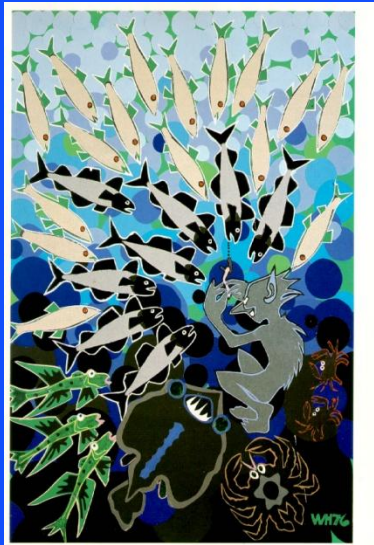


Arctic Ocean Review

AOR Workshop 13-14
September 2010

Consortium for Ocean leadership
Washington DC



NEAFC Parties

Contracting Parties

Denmark (in respect of the Faroe Islands & Greenland)

EU

Iceland

Norway

Russian Federation

Cooperating non-Contracting Parties

Belize, Cook Islands,

Canada, Japan, New Zealand

NEAFC - A RFMO in the North East Atlantic

NEAFC is the competent international organisation in the North Atlantic with respect to fisheries in the high seas and to some extent in the Convention Area

NEAFC has over the last 10 years reached agreements on management measures for all major fisheries on straddling stocks in the North East Atlantic and a strong scheme on control and enforcement

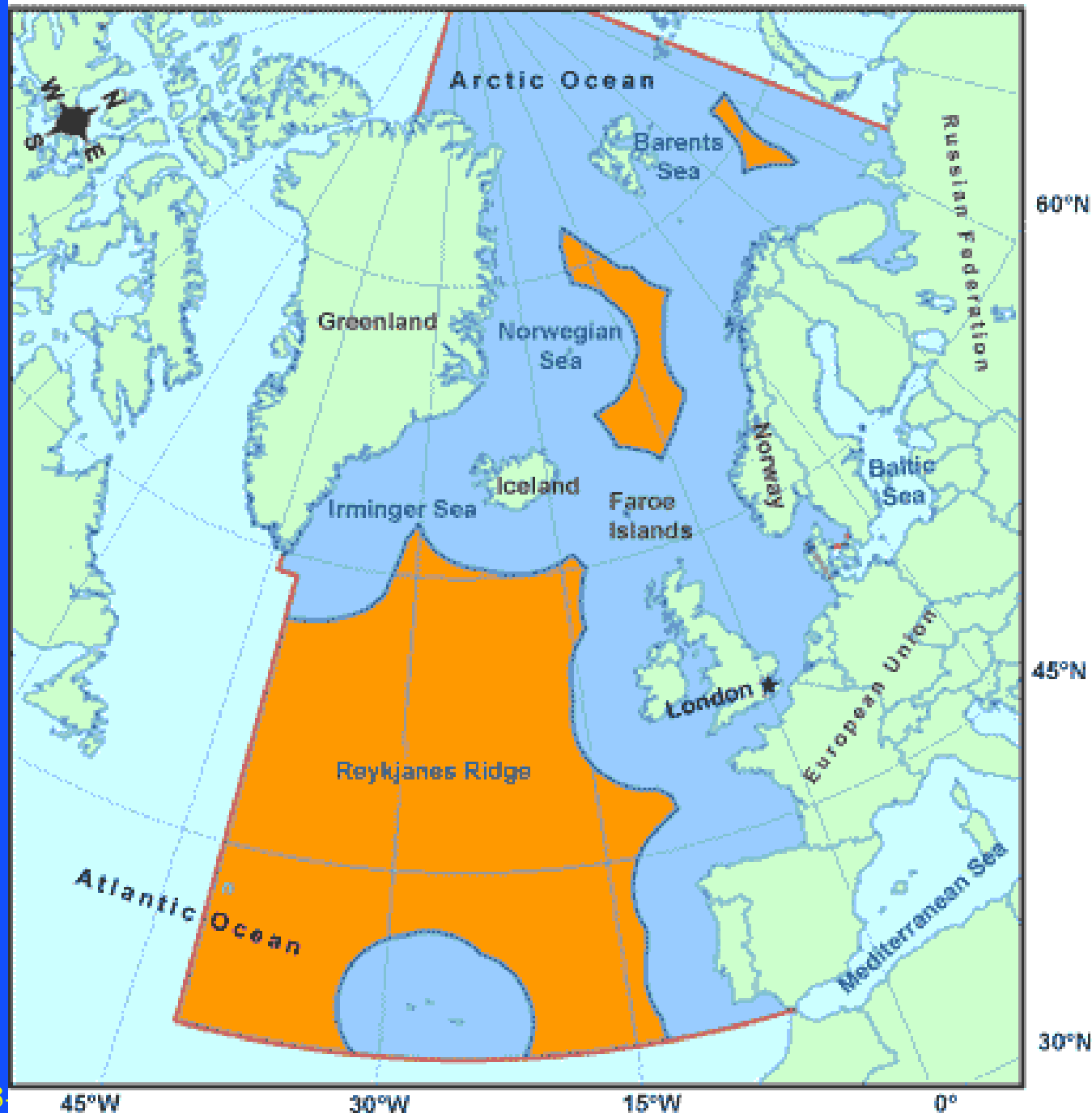
Task at hand the “New” NEAFC Convention

- The objective of this Convention is to ensure the long-term conservation and optimum utilisation of the fishery resources in the Convention Area, providing sustainable economic, environmental and social benefits.
- When making recommendations in accordance with Article 5 or 6 of this Convention the Commission shall in particular:
 - a) ensure that such recommendations are based on the best scientific evidence available;
 - b) apply the precautionary approach;

