

PRESS RELEASE

Ice Services Working for Maritime Safety in the Polar Seas

Buenos Aires, Argentina, 30 September 2022 – After two years of virtual meetings, the International Ice Charting Working Group (IICWG) convened in Buenos Aires during September 26-30. Fifty experts from the national Ice Services and their partners met in the historic *Centro Naval* joined by another 60 participants on-line. The meeting was hosted by the Argentine Naval Hydrographic Service.

Ms. Daniela Castro, Secretary of Research, Industrial Policy and Production for Defense welcomed the participants noting the growing importance of environmental information under climate change. The theme of the meeting was “*Re-Connecting*”, reflecting the need for the Ice Services to reconnect with one another, with their clients, and with their partners in the research and earth observing communities.



The participants in the International Ice Charting Working Group toured the Argentine icebreaker A.R.A. Almirante Irizar.

While this was the first face-to-face meeting since 2019, IICWG task teams continue to be active in supporting maritime safety. In particular:

- Improving sea ice and iceberg detection using multi-spectral Synthetic Aperture Radar in the X-, C-, and L-bands in partnership with the European, German, and Argentine space agencies. Argentina’s new satellite program, SAOCOM, is providing increased observation capabilities for Antarctic sea ice and icebergs.
- Developing new ice hazard risk products to augment traditional ice charts. These new products will help mariners meet the Polar Code requirement for voyage-specific risk assessment. Standards are being developed for iceberg density and sea ice pressure products.
- Working towards implementing an operational Southern Ocean Limit of Known Ice similar to the North Atlantic Limit of All Ice. With the vast extent of the Southern Ocean, the task involves improved satellite detection capabilities and iceberg drift and deterioration models.
- Working with maritime training institutes to provide better tools to teach mariners about sea ice and icebergs and the information available.

Noteworthy Events

The loss of the Sentinel-1B satellite in December 2021 has created a major gap in sea ice and iceberg monitoring capacity, particularly in the Southern Ocean.

While still on a declining trend, ice conditions are highly variable from year to year.

- Arctic sea ice reached its annual maximum extent on February 25, 2022. The minimum ice extent probably occurred on September 18. At 4.7 million square kilometers, it is tied for tenth lowest in the 44-year satellite record.
- The North Atlantic experienced its third consecutive “light” season, with 56 icebergs crossing south of 48 degrees North latitude. The last “severe” season was 2019 with 1,515 icebergs crossing 48N.
- The Baltic Sea ice winter 2021–2022 was mild but long, lasting 221 days.
- Antarctic sea ice diminished to a record minimum extent in February 2022, falling below 2 million square kilometers for the first time on record. Despite this low overall extent, locally high sea ice concentrations prevented some ships from reaching research areas in the Bellingshausen and Weddell Seas.
- Iceberg A-76a, one of the largest icebergs ever recorded, has drifted northward from the Weddell Sea where it calved in 2021, toward Coronation Island. Another giant iceberg, A-68a, which calved in 2017, drifted northward and broke into hundreds of smaller icebergs around South Georgia in 2020.

Sir Ernest Shackleton’s ship *Endurance* was found.

- The Weddell Sea ice cooperated just enough for an international team aboard South Africa’s *S.A. Agulhas II* to find the wreck that was crushed by ice and sank in 1915.

The polar cruise ship industry is hoping for a post-pandemic rebound.

- Cruise ships were allowed into the Canadian Arctic for the first time since 2019. The industry took advantage planning 19 cruises over the summer.
- After a near-complete shutdown for two years, 34 ships made over 250 port calls at Svalbard in 2022 (*Arctic Expedition Cruise Operators*)
- Because of the pandemic, very few cruises went to Antarctica in 2020-21. There were 236 voyages during the 2021-22 season compared with 411 in the 2019-20 season. Future operations will be dictated by the pandemic evolution and worldwide travel restrictions. (*International Association of Antarctic Tour Operators*).

Over the past three years, several new vessels have entered polar service.

- In early 2022, Australia’s new icebreaker *RSV Nuyina* completed its first trip to Antarctica, mapping a previously unknown subsea canyon after re-supplying the Australian research stations.
- China’s *Xue Long 2* made its first trip to the Antarctic in 2020 and traversed the Arctic Ocean in 2021.
- Britain’s new polar research ship, *RRS Sir David Attenborough*, undertook its maiden voyage to the Antarctic in 2021.
- Chile is building a new icebreaker to service its Antarctic stations by 2024.
- The first three of six new Arctic Offshore Patrol Ships were delivered to the Canadian Navy in 2020-22.
- The U.S. Coast Guard is expected to take delivery of the first of three new heavy icebreakers in early 2025.

The IICWG was formed in 1999 to promote cooperation among the world’s Ice Services on all matters concerning sea ice and icebergs. The members of the IICWG are the operational Ice Services of Argentina, Canada, Chile, Denmark (Greenland), Finland, Germany, Iceland, Norway, Poland, Russia, Sweden, and the United States, as well as the British Antarctic Survey and the International Ice Patrol.

For more information, about the IICWG, Sea Ice Services in the World, general ice information or current ice charts, please see the IICWG web site: <http://nsidc.org/noaa/iicwg/>



Contact: Mr. John Falkingham, IICWG Secretariat, Ottawa, Canada