

Sea ice in the Arctic - International Plans



NOAA-ECCC Marine Workshop
Ann Arbor, Michigan

Darlene Langlois – Canadian Ice Service
Becki Heim & Mary-Beth Schreck – NWS Alaska Sea
Ice Program

Caryn Panowicz – US National Ice Center
May 4, 2016

This presentation will highlight the current and future goals of international groups including

- the North American Ice Service (NAIS),
 - the International Ice Charting Working Group (IICWG),
 - and the Expert Team on Sea Ice (ETSI),
- which all include participants from the US and Canada.



North American Ice Service (NAIS)

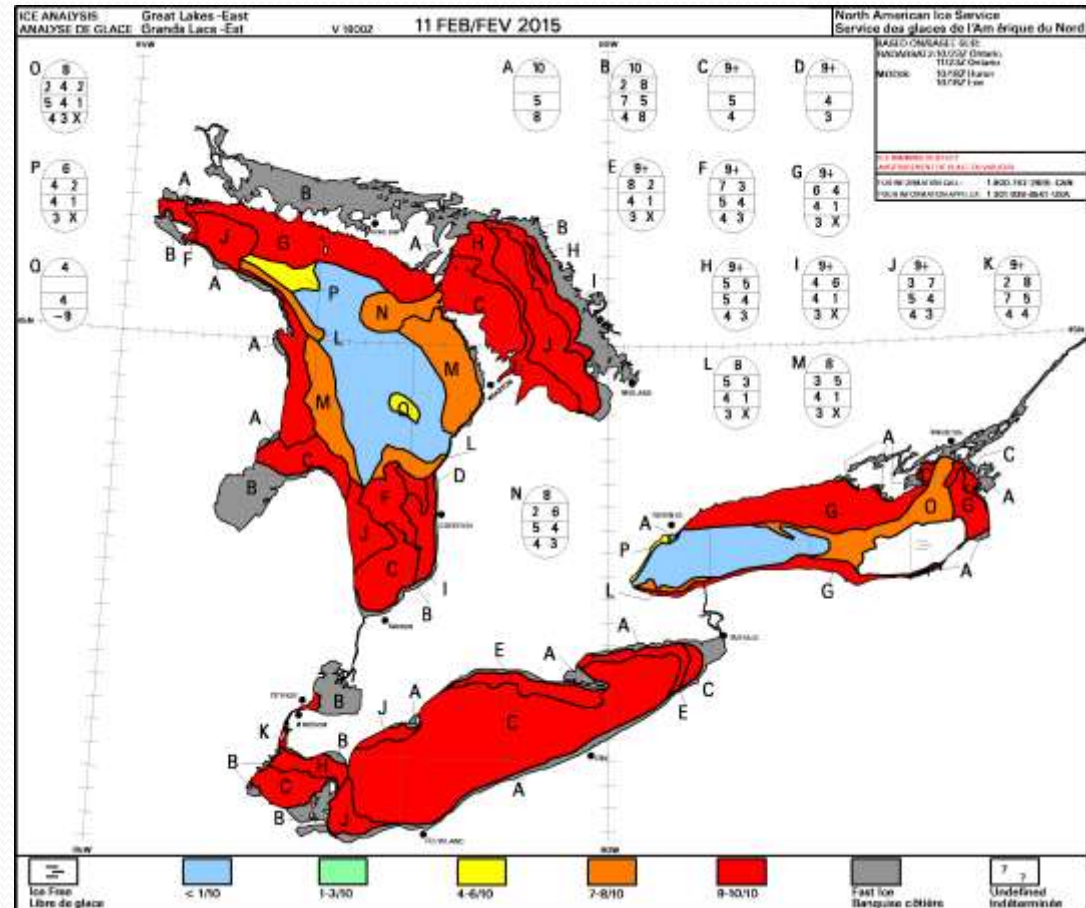
- International partnership between the
 - Environment and Climate Change Canada's Canadian Ice Service
 - International Ice Patrol
 - Danish Meteorological Center
 - U.S. National Ice Center
- Mission is to leverage the strengths of each service to provide the highest quality, timely and accurate ice information for marine interests

NAIS Strategic Goals

- Be the leading authority for the provision of operational ice information in North American waters;
- Provide integrated, seamless ice services through collaborative teamwork; and
- Develop excellence through innovation for the improvement of the effectiveness, accuracy, efficiency and diversity of ice information products.