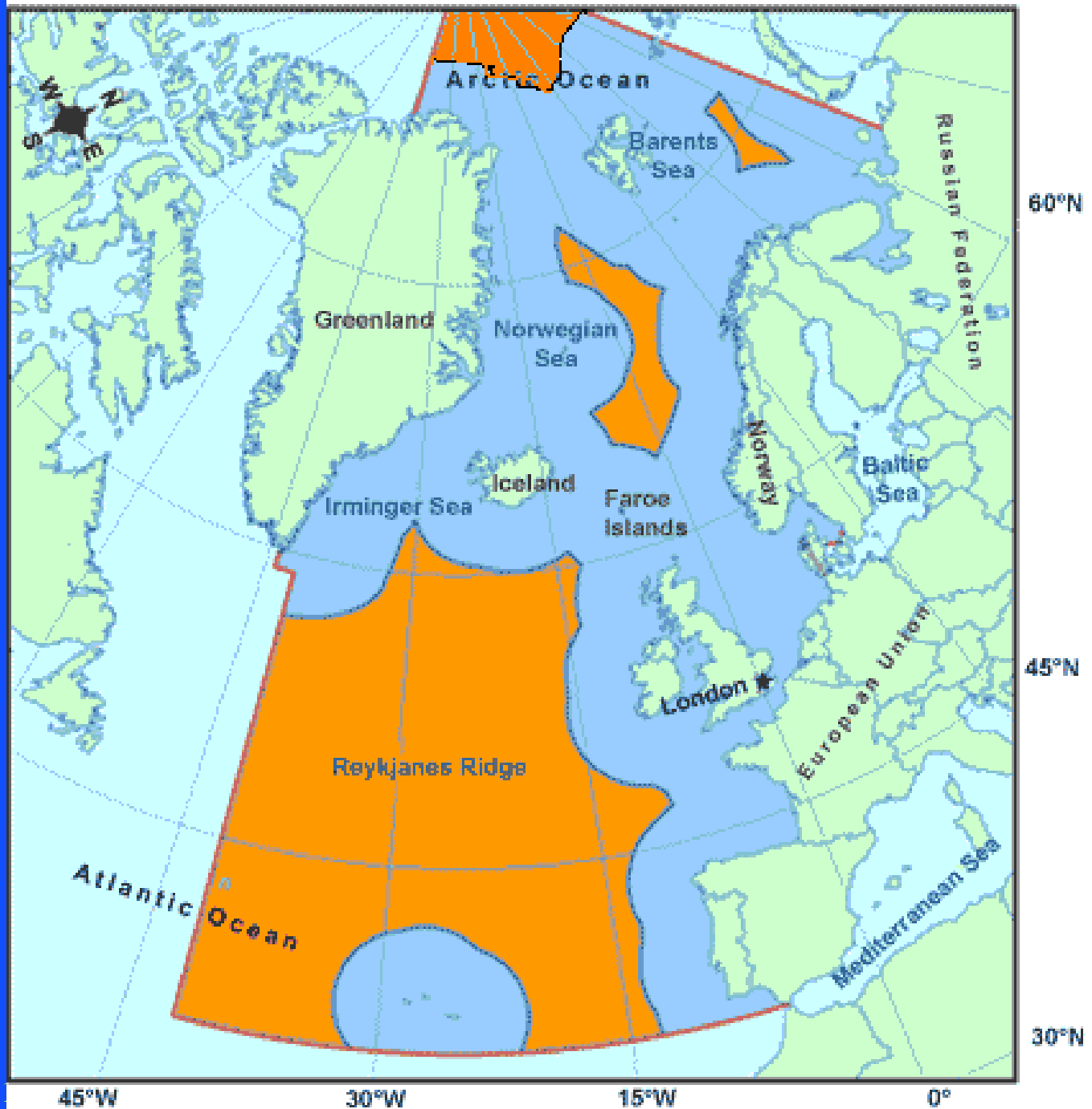
Task at hand

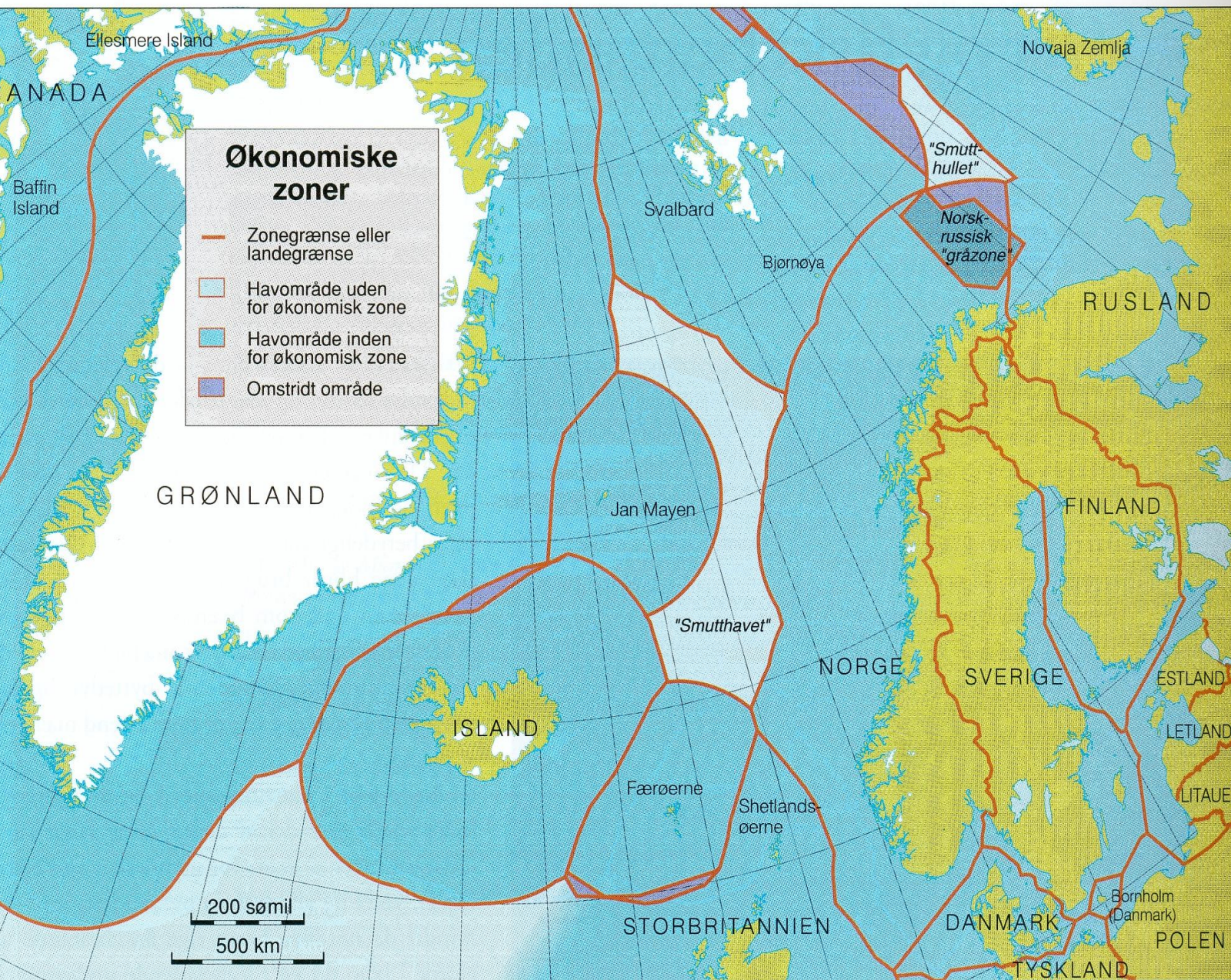
- c) take due account of the impact of fisheries on other species and marine ecosystems, and in doing so adopt, where necessary, conservation and management measures that address the need to minimise harmful impacts on living marine resources and marine ecosystems; and
- d) take due account of the need to conserve marine biological diversity.

