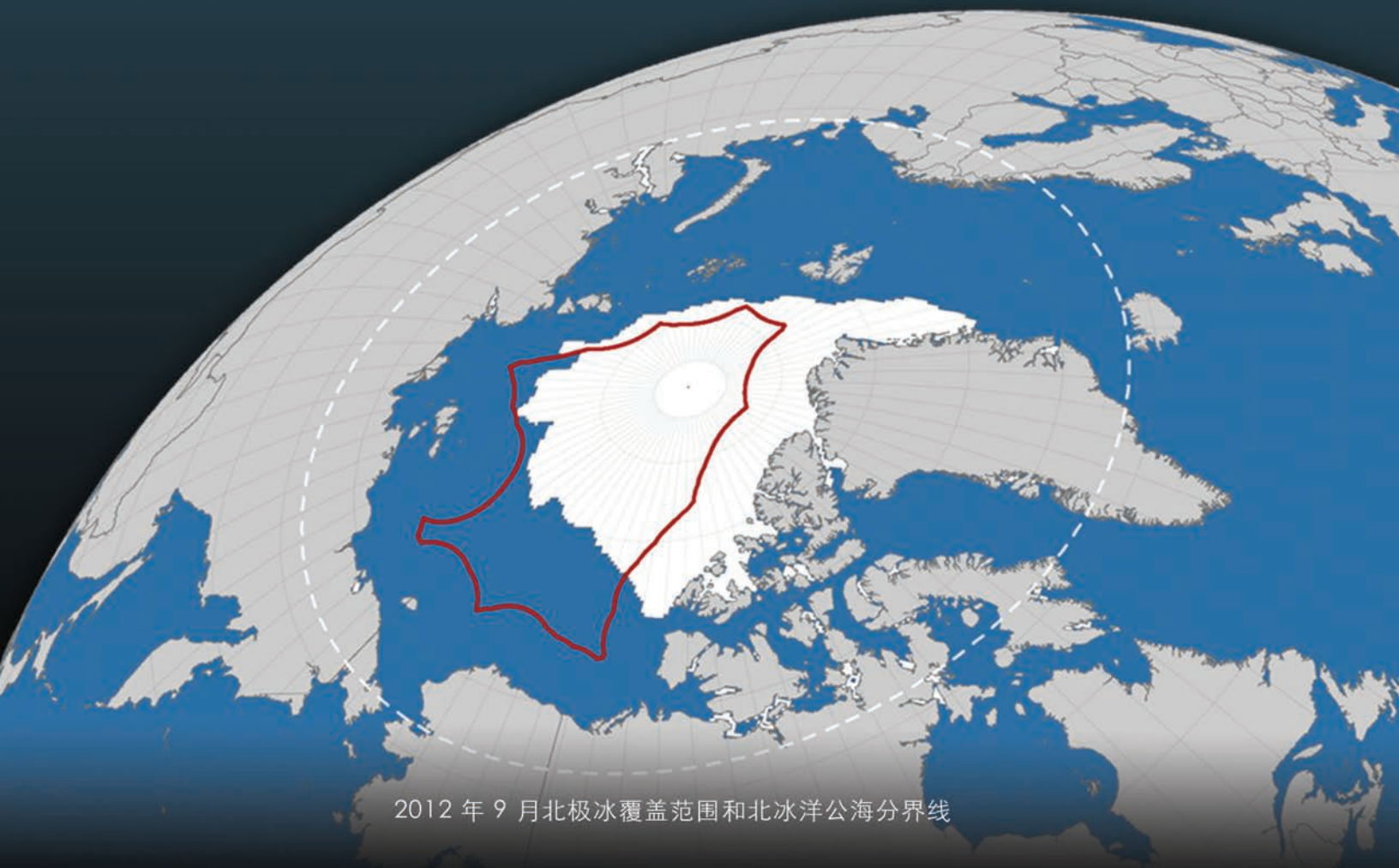


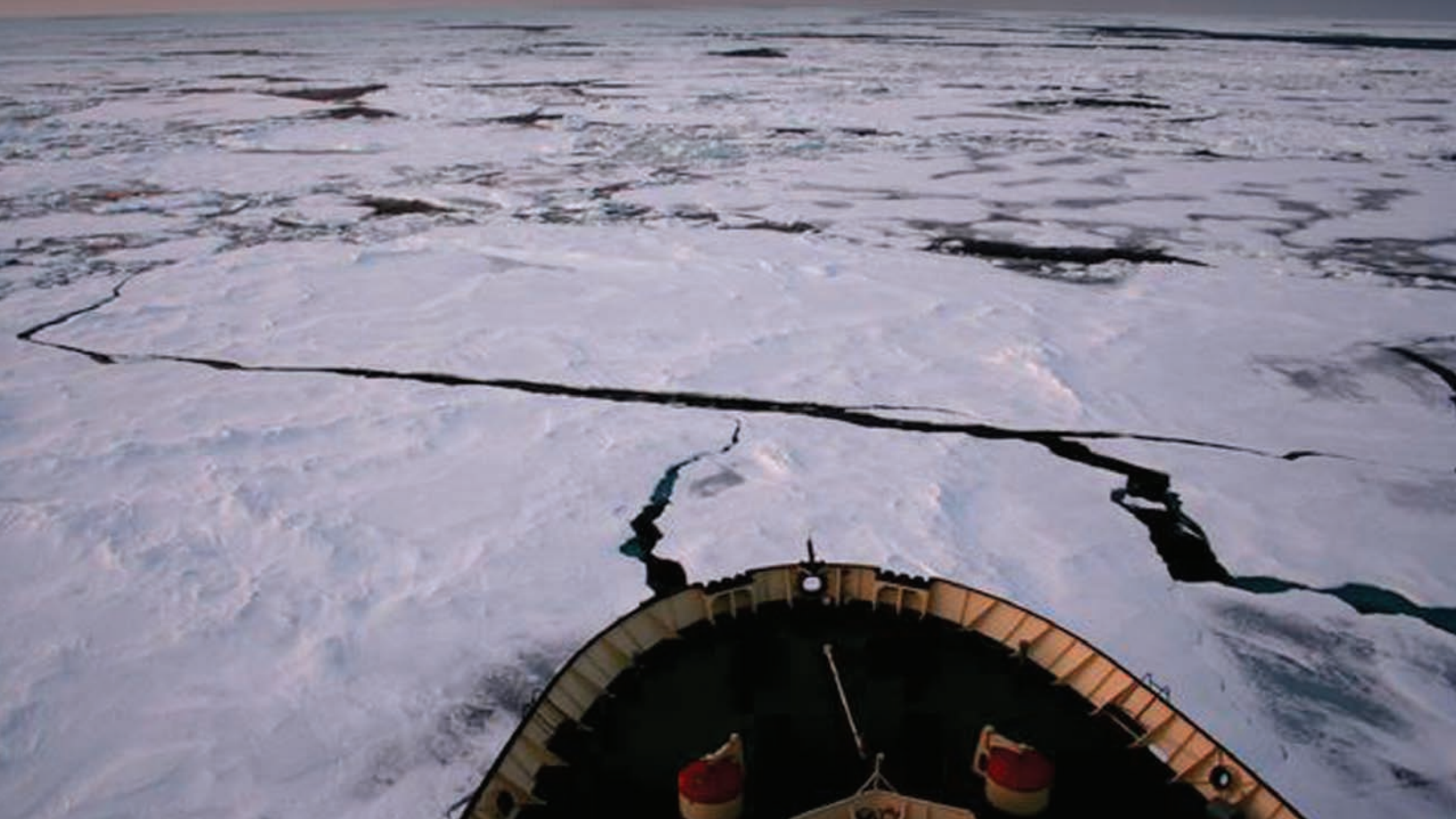
北冰洋在融化：

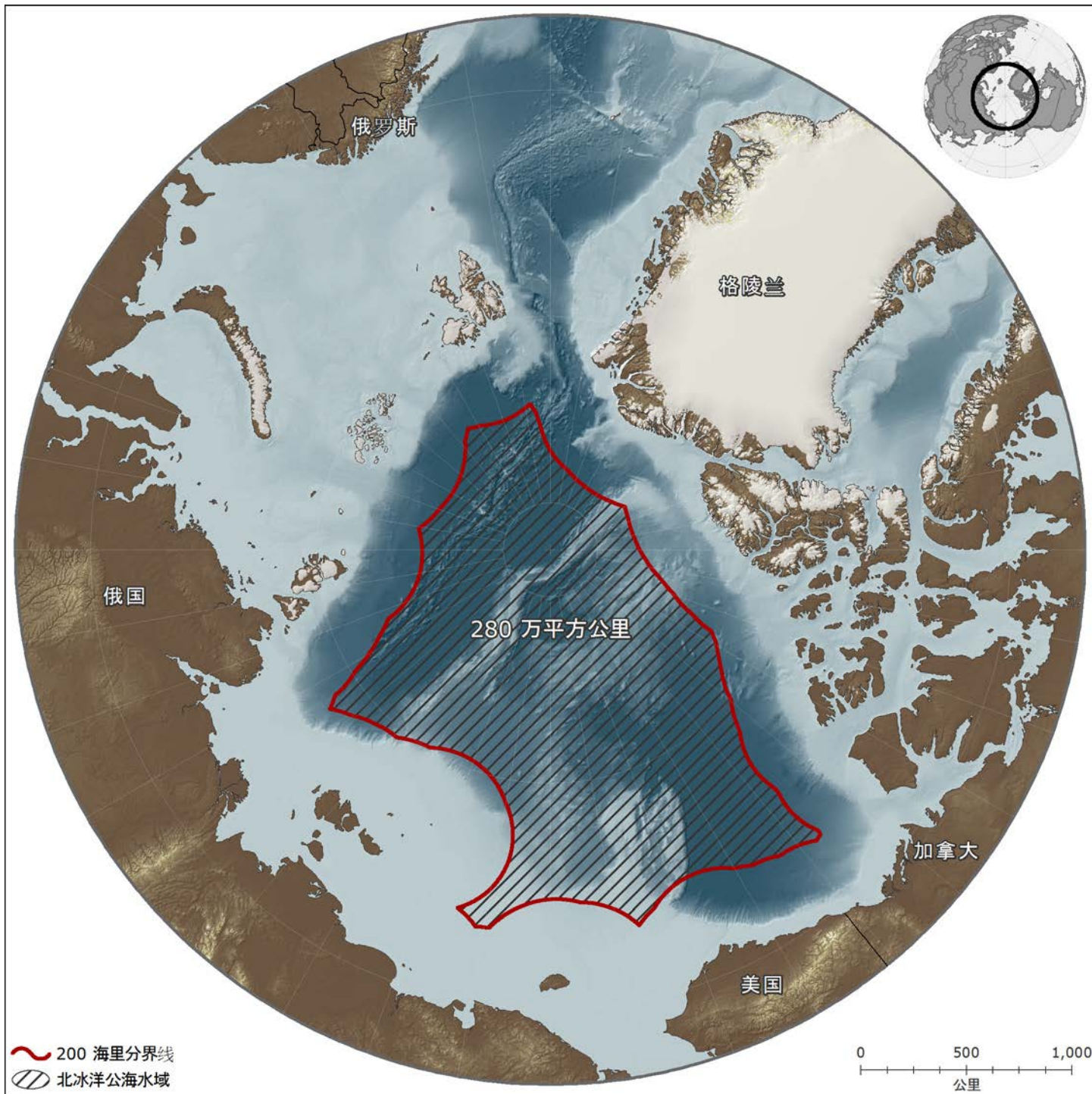
