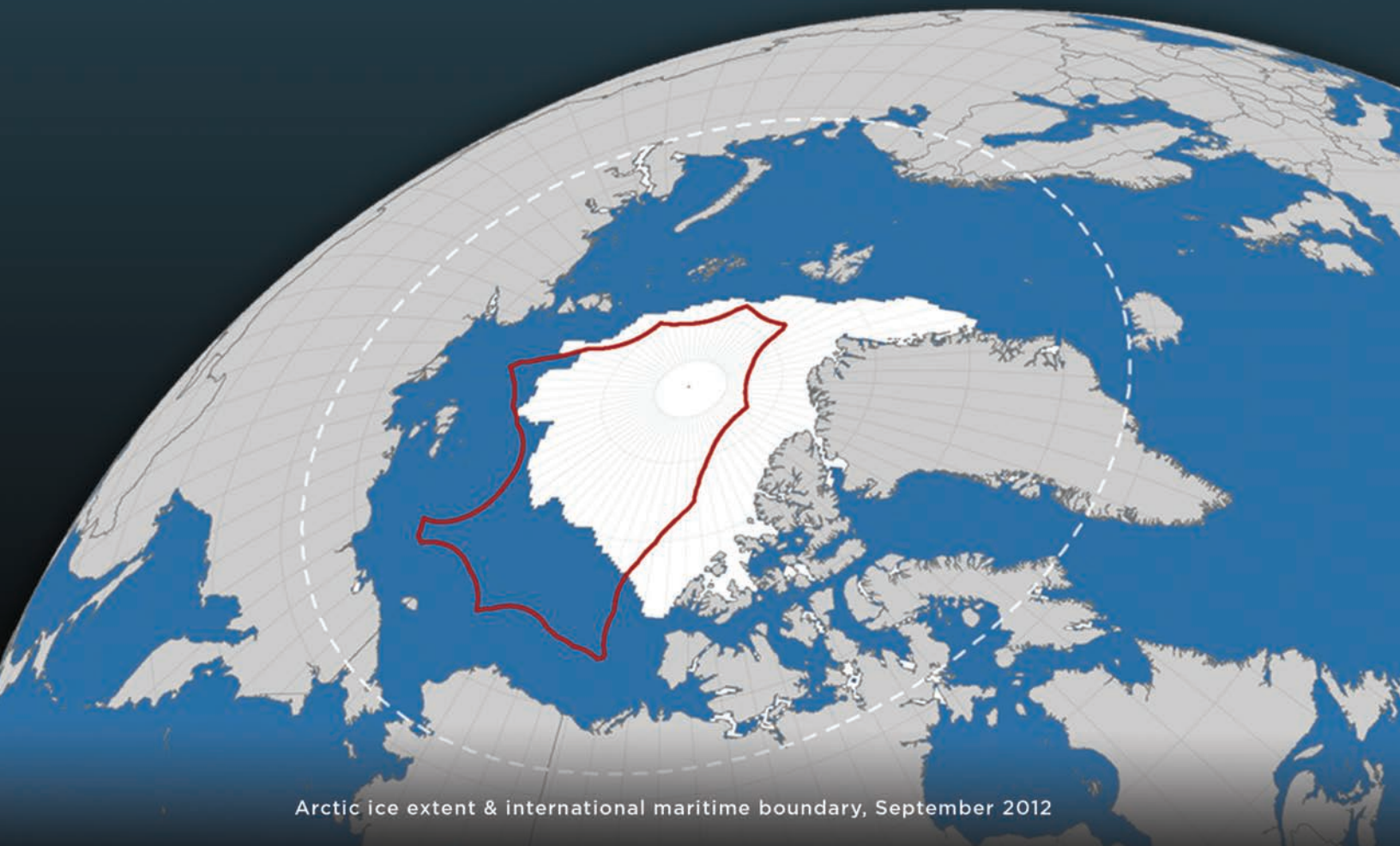
The International Waters of the Central Arctic Ocean