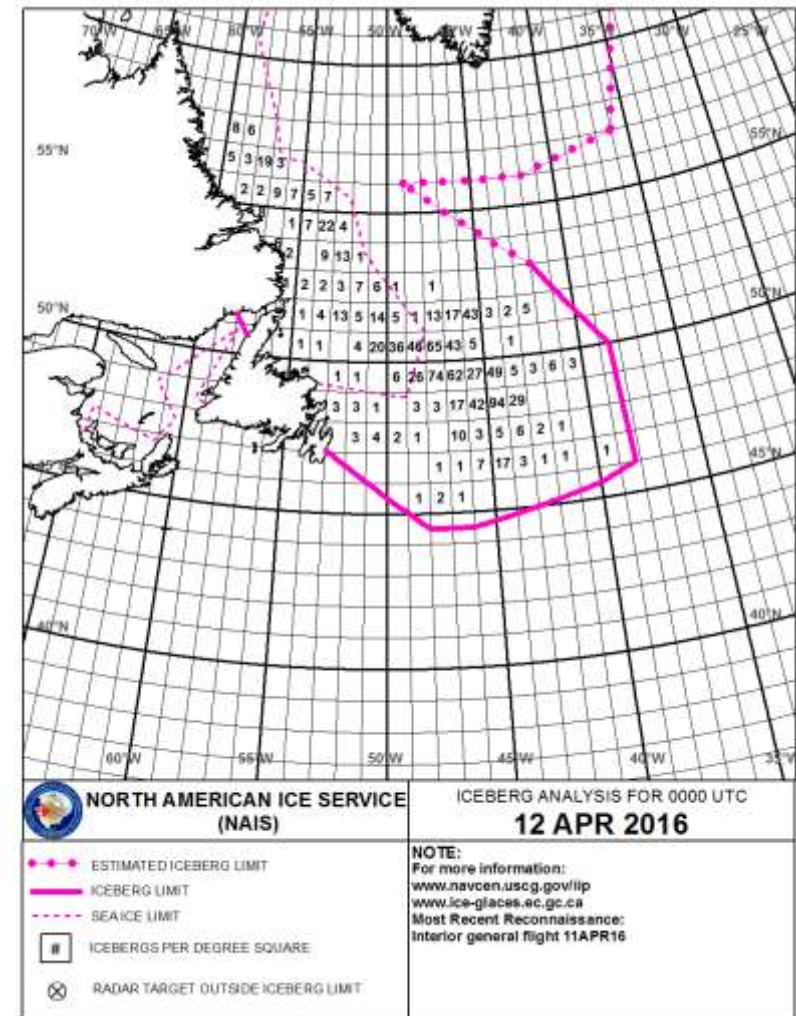
NAIS in practice – Great Lakes

- USCG and CCG work closely together to provide service
- CIS and NIC share production of the daily ice chart
 - NIC Tues-Thurs
 - CIS Fri-Mon
- One daily bulletin includes all areas of the lakes in the same format.
 - Issued by CIS with Lake Michigan contribution from NIC
- RADARSAT-2 imagery shared



NAIS in practice – Icebergs

- Shared responsibility for East Coast waters
- IIP leads Feb to August
- CIS leads Sept to Jan
- Shared database of iceberg positions
- Shared software (BAPS) that includes model of iceberg drift
- Coordinated iceberg flights
- Joint science studies
- Now includes input from Danish Meteorological Institute for iceberg information around Greenland
- CIS's 30 day forecast on sea ice includes contribution from IIP on icebergs for next 15 days