NEAFC
Convention
Area
Regulatory
Area as of
today

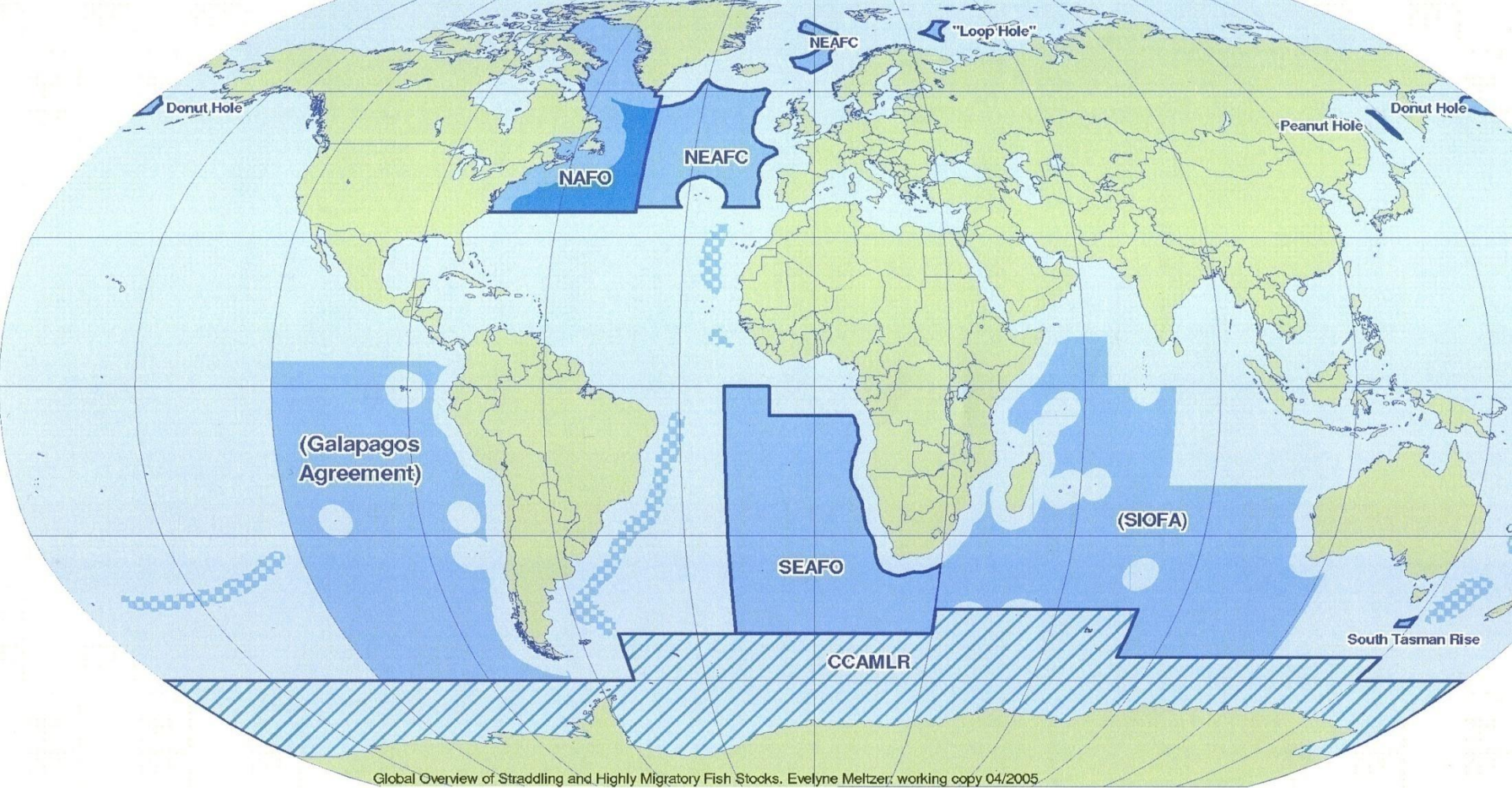


NEAFC
Convention
Area
Regulatory
Area as in
the future





Re- source juris- dictions in the NE Atlantic



Global Overview - Straddling Fish Stocks

- RFMO Boundary
- Proposed Regulatory Area (not yet adopted or not yet in force)
- Other Unregulated High Seas Areas where Straddling Fish Stocks Occur
- CCAMLR
- NAFO Regulatory Area

The High Seas - Regional or Global?

- States cooperate in Regional Fisheries Management Organisations, RFMOs to establish fisheries management systems in the high seas supporting and complementing systems in sea areas under national jurisdiction.
- At the 2006 UNFA Review Conference cooperation through RFMOs was seen as the major vehicle for sustainable fisheries management. This was further underlined at the resumed Review Conference May 2010.

Total impacts on marine ecosystems

- At the centre of concerns for the marine environment must be the totality of impacts of all human activities on the marine ecosystems and that these are managed in order to avoid irreversible changes of marine ecosystems
- Climate change, transboundary pollution, release of chemicals, hazardous substances, Persistent Organic Pollutants, oil in produced water, radioactive discharges, non-indigenous species and marine litter are probably global concerns but the impact on the environment from fishing activity is generally local or regional

Externalities affecting fisheries

- Other uses of the marine environment have externalities that directly affect fisheries. Polluters, the user of fossil fuels, shipping, hydrocarbon and other extraction industries would have no problems operating in a highly polluted ocean with no biodiversity, but fisheries cannot.
- Fisheries have to operate in a clean and healthy marine ecosystems with good environmental status. The consequences of mismanagement of fisheries are primarily internal, first and foremost affecting fisheries themselves. This is a general problem for all uses of living resources, be it fisheries, hunting etc.

NEAFC and Regional Cooperation

- The Commission shall provide a forum for consultation and exchange of information on the state of the fishery resources in the Convention Area and on the management policies, including examination of the overall effects of such policies on the fishery resources and, as appropriate, other living marine resources and marine ecosystems.

Cooperating with other organisations with a mandate to regulate human activity

- Heads of delegations of NEAFC's environmental counterpart in the North East Atlantic, the OSPAR Commission (for the Protection of the Marine Environment of the North-East Atlantic) and NEAFC have met at NEAFC HQ since November 2005
- In September 2008 NEAFC signed a Memorandum of Understanding with OSPAR
- NEAFC has signed terms of Agreement with the IMO and is considering a MoU with the ISA
- These are significant developments in a process aimed at increasing cooperation with intergovernmental organisations, which monitor and regulate human activities other than fisheries in the marine environment

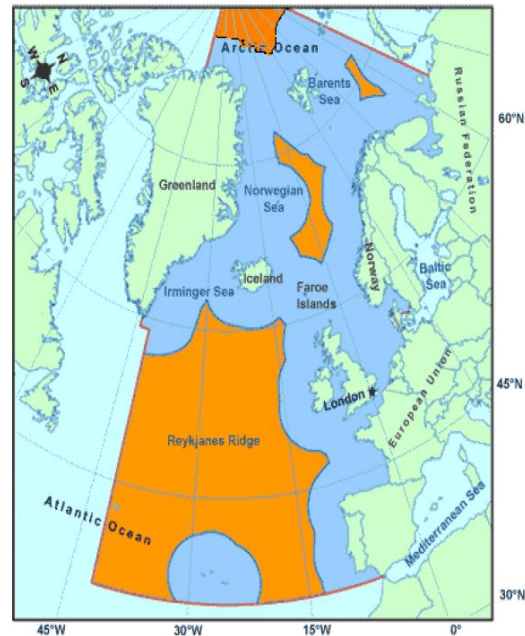
Preconditions

- Good Governance – ability to reach agreements, make decisions and agree on management plans
- Robust impartial peer reviewed scientific advice
- Ability to adopt short and medium term management measures that immediately become binding on the industry
- This includes agreeing on sharing resources that straddle between areas under national jurisdiction and the high seas



NEAFC Fisheries Status Report 1998-2007

Edited by Kjartan Hoydal
NEAFC Secretariat



The map shows the four parts of the NEAFC Regulatory Area: the Arctic Ocean, the Barents Sea, the Norwegian Sea and the North East Atlantic Ocean.

NEAFC runs a public website (www.neafc.org) on which it publishes all relevant documents with regard to management measures, control and enforcement and general information on NEAFC fisheries.