Protecting fisheries in an emerging ocean

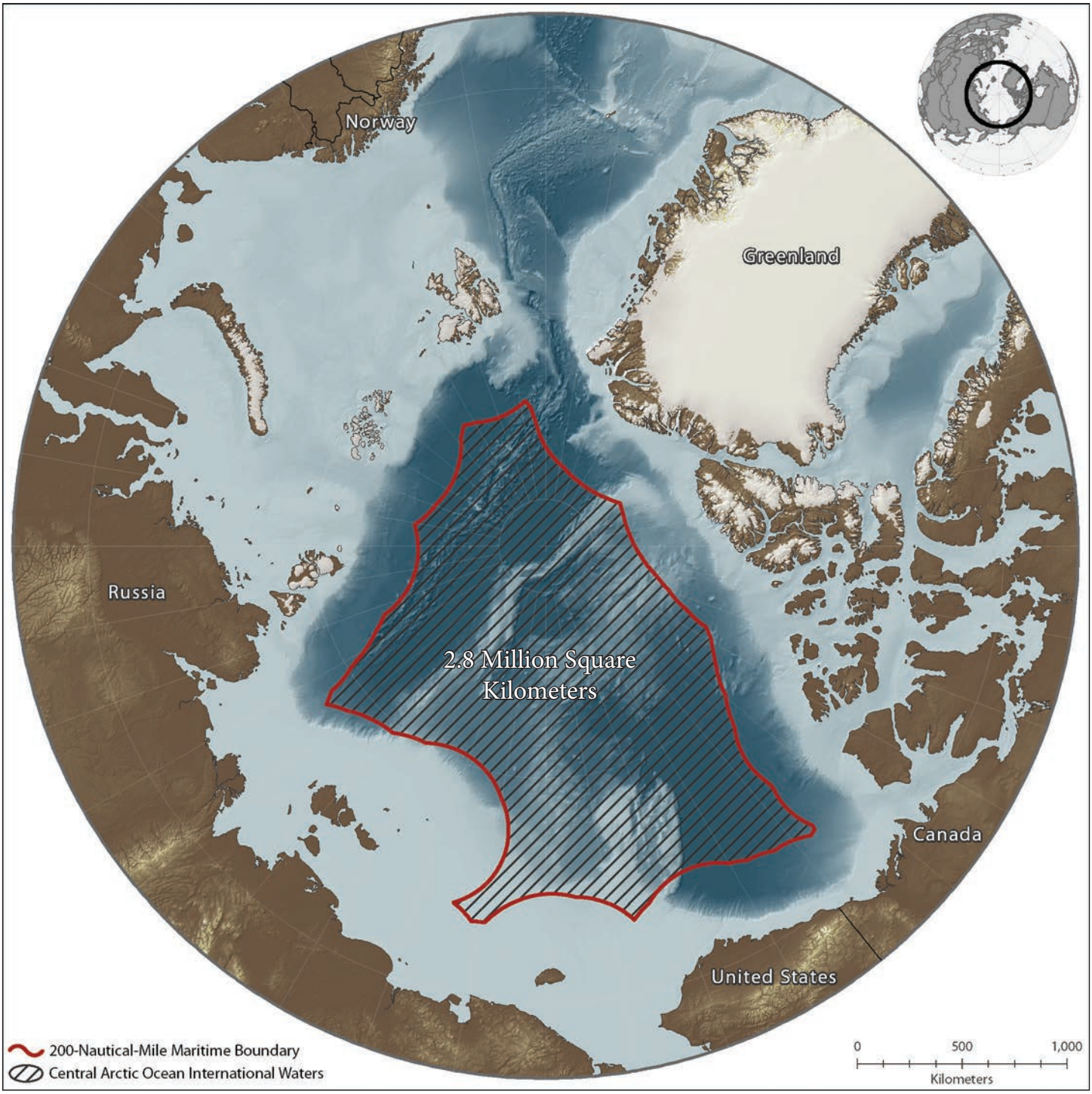


Arctic ice extent & international maritime boundary, September 2012

THE INTERNATIONAL WATERS OF THE CENTRAL ARCTIC OCEAN

The Arctic Ocean is one of the planet's pristine marine regions. But permanent ice is diminishing due to climate change, opening the international waters of the Central Arctic Ocean to commercial fishing for the first time in human history.