渐露轮廓的北冰洋国际水域与海洋渔场



北冰洋国际水域

北冰洋是地球上的一个原始海域。但是随着气候变化，其永冻冰正在不断减少，北冰洋渐渐暴露在世人面前，人们可以在这里进行商业捕鱼，这是史无前例的。



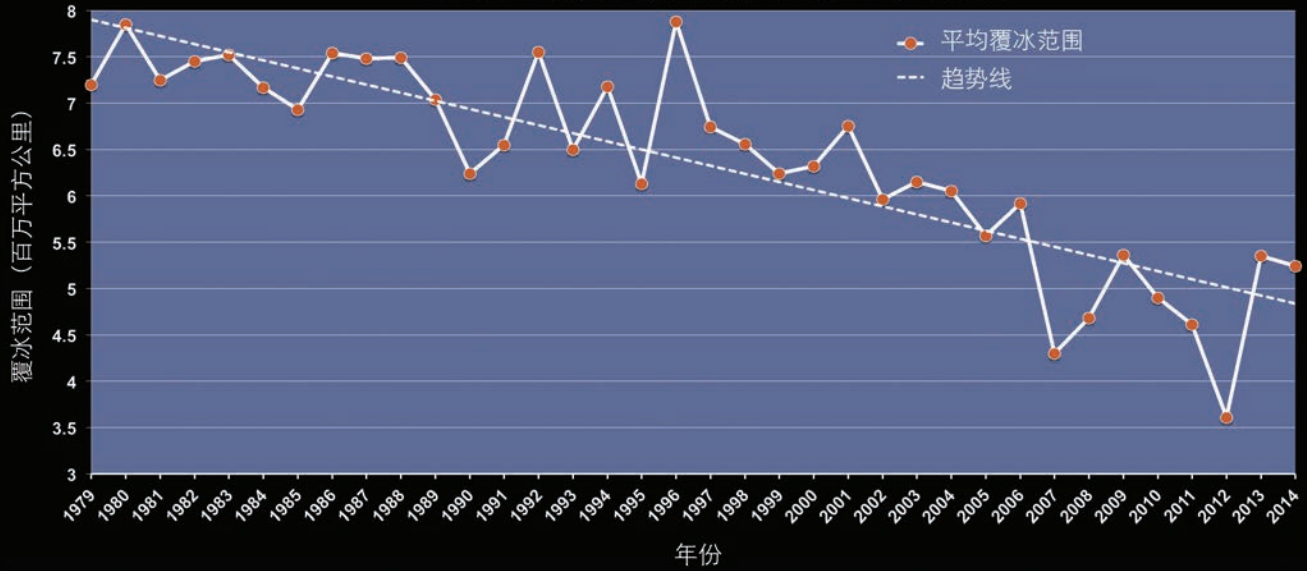


海冰正在融化

北冰洋上的永冻冰有10 万多年之久, 目前它正在融化。2012 年夏季, 北冰洋国际水域 (各国 200 海里专属经济区 (EEZ) 以外的海域) 已有 40%的区域 变成无冰水域。

