

NORWEGIAN POLAR INSTITUTE

A directorate under the auspices of Norway's Ministry of the Environment, the Norwegian Polar Institute (NPI) is headquartered in Tromsø, above the Arctic Circle. The NPI is Norway's principal organization for research, environmental monitoring and mapping in the polar regions of both hemispheres. The Institute's director is Dr. Jan-Gunnar Winther.

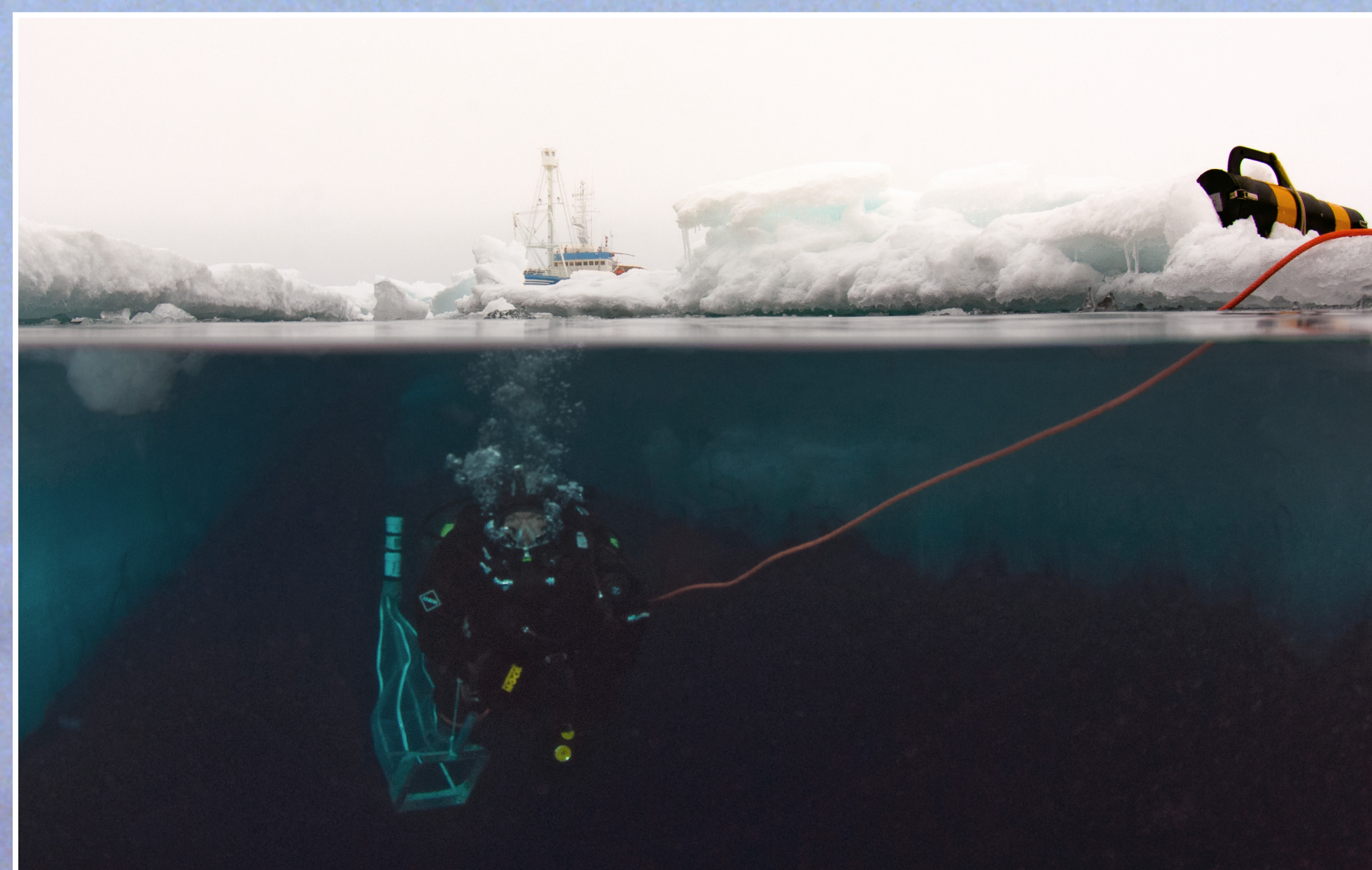
EARLY DAYS

Evolving from Norges Svalbard- og Ishavsundersøkelser (Norway's Svalbard and Arctic Ocean Survey), which was established in 1928, the Norwegian Polar Institute received its modern name and mandate in 1948. The esteemed oceanographer Prof. Harald Ulrik Sverdrup, who had been in charge of the scientific work during Amundsen's North-East Passage expedition, returned to his native land to serve as the new institute's first director.