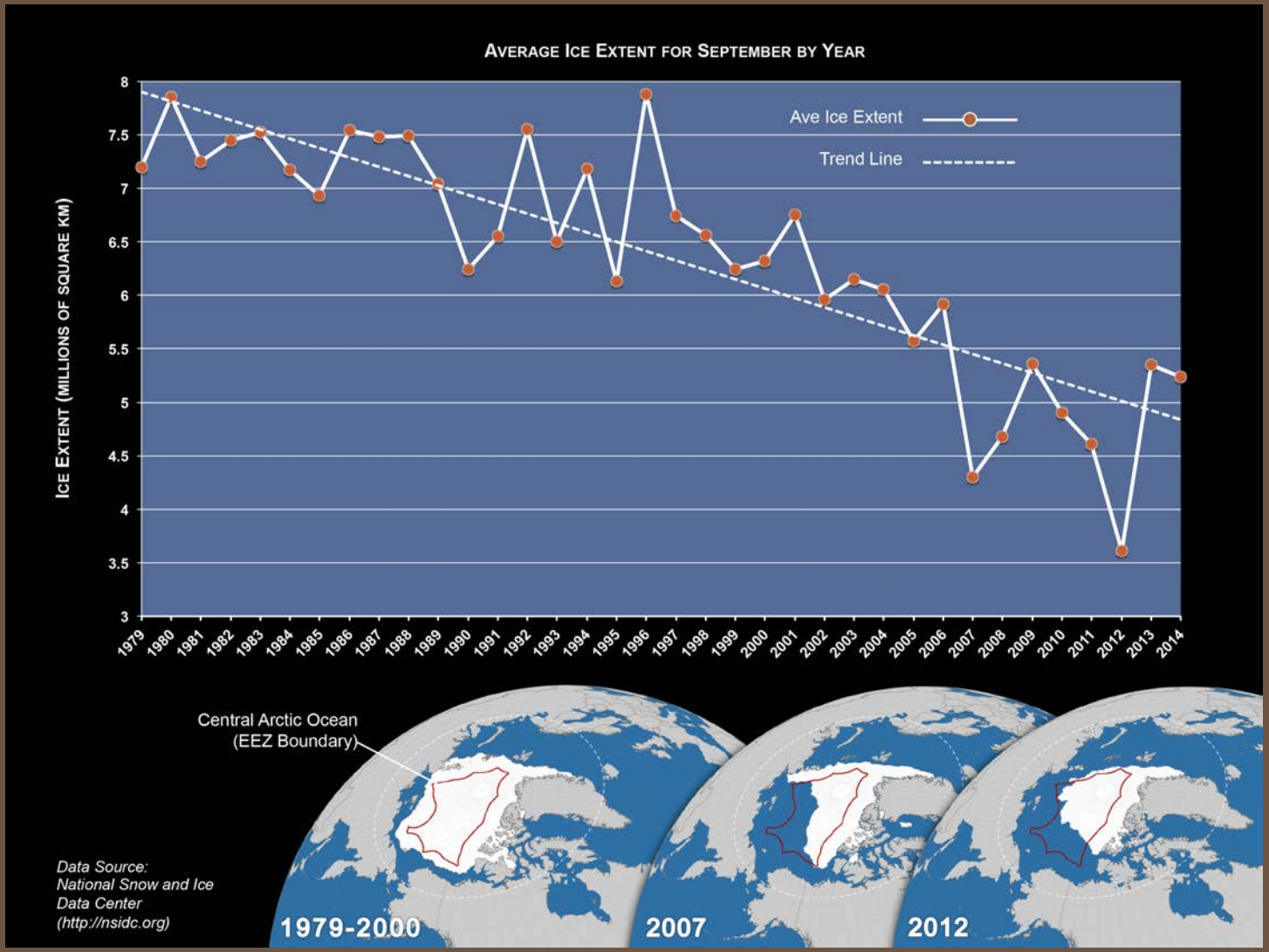
These waters, encompassing an area as big as the Mediterranean Sea, are not governed by a fisheries agreement. Such an accord is needed to close this region to commercial fishing until scientific knowledge and management measures can ensure a sustainable fishery.