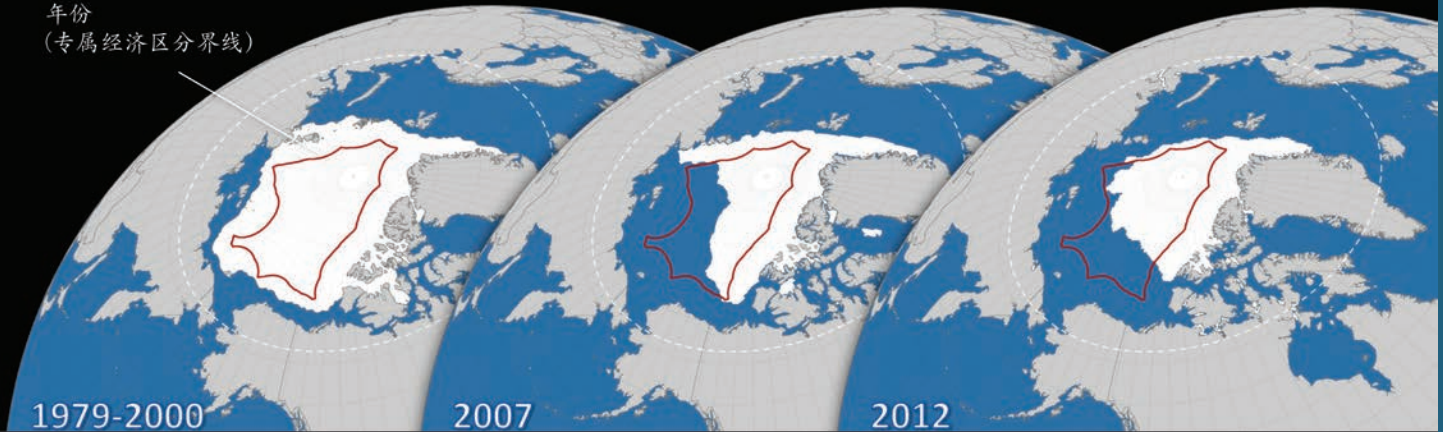


1979年 - 2014年期间北冰洋9月份平均覆冰范围

