, 26-30 August 2018** | **Agenda 4.6** |

## Review of PAME Polar Code Best Practices portal

**Background**

The Arctic Council is a collective of Governments with interests in the Arctic environment and to develop consistent practices and policies. The Arctic Council has established a number of Working Groups, and a few of these working groups cover meteorological interests, and WMO has a role to play. The working group called PAME – Protection of the Arctic Marine Environment, has a majority focus on safe shipping in Arctic waters. A project of the PAME WG was to establish a best practices web portal on applying the Polar Code regulations. The Polar Code is a goal based regulation which leaves room for interpretation on how to apply these functional goals and requirements.

Link to Best Practices web portal,

<https://pame.is/index.php/chapter-11>

**Problem**

The initial text proposed by WMO was not user focused, in-line with the intent of the best practices web portal. The current text reads like an advertorial for all of WMO’s programmes, but does not outline how they relate to the Polar Code in practice, if at all.

Discussion:

The Committee should review the text submitted by WMO for the relevant components of the Polar Code, as per Annex 1. The Committee should agree to revised text submissions that are user focused and relevant to application of the Polar Code.

**Annex 1**

*Text submissions by WMO to the PAME best practices web portal*

**Chapter 11 – Voyage Planning, and Chapter 9 – Safety of Navigation**

[World Meteorological Organization Technical Commission on Oceanography and marine meteorology (JCOMM)](https://pame.is/index.php/chapter-11%22%20%5Cl%20%22world-meteorological-organization-technical-commission-on-oceanography-and-marine-meteorology-jcomm)

**Hyperlink 1:** <http://www.jcomm.info/>The JCOMM website provides access to global information about sea ice and icebergs, waves and coastal hazards, ocean forecasting, and maritime safety services. Information includes standards for observation, reporting and coding such as international ice terminology, chart symbology, and ice hazard warnings. Knowledge of these standards is essential for polar mariners to interpret ice information for voyage planning and navigation in and near ice. Additionally, the website contains current weather forecasts and warnings, ice hazard warnings and maritime coastal advisories issued by National Meteorological and Hydrological Services through the World Meteorological Information System and generally available on NAVTEX and the Global Maritime Distress Safety System (GMDSS).

Updates: Standards information is updated periodically. Current forecast and warning information is updated at least daily.

[World Meterological Institute](https://pame.is/index.php/chapter-11%22%20%5Cl%20%22world-meterological-institute)