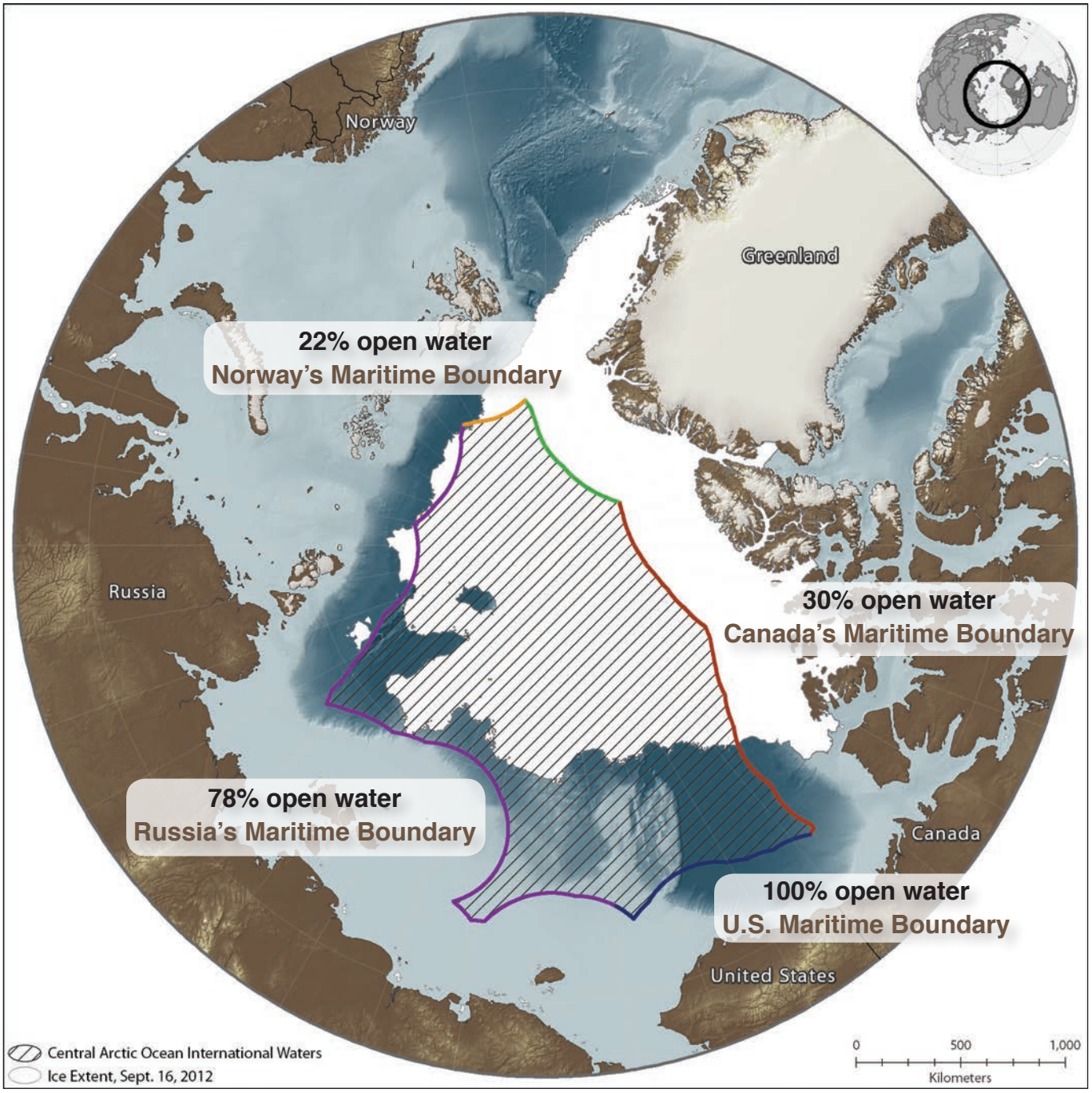
Data Sources: Bathymetry, BCAO v3 (www.ngdc.noaa.gov/mgg/bathymetry/arctic/); Maritime Boundary, International Boundaries Research Unit, Durham University (www.dur.ac.uk/ibru/resources/arctic/). These sources are the same for all successive maps.

MELTING ICE

The permanent ice that has covered the Arctic Ocean for more than 100,000 years is vanishing. In summer 2012, 40 percent of the Central Arctic Ocean—the region outside each nation's 200-nautical-mile exclusive economic zone (EEZ)—was open water.