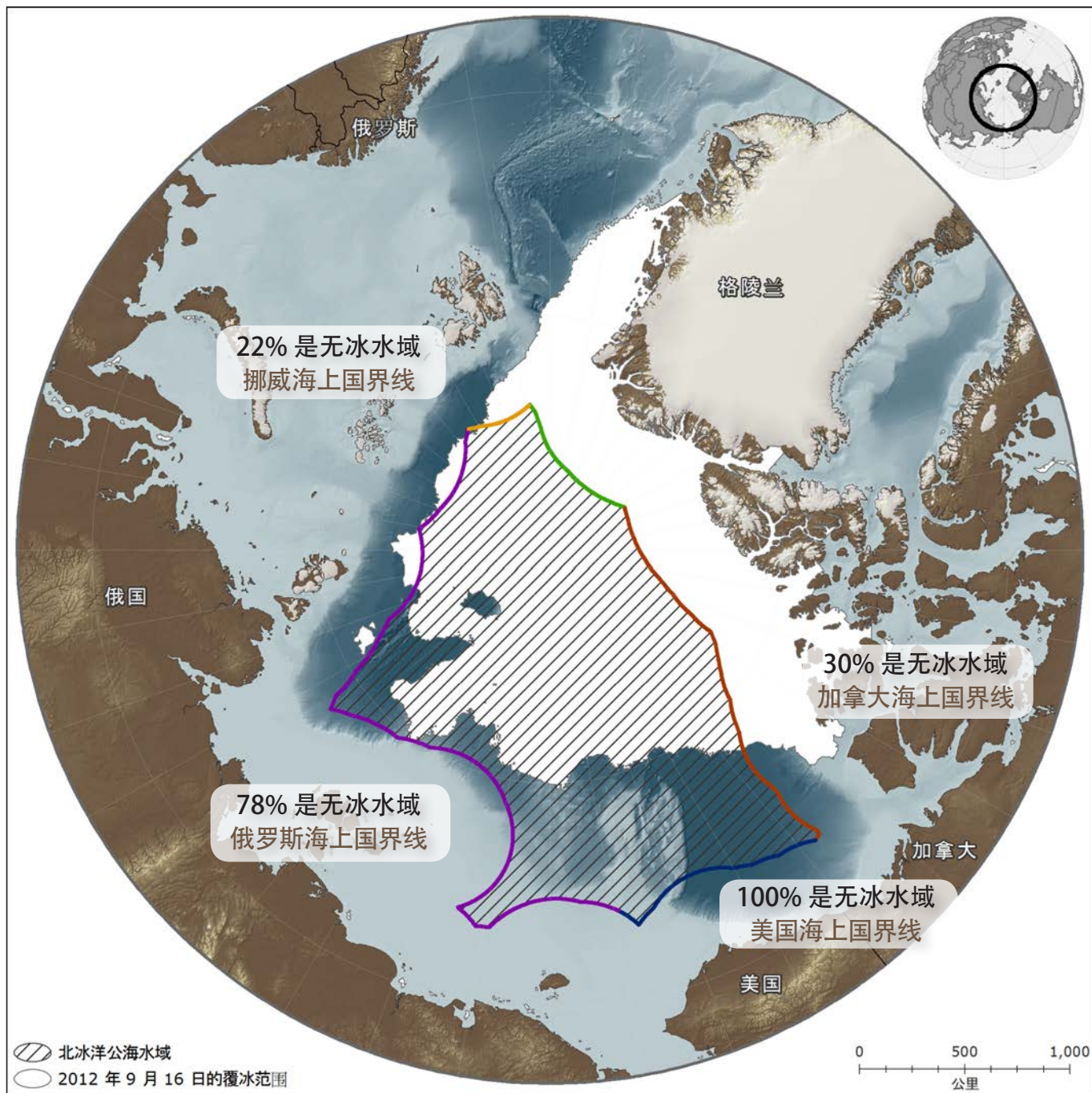


数据来源：美国冰雪数据中心 (<http://nsidc.org>)