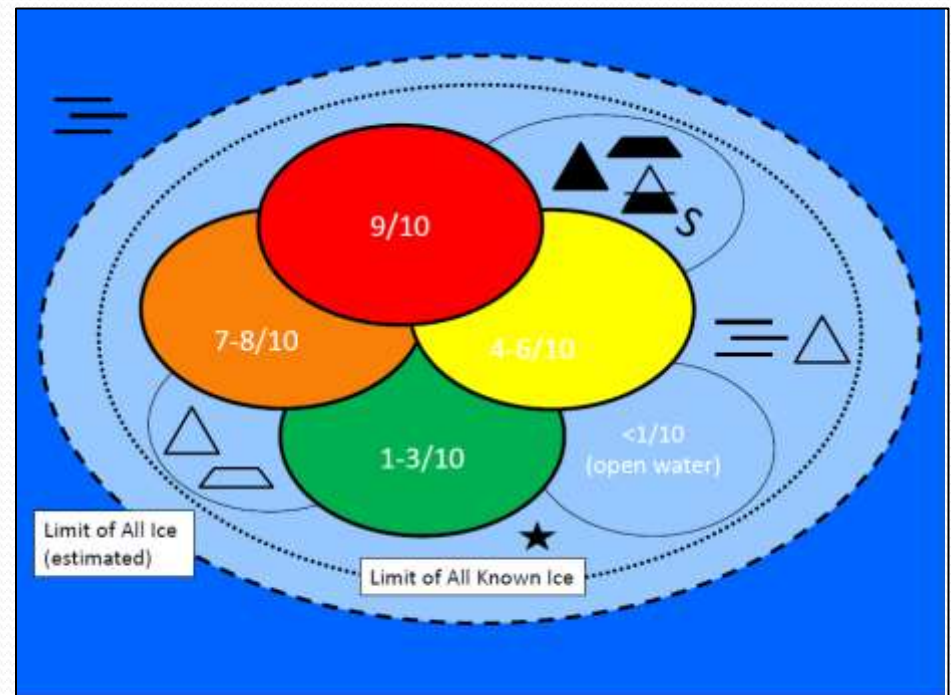


International Ice Charting Working Group (IICWG)

- Informal working group of operational and commercial ice services that discuss common issues:
 - satellite imagery and other data sources,
 - sea ice modeling,
 - customer requirements and suggestions,
 - standards for descriptions of sea ice information.
 - Ice Analyst workshops for joint training and focused discussion

IICWG in practice

- Iceberg committee to discuss standards for:
 - terminology,
 - “berg water” but no official term for “berg ice”
 - colors on charts
 - Various iceberg amounts
 - wording in bulletins
 - Probability
- ETSI has final approval



Proposal from Danish Meteorological Institute

Expert Team on Sea Ice (ETSI)

- ETSI is a formal international WMO committee that sets standards for the descriptions of sea ice information in text or graphical format.
- JCOMM
 - Coordinates and recommends standards and procedures ;
 - Considers evolving needs of all users;
 - Includes an outreach program
 - Aims to maximize the benefits.
 - Main program areas:
 - Observations
 - Data Management
 - Services and Forecasts

ETSI membership

- United States,
 - Argentina,
 - Canada,
 - Denmark,
 - Germany,
 - Japan,
 - Norway,
 - Russia.
-
- ETSI Chair serves as a member of the JCOMM's Expert Team on Maritime Safety Services (ETMSS) and Expert Team on Marine Climatology (ETMC).

ETSI specific activities

- Sharing client requirements
- Provide advice on impacts of sea ice relevant to:
 - maritime safety,
 - marine pollution response and
 - search and rescue services;
- Maintain linkages with
 - Ocean forecasters on the relevant sea ice modelling and forecasting techniques;
 - Projects related to the role of sea ice in the global climate system
- Develop advice and guidance material, software exchange, specialized training
- Maintain and develop formats, nomenclatures and procedures for
 - sea ice data and information exchange
 - terminology, coding and mapping standards;
- Maintain linkages with international organizations and programmes, in particular BSIM, CLIC, EIS, IICWG, NAIS, ASPeCt, GCOS and IHO.

ETSI - in practice

- Developed WMO document “Ice Services of the World”
- Developed the S-411 standards for input of sea ice information into Electronic Data Systems onboard ships.
- Updates to WMO manuals and guides for Sea Ice Maritime Safety information
- Approval of the Ice chart colour code system
- Approval of the WMO Sea Ice Nomenclature documents

Future Possibilities

- Northern hemisphere iceberg coverage
- Coordinated hemispheric sea ice coverage
- Certified ice analyst / forecaster
- Verification methods

An aerial photograph showing a large glacier flowing from the top of the frame into a deep blue lake. The surrounding terrain is rugged and mountainous, with patches of snow and ice. The sky is filled with soft, white clouds.

Thank you
Darlene.Langlois@Canada.ca