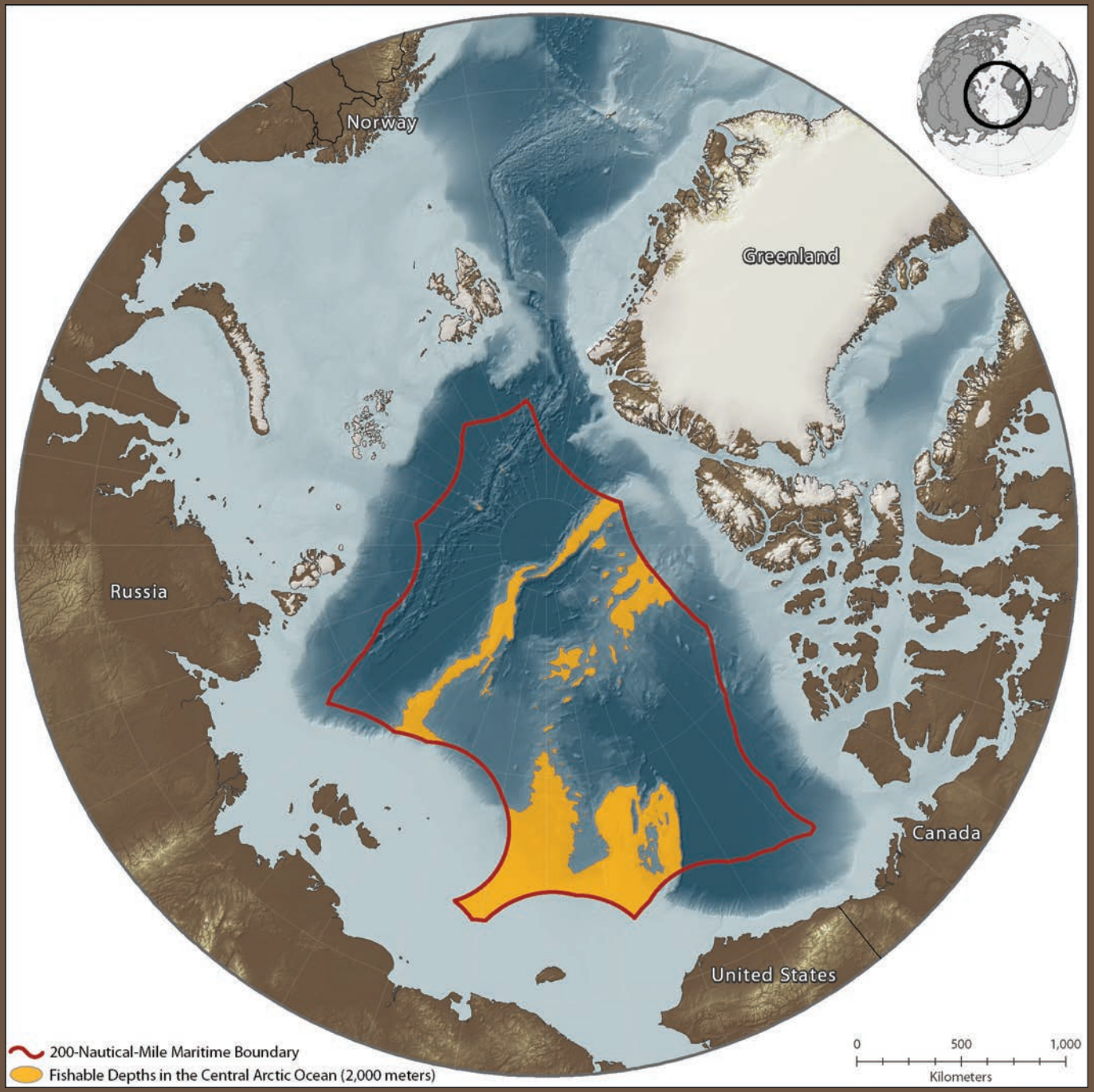


The international boundary of the Central Arctic Ocean shown in red.
Sea ice data source: National Snow and Ice Data Center (http://nsidc.org)



Sea ice data source: University of Bremen SSMIS Sea Ice Data (www.iup.uni-bremen.de:8084/ssmis/).

In summer 2012, four of the five Arctic coastal countries had open water on their maritime boundary with the Central Arctic Ocean.



Twenty-two percent (614,000 square kilometers) of the Central Arctic Ocean is made up of ridges and continental shelves at fishable depths of 2,000 meters or less.