Regional cooperation in the North-East Atlantic

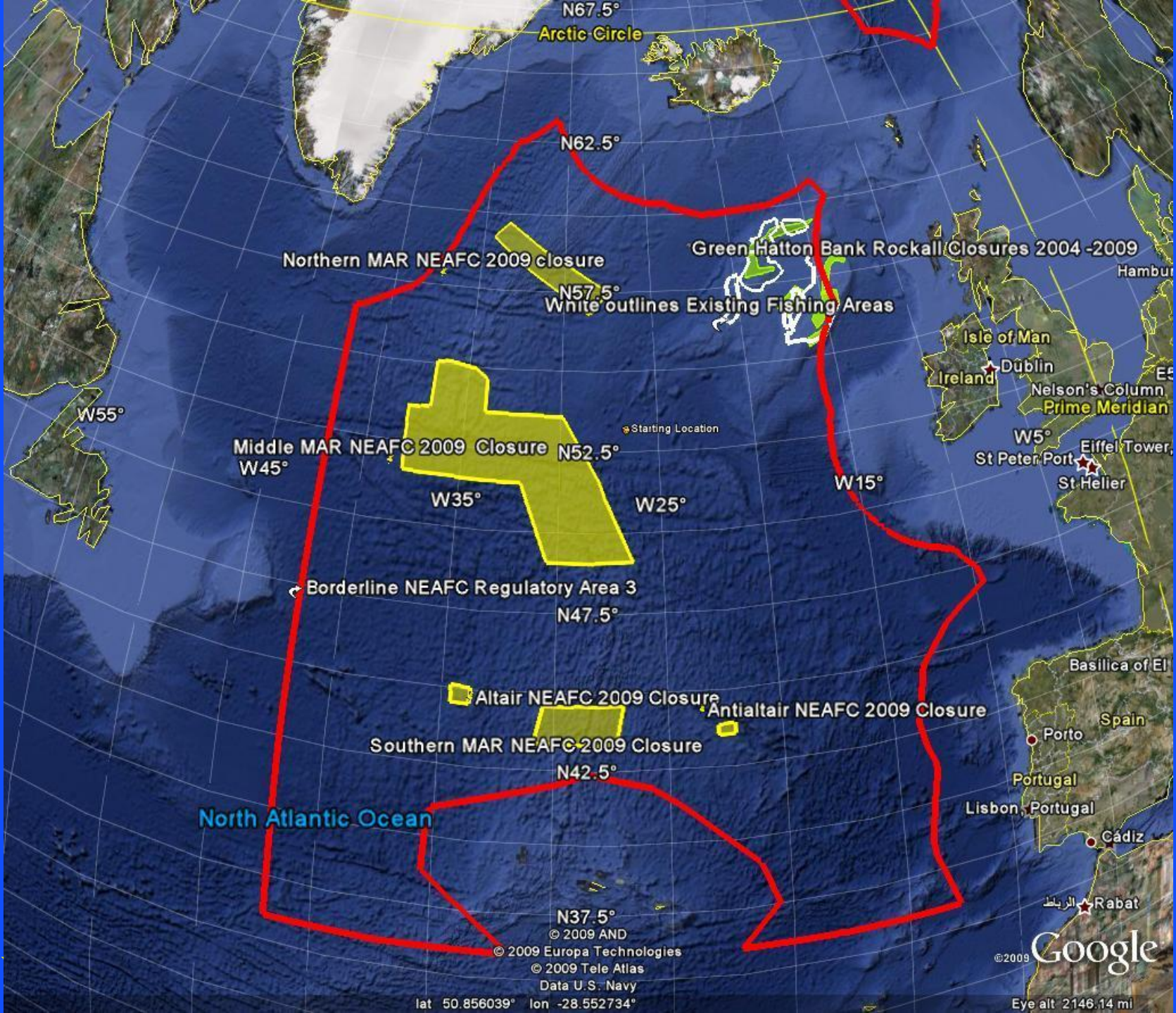
- Regional cooperation in fisheries in the North East Atlantic takes place on several levels:
 - Bilateral exchange of fishing possibilities
 - Cooperation with respect to shared stocks
 - Coastal state cooperation with respect to stocks that straddle into international waters
 - The Regional Convention for the high seas, NEAFC ”States, individually and through regional fisheries management organisations....”

NEAFC performance review

□ “The Panel considers that the NEAFC Convention, including its recent amendments, and the documents adopted to deal with specific issues, such as the Non-Contracting Parties Scheme, the Scheme of Control and Enforcement and the ‘Guidelines for the expectation of future new Contracting Parties with regard to fishing opportunities in the NEAFC Regulatory Area’ generally implement the global instruments dealing with fisheries issues, in particular the UN Fish Stocks Agreement, the FAO Compliance Agreement and the FAO Code of Conduct..

The Tools

- Controlling input (fishing effort) or output (catches)
- Technical measures:
 - Mesh sizes
 - Other fishing gear regulations
 - Minimum sizes
 - Seasonally closed areas
 - Spatial planning , reas permanently closed to demersal fishing gear



NEAFC has analysed the extent of the protection of VMEs in its Regulatory Area. The following rough estimates were arrived at:

AREA of NEAFC Reg. Area		Effective Fishing		Existing Area		New Fishing Area		Closures	
		sq km	%	sq km	%	sq km	%	sq km	%
South of Iceland	4.900.000	42.500	0,9	4.502.200	91,9	355.300	7,3		
Norwegian Sea	326.000			326.000					
Barents Sea	71.000	71.000							
Arctic Ocean	275.000			275.000					
Fishable Area and Closures									
	Sq km	%							
Fishable Area South of	655,000								
All closures	355,300	54							

MSC Control and Enforcement

The free rider problem

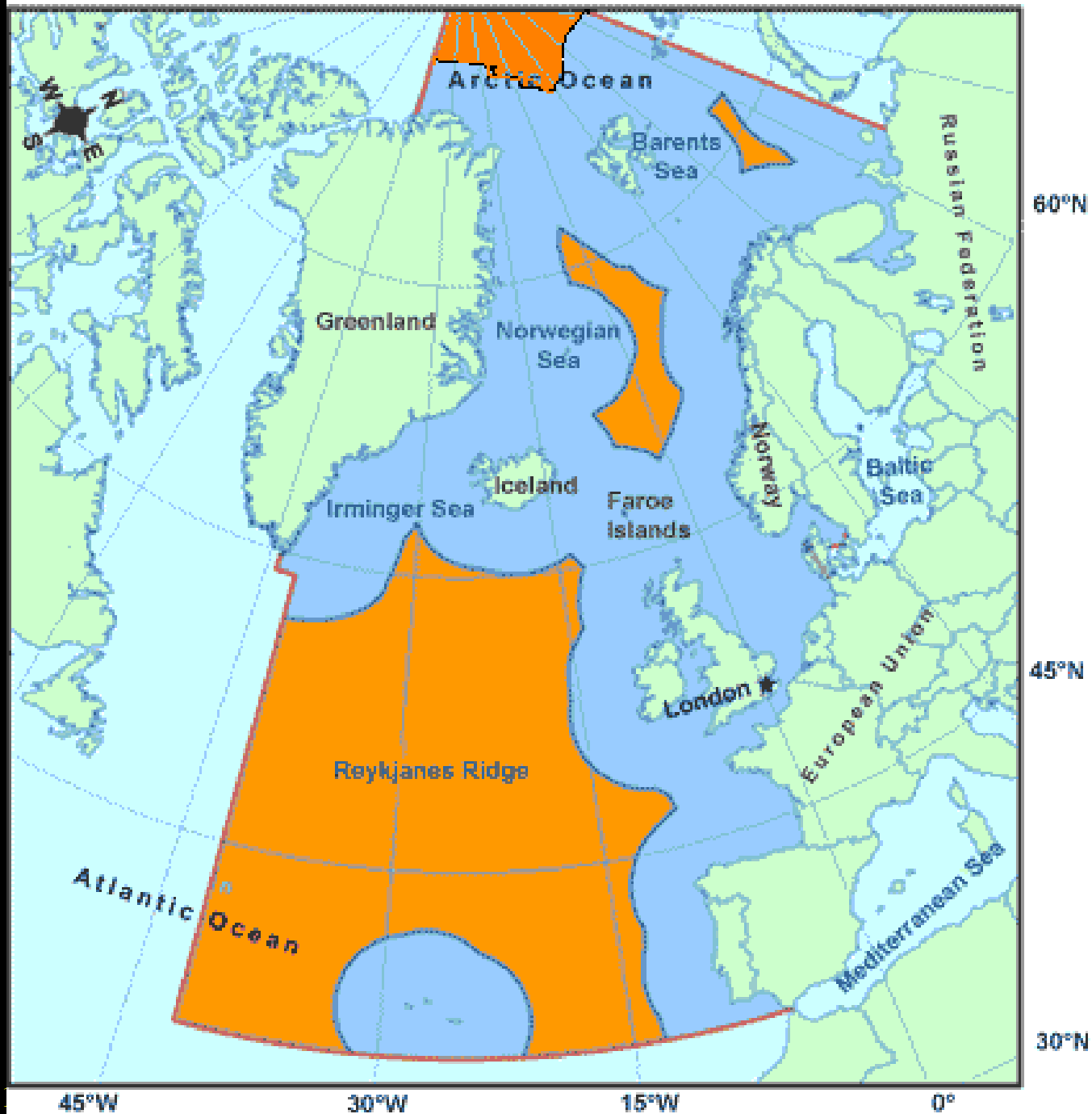
- NEAFC has joined forces with its sister organisation in the Northwest Atlantic, NAFO, to create a pan-North Atlantic list of IUU vessels. The two RFMOs have decided that vessels on their respective lists of IUU vessels are transferred from the list of one organisation to the list of the other.
- NEAFC has adopted Port State Control measures as a part of the existing comprehensive NEAFC Control and Enforcement Scheme.
- The objective is to protect the rights of legal fishermen, operating under national and regional, efficient fisheries management, against free riders