FRAM CENTRE

After having spent its first 70 years in Oslo, the NPI shifted headquarters to Tromsø in 1998. Nicknamed "Gateway to the Arctic", the coastal city has been a traditional starting-point for expeditions to the far north. Members of the city's research community, including those at the world's northernmost university, represent a broad range of disciplines in the natural and social sciences – with a focus on the Arctic.

The NPI is part of the new Fram Centre – High North Research Centre for Climate and the Environment – which is a network of institutions that deal with research and advisory services. The Centre regularly hosts national and international scientific conferences and workshops.



Michael Tessmann samples ice-associated zooplankton with a plankton net. The research vessel *Lance* of the NPI can be seen in the background. Photo: Peter Leopold

ORGANIZATIONAL STRUCTURE

The NPI, now with a staff of 150, is divided into five departments: Research, Environmental Management and Mapping, Administration, Operations and Logistics, and Communications. There is also a Svalbard branch, based in Longyearbyen.

Since the Institute moved to Tromsø, the recruitment of scientists from all over the world has enhanced the NPI's international character. Two of the international secretariats administered by the NPI are the Arctic Council and The Climate and Cryosphere Project (CliC) – a project under the World Climate Research Programme.

The Norwegian Polar Institute runs year-round research stations in Ny-Ålesund (Sverdrup Research Station), Svalbard, and in Dronning Maud Land (Troll), Antarctica. In addition,

the Institute operates expeditions to Dronning Maud Land, and runs a summer station (Tor) there. The NPI's research vessel *Lance* has been customized for navigation in severe ice conditions. Available for lease parts of the year, *Lance* can accommodate up to 24 scientists and has laboratories and a helicopter landing platform.



Polar bear scientist Jon Aars examining a polar bear, assisted by Silje-Kristin Jensen. Reductions in sea ice will drastically affect the living conditions of the polar bears. Photo: Magnus Andersen

RESEARCH GROUPS

The NPI's research activities are organized in four interdisciplinary research groups:

The Biodiversity section, led by Dr. Kit M Kovacs, conducts research on questions related to the population biology and ecology of Arctic and Antarctic wildlife. There is a strong emphasis on marine mammals because they are good system indicators and are the subject of exploitation and management (hunting, tourism, etc.).

The Ecotoxicology section, led by Dr. Geir Wing Gabrielsen, gathers knowledge that improves understanding of contaminants, their sources and their biological effects in the European Arctic. It focuses on persistent organic pollutants (POPs) and heavy metals.

The Ocean and Cryosphere section, led by Prof. Dr. Harald Steen, deals with research about the oceans and the marine cryosphere. The scientific work includes process studies and long term monitoring. Scientific topics include energy and mass fluxes and interactions at the interfaces atmosphere-ice-ocean, as well as large scale dynamics of ocean water masses and sea ice. The work contributes to the understanding of climate processes in the polar regions, and helps to improve numerical climate models.

The Geology and Geophysics section, led by Dr. Elisabeth Isaksson, focuses on research involving modern processes and long term series. The studies include research topics within atmospheric science, paleoclimatic archives (marine sediments and ice cores), glaciology and geology of bedrocks. The programme contributes to the global understanding of climate change on various time scales.

CENTRE FOR ICE, CLIMATE AND ECOSYSTEMS – ICE

The Norwegian Polar Institute's centre for Ice, Climate and Ecosystems (ICE) was opened in 2009. ICE will position itself as a national competence centre for ice and climate research and environmental monitoring of the polar regions. ICE will further develop the NPI's position as a stakeholder in climate related research, such as ice, sea ice, alpine glaciers and effects of climate change on ecosystems, including ice-associated species. ICE is highly interdisciplinary, and engages scientists from all of NPI's research programmes.



Sea-ice scientist Sebastian Gerland is removing a sample of sea ice taken with a corer drill. Several metres of core can be obtained from the sea ice, revealing its physical properties and details about its chemistry and biology, including algae that grow in the ice. Photo: Tor Ivan Karlsen

PUBLICATIONS AND INFORMATION

NPI's multidisciplinary journal, *Polar Research*, promotes the exchange of scientific knowledge about the Arctic and Antarctic across disciplinary boundaries, serving an international community of researchers and environmental managers. The journal was established in 1982 and became an open-access journal at the beginning of 2011. *Polar Research's* international Editorial Board oversees the rigorous peer-review of submissions from around the world. For more information, please see www.polarresearch.net.

NPI also publishes a report series (Norwegian Polar Institute Report Series), a Polar Handbook series, and a variety of other publications for scientists and the general public. The image library contains 90 000 historical and contemporary photographs from the polar regions. The NPI web-site, www.npolar.no, offers detailed information about selected aspects of the polar environment.

For more information, please contact the Norwegian Polar Institute, post@npolar.no.