SCIENTISTS FROM AROUND THE GLOBE URGE ACTION

INTERNATIONAL SCIENTISTS URGE ARCTIC LEADERS:
Protect Fisheries in the Central Arctic Ocean

MORE THAN 2,000 SCIENTISTS from 67 countries have signed a letter urging Arctic governments to develop an international agreement to protect fisheries in the Central Arctic Ocean, based on sound scientific and precautionary principles. The five Arctic coastal countries lead the charge with more than 1,300 signatures.*

CANADA

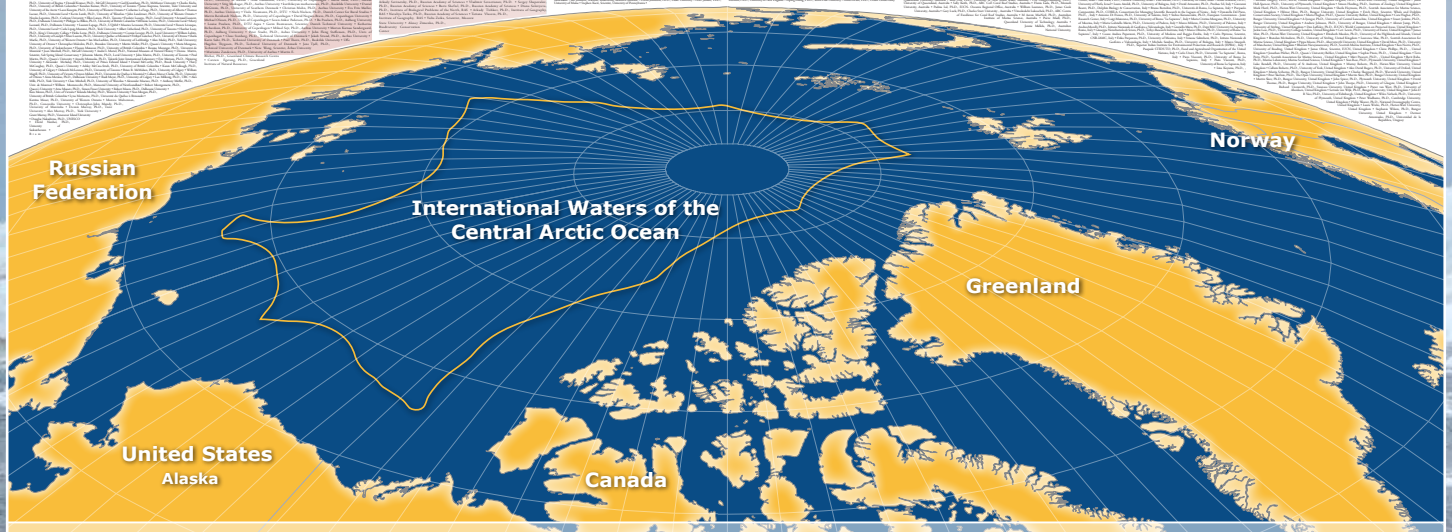
NORWAY

UNITED STATES

OTHER COUNTRIES

GREENLAND/ DENMARK

RUSSIAN FEDERATION



THE PEW ENVIRONMENT GROUP

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*Signers displayed here include Ph.D. level or equivalent.

More than 2,000 scientists from 67 countries have signed a letter urging Arctic governments to develop an international agreement to protect fisheries in the Central Arctic Ocean based on sound scientific and precautionary principles. www.ARCTIC-FISHERIES-LETTER.COM

THE PEW CHARITABLE TRUSTS

The Arctic Ocean is encircled by five coastal states, but there is a significant portion of the central Arctic Ocean that lies outside the Exclusive Economic Zones (EEZs) of the Arctic rim nations. These international waters are not at present governed by any specific international fisheries agreements or regulations. Until recently, the region has been covered with sea ice throughout the year, creating a physical barrier to fisheries.

In recent summers, however, the loss of permanent sea ice has left open water in as much as 40% of these international waters. This region is no more remote from major fishing ports and fishing fleets than many areas of the world to which pelagic fleets travel already. A commercial fishery in the central Arctic Ocean is now possible and feasible.