Other measures regulating the impact of fisheries

❑ NEAFC has prohibited fisheries with gillnets, entangling nets and trammel nets in depths below 200 m and introduced measures to remove and dispose of unmarked or illegal fixed gear and retrieve lost gear to minimise ghost fishing.

❑ In July 2008 NEAFC adopted additional measures on bottom fishing activities in the NEAFC Regulatory Area. These were supplemented at its 2008 Annual Meeting with specific operational procedures.

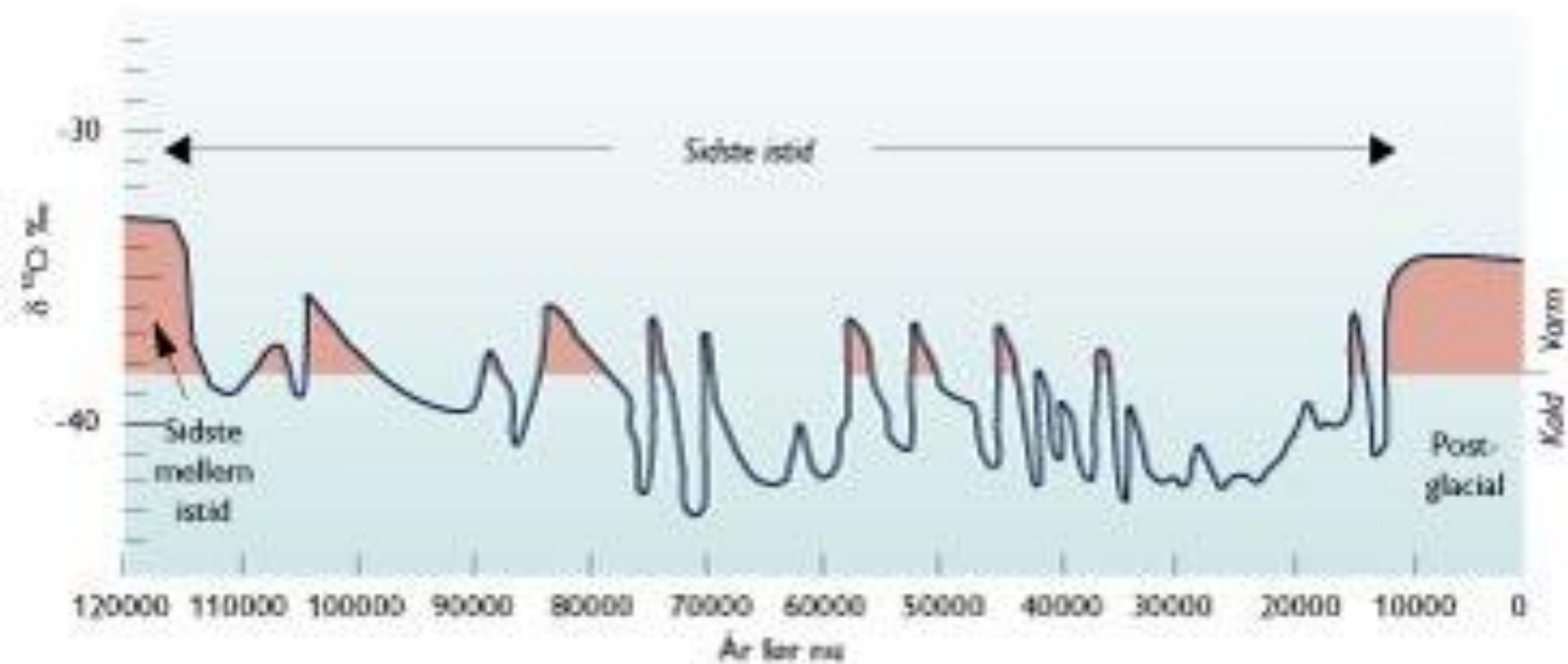
The
end



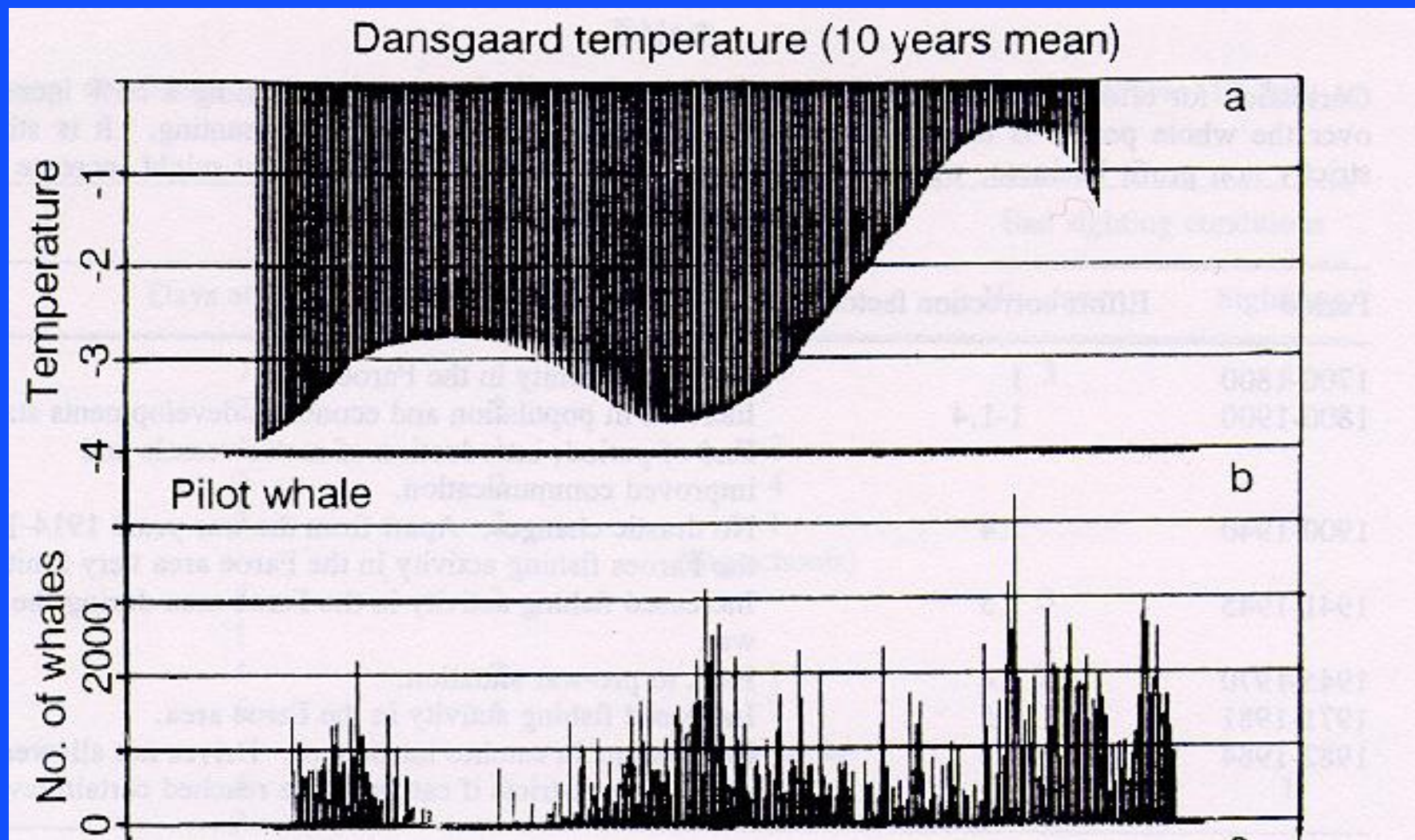
Fisheries and Climate change not a new issue

