

Why an Ice Service ?

Icebergs are a significant marine hazard



Reduta Ordon in drydock after striking an iceberg (July, 1996)

North American Ice Service (NAIS)

A Canada - US initiative

Mission: *be the authoritative source of marine ice information to meet the needs and obligations of the United States and Canadian governments.*

Vision: *create a harmonized suite of products and services for ice information to meet government needs for safety of navigation, security and informed decision making*



NAIS Canadian component

- Mandate/Mission
 - Warn maritime users of hazardous ice conditions in Canadian waters
 - Maintain a general historic knowledge of ice conditions and ice climatology
- Provides ice information in support of:
 - Ship routing
 - Icebreaking operations
 - Climate monitoring
 - Weather forecasting, etc.



Data to Ice Information Products

Satellite

Optical

NOAA AVHRR
DMSP OLS

Microwave

RADARSAT
ENVISAT
QUIKSCAT
DMSP SSM/I

Airborne

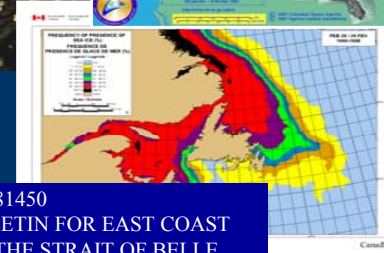
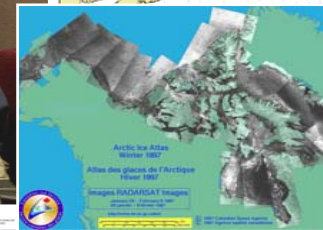
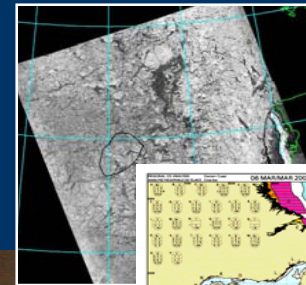
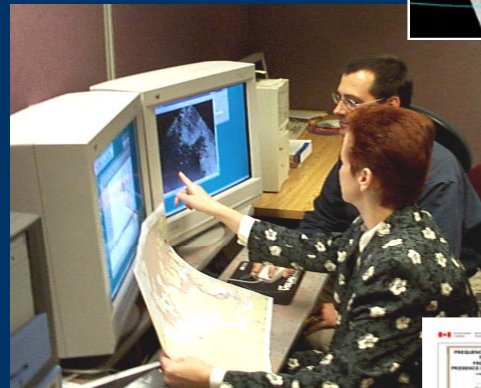
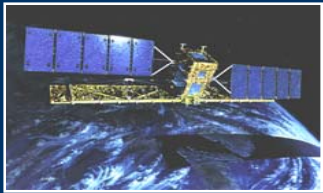
Visual Obs
SLAR/SAR

Surface

Buoys
Ship Reports
Shore Obs

Models

Marine weather
Ice



FICN11 CWIS 181450
ICEBERG BULLETIN FOR EAST COAST
WATERS AND THE STRAIT OF BELLE
ISLE
AND ITS APPROACHES ISSUED BY
ENVIRONMENT CANADA FROM
CANADIAN ICE
SERVICE IN OTTAWA AT 1500 UTC
WEDNESDAY 18 OCTOBER 2000.

Image Products

Analysed
images

Chart Products

Daily tactical
ice analyses
Weekly
strategic ice
analyses

Climatological Products

Ice Atlases
Normals /
Extremes

Text Products

Ice hazard
warnings
30-day
forecasts
Seasonal
Outlooks

Unusual ice events are in the news

- The 66 square-km Ayles ice shelf
- Broke away in August 2005
- Freed by high temperatures and winds.
- 3,000 years old
- 15 km long by 5 km wide
- 35 meters thick
- Detected by Laurie Weir NAIS in near real time
- Now 80 km west of origin