The ability to fish is not the same as having the scientific information and management regimes needed for a well-managed fishery. The science community currently does not have sufficient biological information to understand the presence, abundance, structure, movements, and health of fish stocks and the role they play in the broader ecosystem of the central Arctic Ocean. Absent this scientific data and a robust management system, depletion of fishery resources and damage to other components of the ecosystem are likely to result if fisheries commence.

Although scientific research, observations, and modeling provide persuasive evidence of continued decrease of summer sea ice, far less is known about the present and future fisheries biology of these waters. Research is needed to develop a basic model of the central Arctic ecosystem, including estimates of abundance and distribution of potential target fish stocks and other key species in the food web.

Data and analysis also will be required to understand the effects of fishing removals on other components of the Arctic Ocean such as seals, whales and polar bears and the effect this may have on the peoples of the Arctic who rely on those resources for their subsistence and way of life. Time and effort will be required before scientific knowledge improves to the level required to support sound fisheries management in this remote region.

The central Arctic Ocean provides both a challenge and an opportunity. The challenge is that exploratory fisheries, and subsequent claims of access to these international waters, could commence in the next few years. The opportunity is that the international community can take action now to protect these waters until we have the science and governance in place to ensure sustainable development of fisheries.

Now is the time for the international community to create a precautionary management system for central Arctic Ocean fisheries. Such a system should postpone fishing activity until such time as the biology and ecology of the region are understood sufficiently well to allow for setting scientifically sound catch levels. Such a system should also require that a robust management, monitoring, and enforcement regime be established before fishing is allowed. This system should be put in place before sea ice retreats farther, before fishing begins and political pressure increases, and before precautionary management is no longer an option.

We, the undersigned scientists, call on Arctic governments to take a lead in developing an international agreement to address fisheries in the central Arctic Ocean, based on sound scientific and precautionary principles, and starting with a catch level of zero as a reflection of the state of understanding of the fisheries ecology of the region.

(The scientists who have signed this letter have done so in their personal capacities. Institutional affiliations are provided only for identification purposes, and do not imply any institutional position on Arctic Ocean fisheries.)

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Stanislav Ye. Belikov, Ph.D., All-Russian Research Institute for Nature Protection, Moscow, Russia

M.V. Flint, Ph.D., Shirshov Institute of Oceanology, Russian Academy of Sciences, Moscow, Russia

Jackie Grebmeier, Ph.D., Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, USA