- Historic evidence shows cold and warm periods over the last millennium. Mini Ice ages are well known. Changes well documented in catches of boreal and polar fish species
- The founding fathers of ICES in the beginning of the 20th century looked for environmental changes and other causes as the main cause of “Fluctuations in the Great Fisheries of Northern Europe”

Cod landings at Greenland

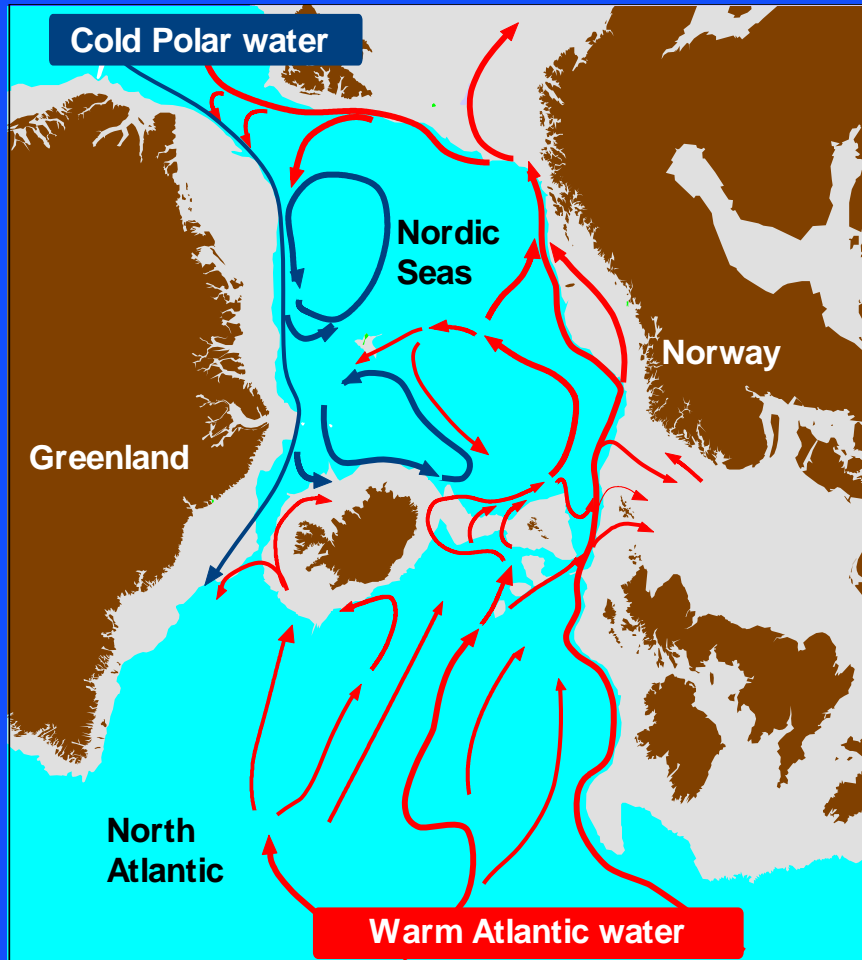


Pilot whales environment



Hoydal and Lastein 1993 IWC

Oceanography



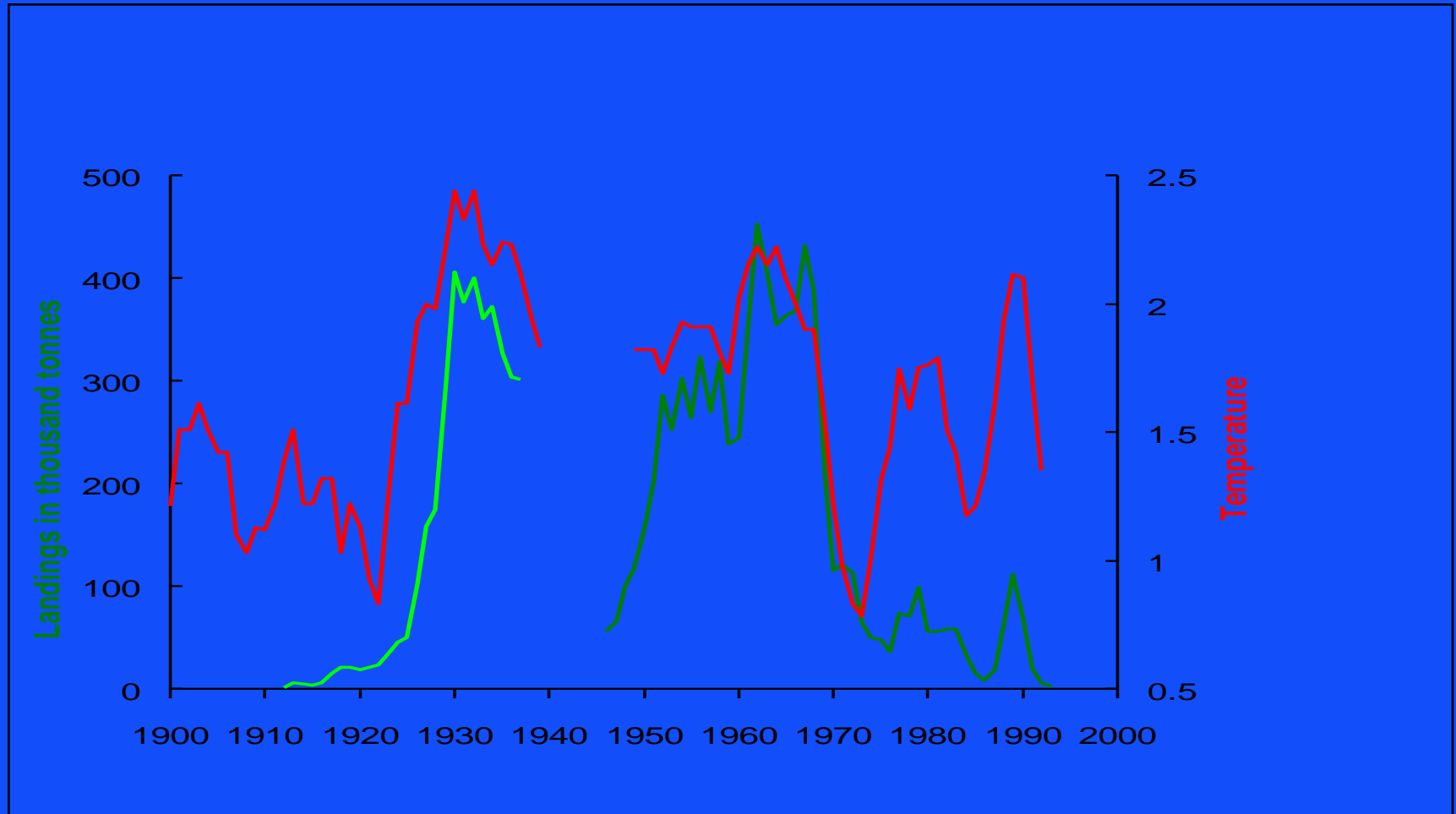
The inflow of warm Atlantic water to the Nordic Seas is one of the most important factors for the ecosystem of the eastern North Atlantic

Effects of climate on fish and fisheries

How do you distinguish between climate and fisheries effects?

