

Paper for Consideration by NIPWG

Polar Regions Ice Information Sources

Submitted by:	Italy (IHI) and United States (NGA)
Executive Summary:	Provide information on obtaining historical and real-time ice information In the polar regions (the Arctic and the Antarctic)
Related Documents:	IMO Polar Code.
Related Projects:	NIPWG Physical Environment Test Data Set (S-126)

Introduction / Background

The IHI and NGA were requested to research the availability of ice information from countries bordering the polar regions or with a significant scientific or commercial presence in the Arctic and Antarctic regions. We concentrated on researching information from Australia, Canada, Denmark, Germany, Iceland, Norway, Russia, the United Kingdom, and the United States.

Analysis/Discussion

While the IMO Polar Code was not the driving force behind researching this information, it was decided that the Polar Code breakdown of ice information into historical information and real-time information would be appropriate for this research.

Historical ice information is a summary of data collected over a period of time; the meteorological equivalent is the compilation of daily weather information over a period of time into climate data. Historical information can be obtained from both hard copy hydrographic office sailing directions and pilots as well as from hydrographic office, scientific, educational, and commercial web sites on the internet.

Real-time ice information is data reflecting what is happening at the current time and predictions for the short-term future; the meteorological equivalent is the daily weather information. Real-time information can be obtained from hydrographic office, scientific, educational, and commercial web sites on the internet as well as through telephone, facsimile, and e-mail requests through these same web sites.

The breakdown of this information can be summarized, as follows:

1. Arctic region vs. Antarctic Region.
2. Historical information vs. real-time information.
3. Hard copy availability vs. internet availability.

The tables below summarize the source countries which provide historical and real-time data on polar ice conditions, in hard-copy format and internet availability.

Source Country	Historical Data		
	Arctic		Antarctic
	Internet	Hard Copy	Hard Copy
Australia			x
Canada	x	x	
Denmark (Greenland)	x		
Germany	x		
Iceland	x		
Norway	x	x	
Russia	x		
United Kingdom		x	x
United States	x	x	x
Unique sources	10	13	4

Real-time Data		
Source Country	Arctic	Antarctic
	Internet	Internet
Australia		x
Canada	x	
Denmark (Greenland)	x	
Germany	x	x
Iceland	x	
Norway	x	
Russia	x	
United Kingdom		
United States	x	x
Unique sources	15	5

Annex A—Arctic and Antarctic Historical Ice Information.
Annex B—Arctic and Antarctic Real-Time Ice Information.

Conclusions

A significant number of sources are available, either in hard-copy format or via the internet, covering historical and real-time data regarding ice information in the Arctic and the Antarctic polar regions.

Recommendations

Determine if any or all of the information contained in Annex A and Annex B is suitable for inclusion in the Physical Environment Test Data Set. (S-126).

Action Required of NIPWG

The NIPWG is invited to:

- a. Note this paper.
- b. Analyze this information to determine if it should be added to the Physical Environment Test Data Set