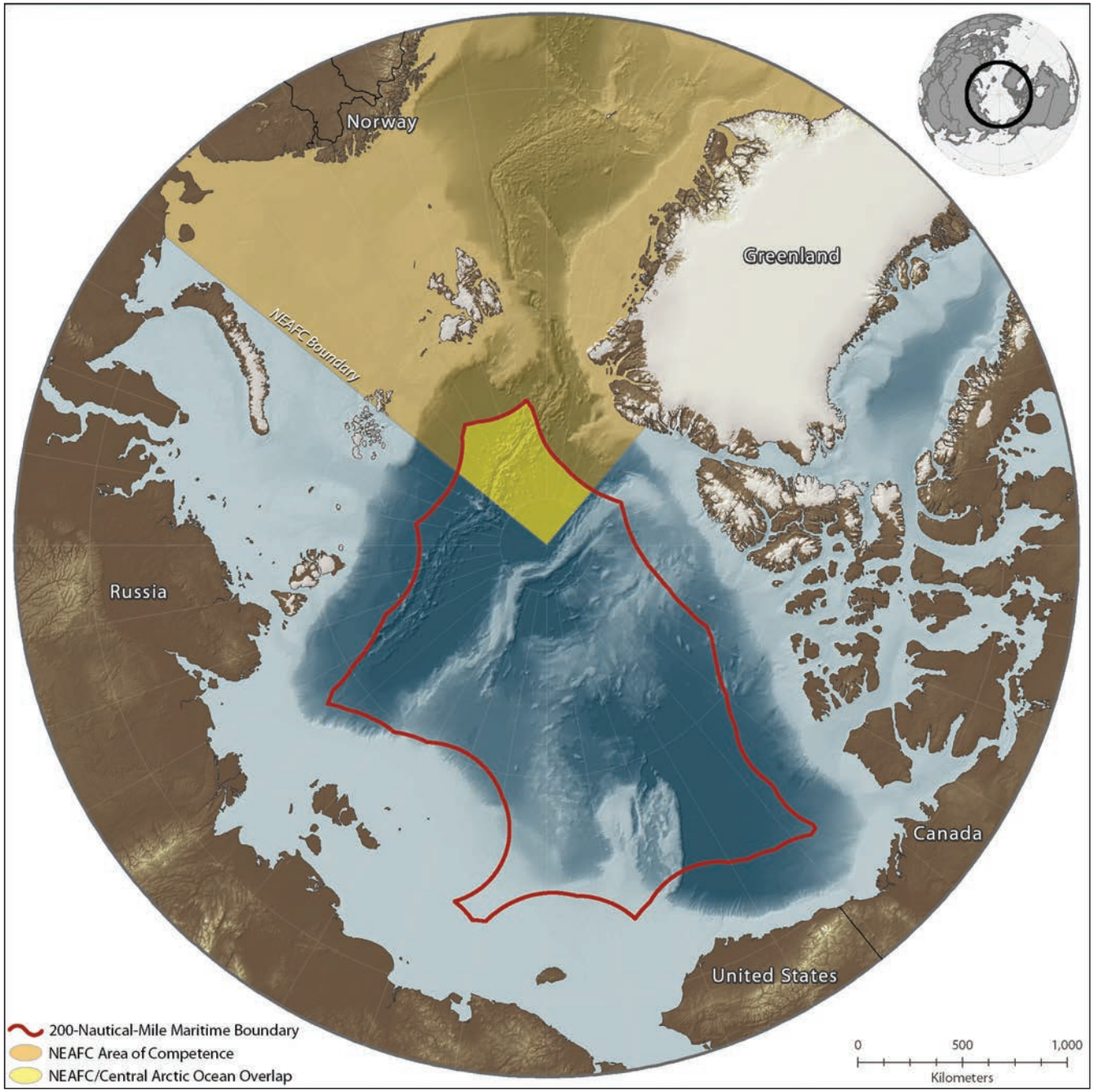
Henry P. Huntington, Ph.D., Pew Environment Group, Eagle River, Alaska, USA

Peter Rask Møller, Ph.D., Natural History Museum of Denmark, University of Copenhagen, Denmark

Daniel Pauly, Ph.D., Fisheries Centre & Zoology Department, University of British Columbia, Canada

Alan Springer, Ph.D., School of Fisheries and Ocean Sciences, University of Fairbanks Alaska, USA

Paul Wassmann, Ph.D., Faculty of Biosciences, Fisheries and Economics, University of Tromsø, Norway



NEAFC Area of Competence boundary was derived using information from FAO's Regional Fishery Bodies website (www.fao.org/fishery/rfb/neafc/en).

Eight percent of the Central Arctic Ocean is within the North East Atlantic Fisheries Commission (NEAFC) Area of Competence. The remaining 92 percent of the Central Arctic Ocean, however, is not bound by any international rules, leaving it open to unregulated commercial fishing.

PROGRESS TOWARD AN AGREEMENT

2008–2013 Governments and Arctic experts in the **Arctic coastal states** develop national policies and recommendations calling for fisheries regulation and increased science before commercial fishing starts in the Central Arctic Ocean through international cooperation.

2010–2014 The **European Union** calls for management rules, enforcement capability and robust science to be in place before commercial fisheries are allowed in the Central Arctic Ocean. The North Pacific Arctic Conference convenes experts from **Korea, Japan, China, Canada** and the **U.S.** to discuss the need for international cooperation on Arctic fisheries.

2014 **Canada, Norway, Russia,** the **Kingdom of Denmark** and the **United States** reach consensus on the need for new international measures to prevent commercial fishing in the Central Arctic Ocean until scientific research and management can ensure a sustainable resource. They pledge to issue a Ministerial Declaration and convene a meeting of interested Arctic and non-Arctic states to negotiate the new measures.

Scott Highleyman, director,
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THE PEW CHARITABLE TRUSTS

THE PEW CHARITABLE TRUSTS' INTERNATIONAL ARCTIC CAMPAIGN

is working with Arctic countries, scientists, the fishing industry, and indigenous peoples to achieve expanded support for an agreement that would protect the international waters of the Central Arctic Ocean and its living marine resources from unregulated or unsustainable commercial fishing.