

Polar priorities: Senior defense officials discuss Arctic, Antarctic science and research

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Chief of Naval Research Rear Adm. Mat Winter, right, talks with Rear Adm. Veijo Taipalus, commander of the Finnish navy. Both attended the International Cooperative Engagement Program for Polar Research (ICE-PPR), a first-ever gathering of senior defense officials to coordinate science and technology research in high latitudes. Credit: Lt. Marten Coulter, US Navy

To address the need for collaborative research in the Polar Regions, Chief of Naval Research Rear Adm. Mat Winter met in Finland last week with counterparts from five nations in a first-ever gathering of senior defense officials to coordinate science and technology research in high latitudes.

Dubbed the International Cooperative Engagement Program for Polar Research (ICE-PPR), defense officials and scientists from partner nations with Arctic and Antarctic interests—including the U.S., Canada, Denmark, Finland, Norway and Sweden—met in Helsinki to advance collaboration on polar research that could prove pivotal to not only scientific understandings but also U.S. and international naval operations.

While the U.S. Navy has long experience with polar operations, changing climates present new challenges—particularly for surface ships, as new water passages open up.

"Cooperative polar research is essential to ensuring safe maritime operations in these rapidly changing regions," said Winter. "ICE-PPR will allow the U.S. Navy and our partners to outline and coordinate our respective needs and priorities moving forward.

"The longstanding research and operational experience of our polar partners will play a key role in advancing U.S. knowledge and capabilities in these extremely challenging regions of the world."

The meeting answers the recent call from Chief of Naval Operations Adm. John Richardson to rapidly accelerate learning and provide new capabilities to the fleet. The Design for Maintaining Maritime Superiority specifically calls for expanding and strengthening the Navy and Marine Corps network of partners—including a directive to "prioritize key international partnerships through information sharing,

interoperability initiatives and combined operations."

Ongoing research sponsored by the Office of Naval Research (ONR) is increasing the world's understanding of the changing environment in the Arctic, documenting a steady reduction in summer sea ice—with the resultant opening up of previously inaccessible waterways for extended periods of time each year.

At the gathering, representatives from each nation presented an overview of ongoing polar research activities, and outlined their top research priorities that could benefit from increased international science and technology collaboration.

Officials say the research collaboration will run the gamut from long-term fundamental research partnerships to applied research and even system prototypes—enabling more immediate opportunities to provide new technologies and capabilities to the fleet, a CNO priority.

The results could enhance capability for the Navy to support the U.S. Coast Guard in search and rescue operations, as well as the ability to more swiftly provide humanitarian and disaster relief around the world.

Long-term U.S. priorities discussed at the gathering included the enhancement of polar platforms, including surface ships and autonomous vehicles; the improvement of remote sensing in [polar regions](#); and the exploration of how to enhance human performance in some of the most physically challenging regions of the world.

"The mutual sharing of science and technology will be essential, both short-term and long-term, to the U.S. Navy and Marine Corps, to the Department of Defense and to our international partners," said Winter.

ICE-PPR was developed by ONR Global and other Navy partners.

Provided by Office of Naval Research

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