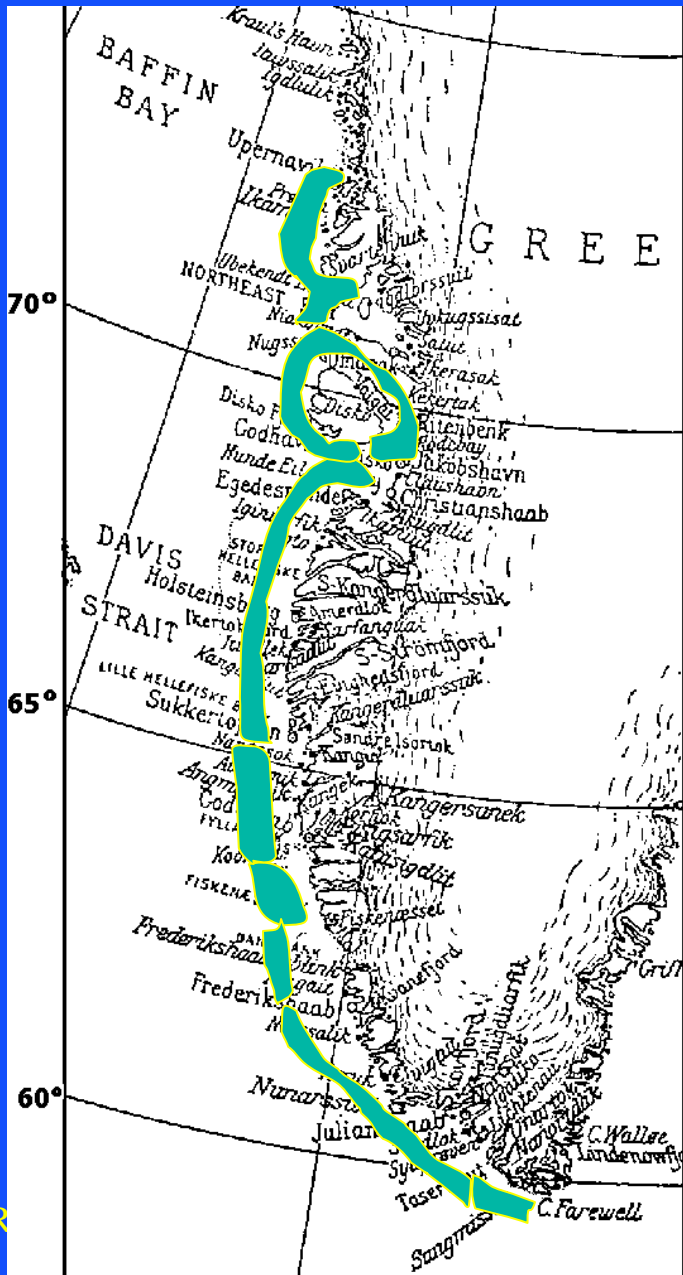
- Look at periods prior to fishing
- Look for effects (e.g. stock increase) which are unlikely to be due to fishing

Cod landings at Greenland



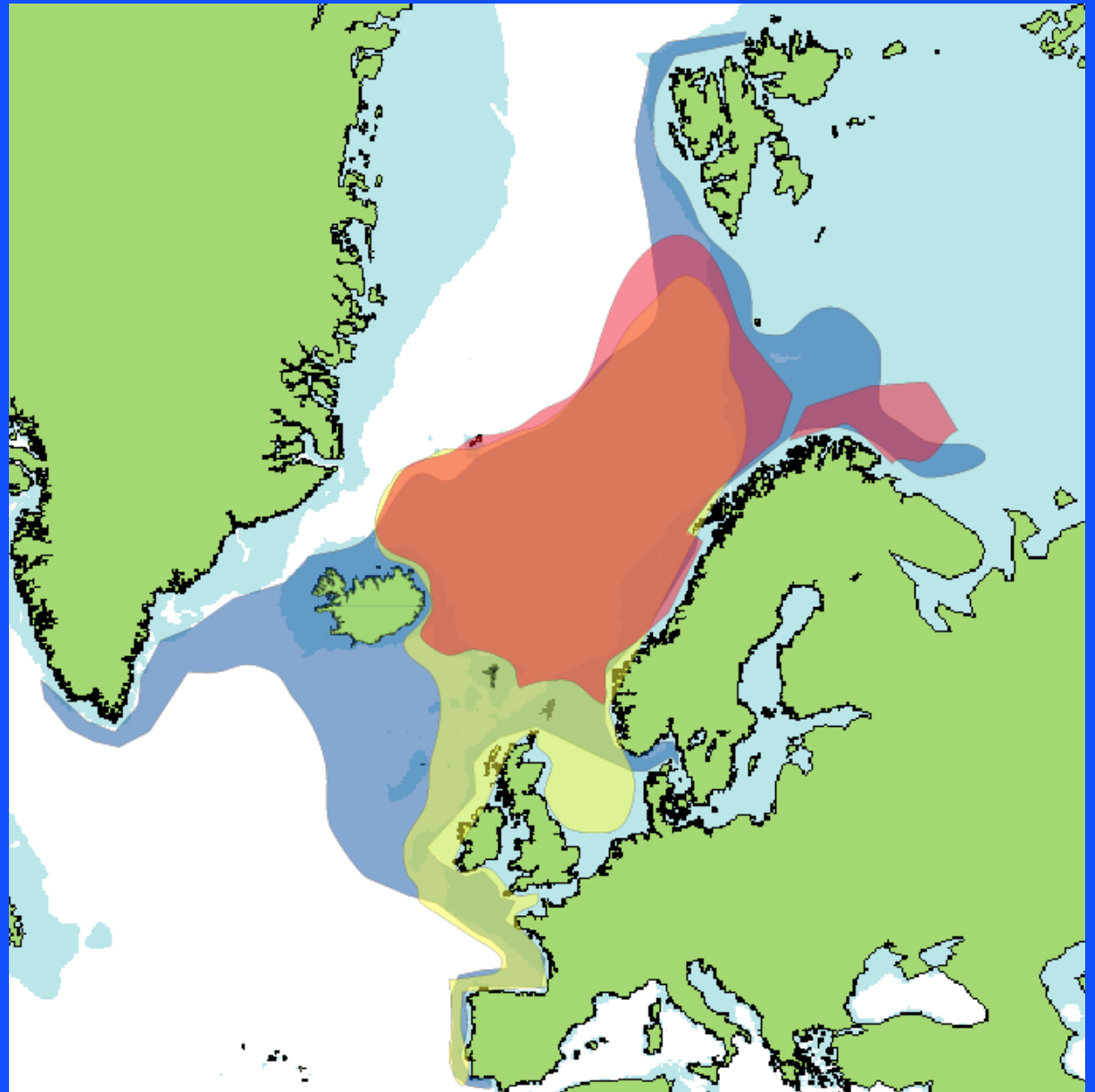
Spread of Cod at West Greenland

- 1900 Cape Farewell & Fiskenes Bank
- 1917-18 Frederikshaab
- 1919 Nuuk
- 1922 Sukkertoppen
- 1927-30 Christianshaab and first direct evidence of spawning DANA 1925
- 1931-36 Umanak
- Late 1930's Upernavik
- Late 1960 decline and retreat