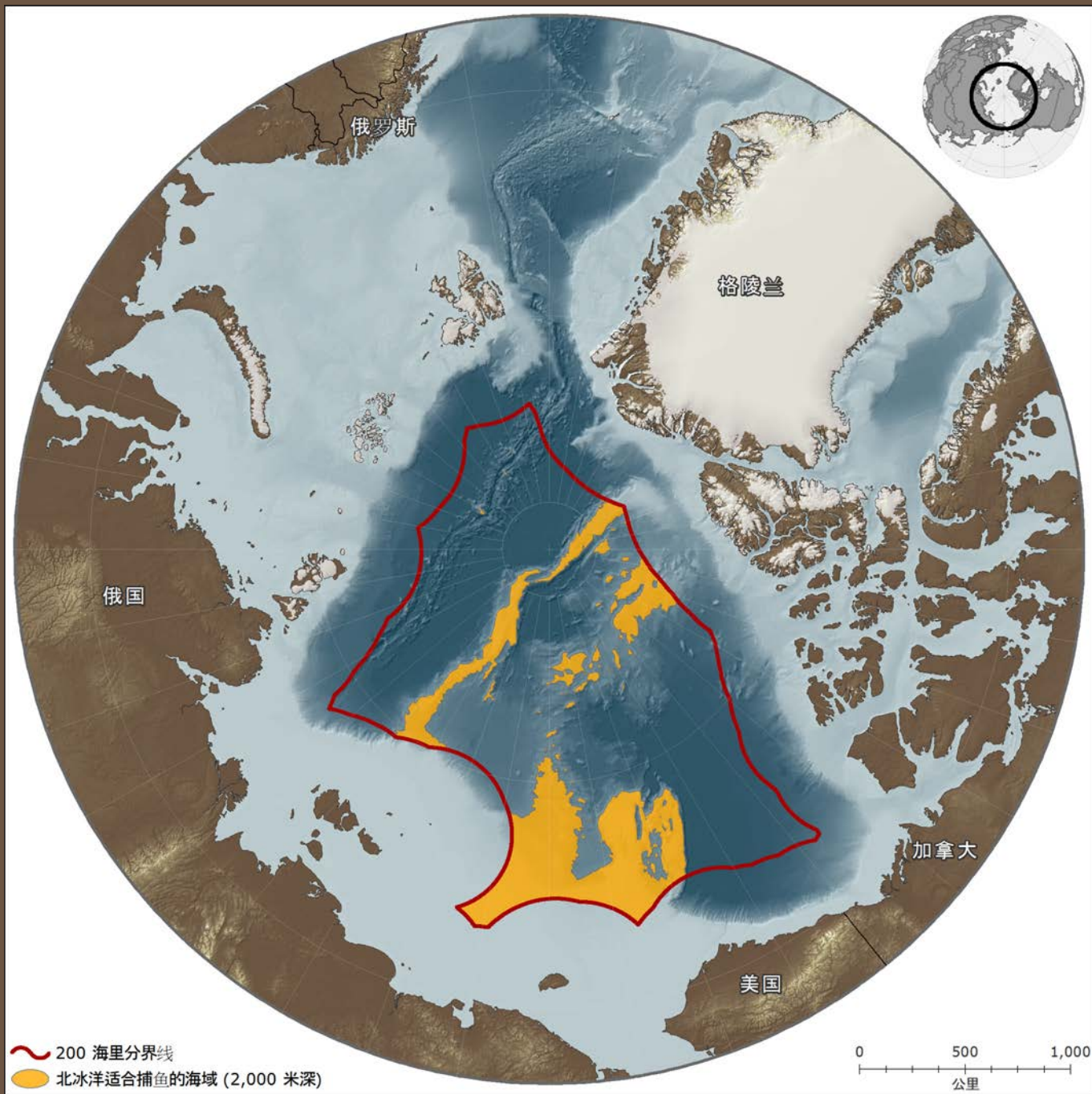
年份
(专属经济区分界线)



北冰洋国际水域分界线以红色表示。
海冰数据来源：美国冰雪数据中心 (<http://nsidc.org>)



2012年夏季，北冰洋沿岸五国中，四个国家与北冰洋公海的分界线上出现了无冰水域。



北冰洋有 22% (61.4 万平方公里) 的区域由山脉和大陆架构成, 水深不超过 2,000 米, 适合捕鱼。

世界各地的科学家强烈建议采取行动

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

...the Arctic region is a global commons, and the Central Arctic Ocean is a particularly important area for international cooperation and protection of fisheries resources. The five Arctic coastal countries (Canada, Denmark, Norway, Russia, and the United States) have a unique responsibility to lead by example and 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.*

