

EXPERT TEAM ON SEA ICE – FIFTH SESSION

STEERING GROUP FOR THE PROJECT
GLOBAL DIGITAL SEA ICE DATA BANK (GDSIDB) –
THIRTEENTH SESSION

OTTAWA, CANADA, 25 TO 28 MARCH 2014

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Submitted by: Darlene Langlois

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ICE CLIMATOLOGY SERVICES PROVIDED IN CANADA

Summary and Purpose of Document

This document describes the state of Ice Climatology services provided in Canada – March 2014

ACTION PROPOSED

The Team is invited to:

- (a) Note and comment on the information contained in the report;

References: CIS archive site: <http://www.ec.gc.ca/glaces-ice/default.asp?lang=En&n=0A70E5EB-1>

Appendices: none

Discussion

1. The Canadian Ice Service (CIS) maintains a digital archive of ice records in a variety of formats. Collections include: sea ice, lake ice and iceberg charts, aircraft and ship reconnaissance charts, bulletins and iceberg reports. The current focus has been on sea ice charts since we have very few requests for iceberg data.

Data Availability

2. Currently the collections available online at the CIS web site are:

- Regional scale charts. Frequency has gradually increased from Monthly to weekly. Northern charts (Western and Eastern Arctic and Hudson Bay charts are done weekly year round. Southern charts (Great Lakes, East Coast) are started the week before we expect ice to form and end the week after we expect the last ice to leave. In this way, we hope to catch early and late freeze up events.
- Daily iceberg distribution chart showing the estimated numbers of icebergs in each degree latitude/longitude square as well as the Limit of All Known Ice (done in partnership with the International Ice Patrol)
- Daily charts. These charts are now produced in areas where there is marine activity. In the past they focused on where the Canadian Coast Guard ships were operating.

3. Other data available through manual extraction are:

- Ship-board or aircraft ice reconnaissance charts
- Daily ice bulletins – text messages including warnings of hazardous ice conditions present or developing within the next 36 hours
- 30-Day Forecasts – text forecasts issued about the 1st and 15th of every month describing expected changes in ice conditions over the next 30 days
- Seasonal Outlooks – text and graphical products issued about December 1st to provide an outlook for the freeze-up and development of the ice season in southern Canadian waters, and about June 1 to provide an outlook for the break-up and development of the navigation season in northern Canadian waters
- Seasonal Summaries – text and graphical products issued at the end of each season (summer and winter) summarizing the recently completed ice season as a brief climatological record.

4. Data that is held but is not practically available for distribution are:

- Iceberg position reports. The iceberg reports are contained in a variety of formats, including paper and documents within emails. We currently lack the expertise to manage this collection.
 - Daily charts produced before 1999. The Canadian Ice Service is in the process of making available ice charts produced before 1999. The work involves doing a quality check of the data and naming each chart. We are focusing on charts over the Beaufort in the Western Arctic but hope to expand to other areas. The goal is to make available more detailed ice information, over a longer time period than currently available.
 - Photos of ice conditions. The photo collection is not organized in any fashion. We hope to organize the photos by location or other system but have not begun to work on this.
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