



# International Ice Charting Working Group (IICWG)

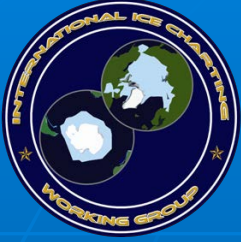
<http://nsidc.org/noaa/iicwg/>

- Working group formed by national ice services to coordinate the operational provision of sea ice and iceberg information globally
- Ad-hoc self-funded group
- Acts as an advisory body to the WMO-IOC JCOMM/ETSI
- Meets annually since 1999
- Charter has been signed by 12 national organizations
  - Canada, Denmark (Greenland), Finland, Germany, Iceland, Norway, Poland, the Russian Federation, Sweden and the United States, as well as the British Antarctic Survey and the International Ice Patrol.
  - But meetings are attended by many more
  - Expanding to bring Southern Hemisphere ice services to the charter
- Coordinates provision of sea ice and iceberg information
  - Faster time cycle than ETSI
- Serves as a forum to exchange information, scientific/technical advances, best practices



# IICWG Accomplishments

- Harmonization of ice chart availability and appearance
  - Common implementation of international ice code
  - Standard international colour codes
- SIGRID – formats for exchange and archival of digital ice charts
- Lobby for continued availability of satellite data for ice monitoring
- Ice Logistics Portal
  - Convenient, single point of access to charts from many ice services (<http://www.bsis-ice.de/IcePortal/>)
- Pushed creation of Arctic METAREAs and established protocols to coordinate ice information among issuing services for the Arctic Ocean
- Ice Analyst Workshops - share best practices and standardize training



# IICWG Ongoing Issues

- Ice information products for Electronic Navigation Chart Systems (ENCS / ECDIS)
  - Commence routine, standard production of ice information for ENCS
- Availability of ice information in Antarctic waters
  - Increase capacity of southern hemisphere ice services to provide information for marine safety
- Ice information requirements of the IMO Mandatory Polar Code
  - Also ice navigator training requirements
- Joint Ice Chart Production
  - Reduce cost of production by sharing workload internationally
  - Improve quality of ice information available to mariners
- Measurement of Sea Ice Thickness
  - Lack of basin-scale measurements most serious gap in ice monitoring

# YOPP Implementation Plan

## Main IICWG Comment Areas

- Better linkages/integration between the modeling/research , observational, and operational community required
- Enhanced YOPP observations should provide data in near real-time to attract the operational community
- Seek early engagement of operational services in YOPP activities including summer schools, workshops, and synthesis preparation
- Actively promote forecasting centres to undertake sea ice verification
- Identify what IICWG coordination is required or expected in support of YOPP
- Leverage YOPP to develop IICWG Southern Hemisphere participation
- Improved sea ice automation may not be based solely on SAR but on a combination with non-SAR observations
- Promote assimilation of analysis into models

# Recent Activities of Note For Discussion

NOAA Sea Ice Forecasting Workshop, Anchorage, Alaska, 19-21  
September, 2011

[http://www.arctic.noaa.gov/docs/NOAA\\_Sea\\_Ice\\_Forecasting\\_Workshop\\_Summary.pdf](http://www.arctic.noaa.gov/docs/NOAA_Sea_Ice_Forecasting_Workshop_Summary.pdf)

National Research Council Polar Research Board; Division on Earth and Life  
Studies Committee on the Future of Arctic Sea Ice Research in Support of  
Seasonal-to-Decadal Predictions - Seasonal-to-Decadal Predictions of  
Arctic Sea Ice: Challenges and Strategies Study, November 2012

[http://polar.crrel.usace.army.mil/PDFs/NAP\\_Seasonal-toDecadal\\_Predictions\\_of\\_Arctic\\_Sea\\_Ice.pdf](http://polar.crrel.usace.army.mil/PDFs/NAP_Seasonal-toDecadal_Predictions_of_Arctic_Sea_Ice.pdf)

International workshop on seasonal to decadal prediction, Toulouse,  
France, from 13 to 16 May 2013

[http://www.meteo.fr/cic/meetings/2013/s2d/report\\_workshop\\_Toulouse\\_May2013.pdf](http://www.meteo.fr/cic/meetings/2013/s2d/report_workshop_Toulouse_May2013.pdf)

Global Satellite Observation Requirements for Floating Ice - Focusing on  
SAR, WMO/EC-PORS PSTG Study March 2014

NOAA Science Challenge Workshop - Predicting Arctic Weather, Climate and  
Related Impacts is scheduled for May 13-15, 2014 in Boulder, CO

<http://www.esrl.noaa.gov/psd/events/2014/arctic-predictions-science/>