GREENLAND/DENMARK

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NORWAY

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UNITED STATES

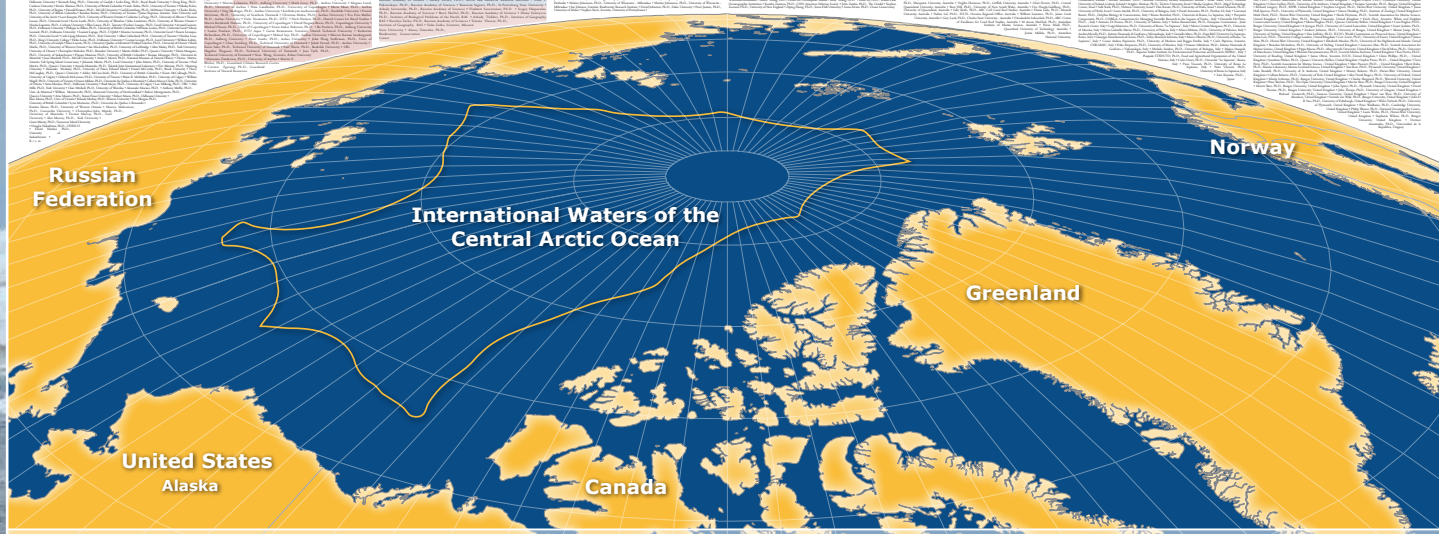
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OTHER COUNTRIES

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For more information: www.OceansNorth.org/International
• Science: Dr. Henry Huntington, hhuntington@pewtrusts.org, 907-696-3564
• Policy: Scott Highleyman, highleyman@pewtrusts.org, 360-715-0063
• Spatial Data: Jeremy Davies, jdavies@pewtrusts.org, 360-543-5868

*Signers displayed here include only 10 of the 2,000+ signatories.

来自 67 个国家/地区的 2,000 多位科学家联名发函，敦促北冰洋沿岸各国政府逐步达成国际协议，以便在完善的科学和预防原则基础上，保护北冰洋中部的渔场。来自北冰洋沿岸五国的科学家一马当先，有 1,300 多位科学家签了名。www.ARCTIC-FISHERIES-LETTER.COM