**Hyperlink 1**: [https://public.wmo.int](https://public.wmo.int/)WMO provides information for integrating weather, climate and hydrological data, environmental information and weather-climate predictive tools in the Arctic region, for example through its World Weather Watch (WWW), the Marine Meteorology and Oceanography Programme (MMOP), the Global Cryosphere Watch and other components of the WMO Integrated Global Observing System (WIGOS) as well as its World Climate and Weather Research Programmes (WCRP and WWRP). This is the general link to the WMO's public website.
 **Hyperlink 2:** [http://wcrp-climate.org](http://wcrp-climate.org/)
For longer timescales the World Climate Research Programme (a cosponsored organisation of WMO, the Intergovernmental Oceanographic Commission and the International Council for Science) provides the science underpinning changes in the climate worldwide, including the Arctic.
 **Hyperlink 3:**<http://www.climate-cryosphere.org/wcrp/pcpi>The Polar Climate Predictability Initiative (PCPI) is an initiative of the World Climate Research Programme (WCRP), whose goal is to improve the understanding of the predictability of climate and the effect of human activities on climate. The PCPI has a focus on polar regions and their role in the global climate system, and aims to improve predictability of the climate system on all time scales by improving our understanding of the underlying physical mechanisms and their representation in climate models.
 **Hyperlink 4:**[http://www.polarprediction.net](http://www.polarprediction.net/)WMO is coordinating a Year of Polar Prediction (YOPP), starting in 2017, which will include a host of observing, modelling and educational activities. YOPP has the overarching goal to significantly improve our environmental prediction capabilities for the polar regions and beyond, on time scales from hours to seasons. Because of various teleconnections the poles influence weather and climate conditions in lower latitudes where hundreds of millions of people live. YOPP is intended to evaluate the improvement of weather and climate prediction worldwide with improved polar observational network. The connection to longer time scales is made through the World Climate Research Programme’s Polar Climate Predictability Initiative. The core period of YOPP entails intensive observation and modelling campaigns in both the Arctic and the Antarctic, scheduled from mid-2017 to mid-2019.
 **Hyperlink 5:**<http://www.jcomm.info/index.php?option=com_oe&task=viewGroupRecord&groupID=114&I>The Expert Team on Sea-Ice of the Joint WMO -IOC Technical Commission for Oceanography and Marine Meteorology provides for coordination, guidance, and proposals on relevant technical regulations and standards to WMO and IOC on maters related to marine meteorological services in polar regions.
 **Hyperlink 6:** <http://www.jcomm.info/index.php?option=com_content&view=article&id=135&Itemid=37>The Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) provides coordination, guidance, and proposes technical regulations and standards to WMO and IOC on aspects related to forecasting marine coastal hazards, including in polar regions.
 **Hyperlink 7:** <https://library.wmo.int/pmb_ged/wmo_558_en-v1.pdf>The WMO Manual on Marine Meteorological Services, WMO No. 558, provides for WMO Technical Regulations and standard practices related to marine meteorological services, including sea-ice services, support to marine transportation, and prevention and mitigation of marine hazards.
 **Hyperlink 8:**<https://library.wmo.int/opac/index.php?lvl=notice_display&id=7469>Guide to Marine Meteorological Services, WMO No. 471 provides for guidance to WMO Members in accordance to WMO Technical Regulations and Standard Procedures and Practices (WMO No. 558) related to marine meteorological services, including sea-ice services, support to marine transportation, and prevention and mitigation of marine hazards.
 **Hyperlink 9:** <http://www.jcomm.info/index.php?option=com_oe&task=viewDocumentRecord&docID=9607>The Sea Ice Information Services in the World (WMO-No.574) is intended to provide to mariners and other users information on best practices in sea ice services available world-wide and by this formally extending the WMO publications No.9, Volume D - information for Shipping and No.558 - Manual on Marine Meteorological Services (WMO-No.558).
 **Hyperlink 10:** [http://weather.gmdss.org](http://weather.gmdss.org/)The Global Maritime Distress and Safety System (GMDSS) website displays the marine forecast and warning products that are provided to mariners via SafetyNet and Navtex, as part of the Worldwide Met-Ocean Information and Warning Service (WWMIWS), within the framework of the Global Maritime Distress and Safety System (GMDSS). The worlds' oceans have been divided into 21 areas, called MetArea's, for the provision of marine products to shipping. The products displayed are issued by the National Meteorological Services (NMS) appointed as WWMIWS Issuing Services. METAREA Coordinators are assigned to coordinate provision of the marine services for each area. View the MetArea Coordinator contact list.
 **Hyperlink 11:** <http://www.jcomm.info/index.php?option=com_content&view=article&id=281&Itemid=37>Marine Pollution Emergency Response Support System (MPERSS) primary objective is to have in place a coordinated, global system for the provision of meteorological and oceanographic information for marine pollution emergency response operations outside waters under national jurisdiction. The areas covered have the same geographical distribution than those for the GMDSS, and Area Meteorological Coordinators have been identified for all of them.
 **Hyperlink 12:** <https://nsidc.org/noaa/iicwg>The International Ice Charting Working Group (IICWG) is a working group of the world’s national ice services to promote coordination of operational sea ice and iceberg information services to better meet the needs of their national and international maritime clients. Through collaboration and cooperation in data sharing, standards, training, product development, research activities, and the delivery of information services, the IICWG aims to enhance the safety of maritime operations in ice-covered waters.
 **Hyperlink 13:** <http://www.wmo.int/wwrp>WMO's World Weather Research Programme advances society's ability to cope with high impact weather through research focused on improving the accuracy, lead time and utilization of weather prediction. It has several activities focussed on the Arctic region, including the Year of Polar Prediction (http://www.polarprediction.net).

[WMO website](https://www.wmo.int/pages/index_en.html)

[International Ice Charting Working Group](https://pame.is/index.php/chapter-11#international-ice-charting-working-group)

**Hyperlink:** <http://nsidc.org/noaa/iicwg/>
For Arctic shipping, the website of the International Ice Charting Working Group (IICWG) most importantly provides contact information for all of the national ice services in the world, including 24/7 emergency access to ice information. Additionally, the site provides information about IICWG activities, summaries and presentations from annual IICWG meetings, documents on standards, and links to other ice information sites.

[IICWG website](https://nsidc.org/noaa/iicwg)

**Chapter 10 Communication**

[World Meteorological Organization Technical Commission on Oceanography and Marine Meteorology (JCOMM)](https://pame.is/index.php/chapter-10#world-meteorological-organization-technical-commission-on-oceanography-and-marine-meteorology-jcomm)

**Hyperlink**: <http://www.jcomm.info/>The JCOMM website provides access to global information about sea ice and icebergs, waves and coastal hazards, ocean forecasting, and maritime safety services. Information includes standards for observation, reporting and coding such as international ice terminology, chart symbology, and ice hazard warnings. Knowledge of these standards is essential for polar mariners to interpret ice information for voyage planning and navigation in and near ice. Additionally, the website contains current weather forecasts and warnings, ice hazard warnings and maritime coastal advisories issued by National Meteorological and Hydrological Services through the World Meteorological Information System and generally available on NAVTEX and the Global Maritime Distress Safety System (GMDSS).
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