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

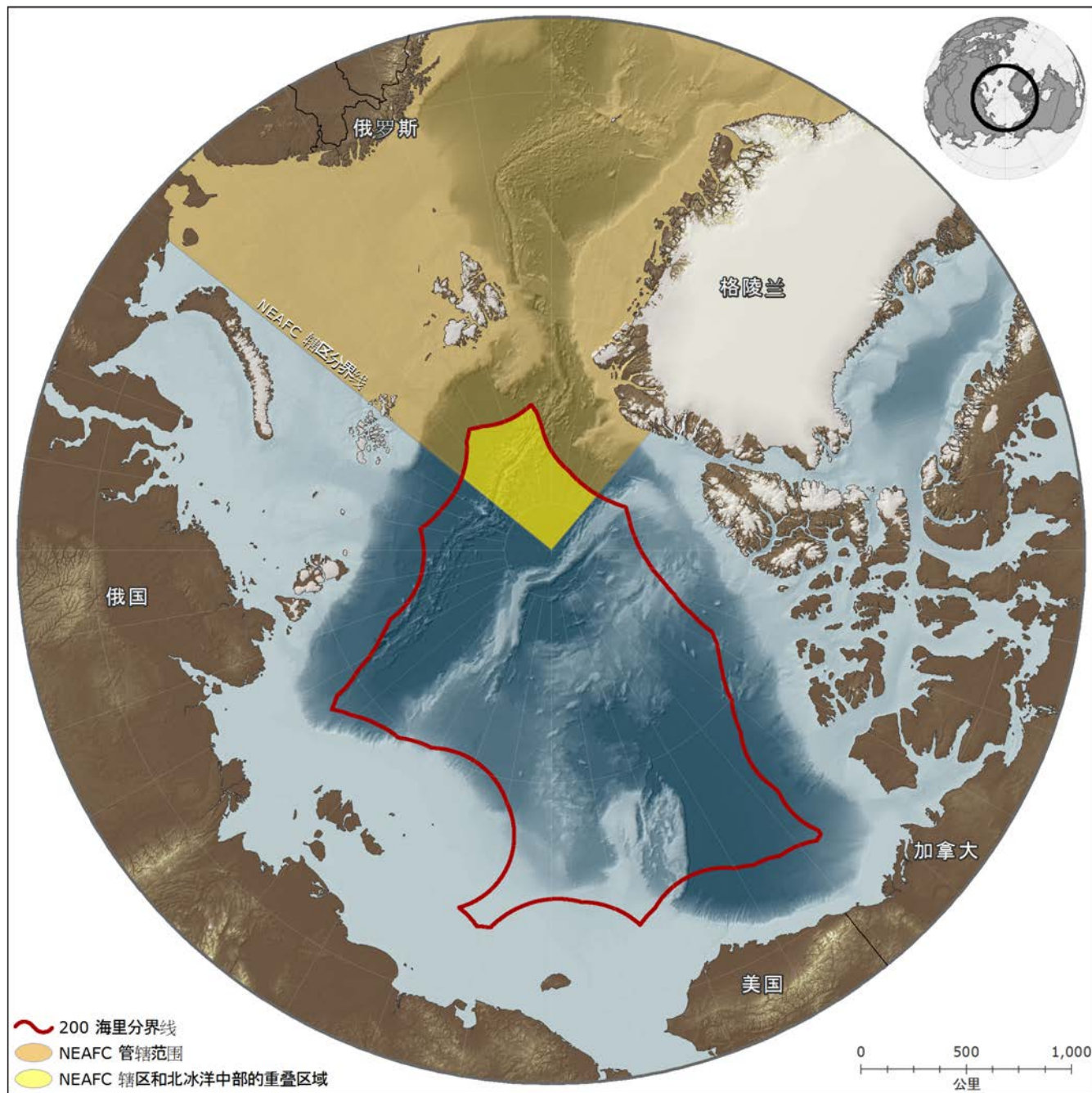
Henry P. Huntington, Ph.D., Pew Environment Group, Eagle River, Alaska, USA

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



北冰洋国际水域有 8% 在东北大西洋渔业委员会 (NEAFC) 的管辖范围内。但其余的 92%，却不受任何国际法规的约束，其商业捕鱼活动将会毫无节制。

协议进展情况



2008年 - 2013年

北冰洋沿岸各国政府和北冰洋专家逐步制定国家政策并提出建议，提倡通过国际合作，在北冰洋国际水域开始进行商业捕鱼之前进行渔业监管并提高监管的科学性。

2010年 - 2014年

欧盟要求在允许在北冰洋国际水域进行商业捕鱼之前，需先出台管理法规，提高执法监管职能并采取稳妥科学的措施。来自韩国、日本、中国、加拿大和美国的专家，举行了北太平洋北极论坛，以讨论是否需要就北冰洋渔业展开国际合作。

2014年

加拿大、挪威、俄罗斯、丹麦和美国就有必要在通过采取新的国际措施，阻止在北冰洋国际水域进行商业捕鱼，直至经过科学调研和监管能确保北冰洋有可持续渔业资源。各国郑重承诺发表部长声明，并召开北冰洋沿岸和非北冰洋沿岸当事国参加的会议，就新措施进行协商。

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皮尤慈善信托基金国际北极项目

正在与北极国家、科学家、渔业公司以及原住民一道为实现这一项协议而努力，这项协议将保护北冰洋改成“国际”水域及其海洋生物资源免受无序或不可持续商业捕捞的破坏。

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