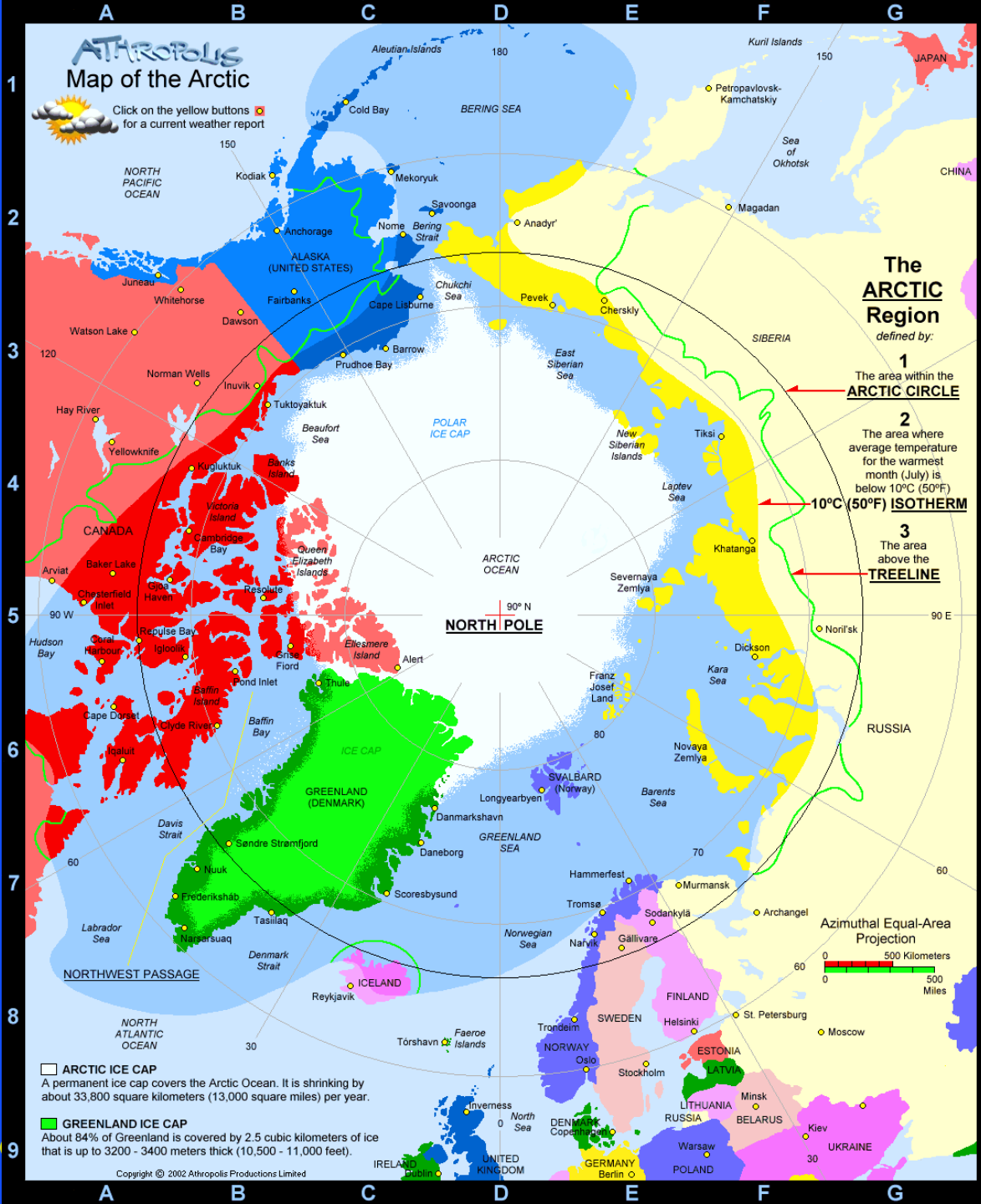


NSS (AS) Herring distribution

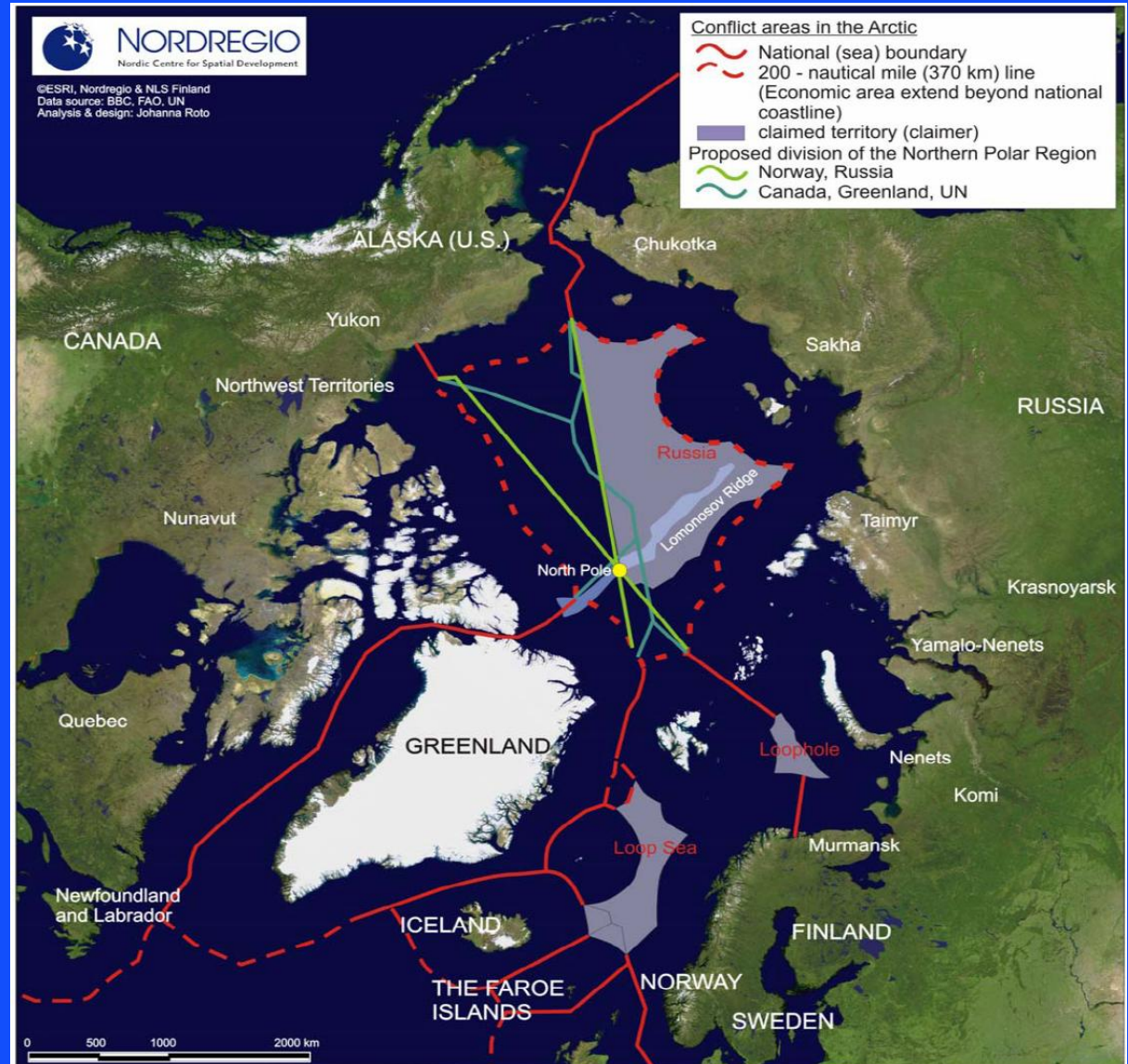


Map of the Arctic

It is estimated that around 4 million people north of the Arctic circle



Boundaries in the Arctic

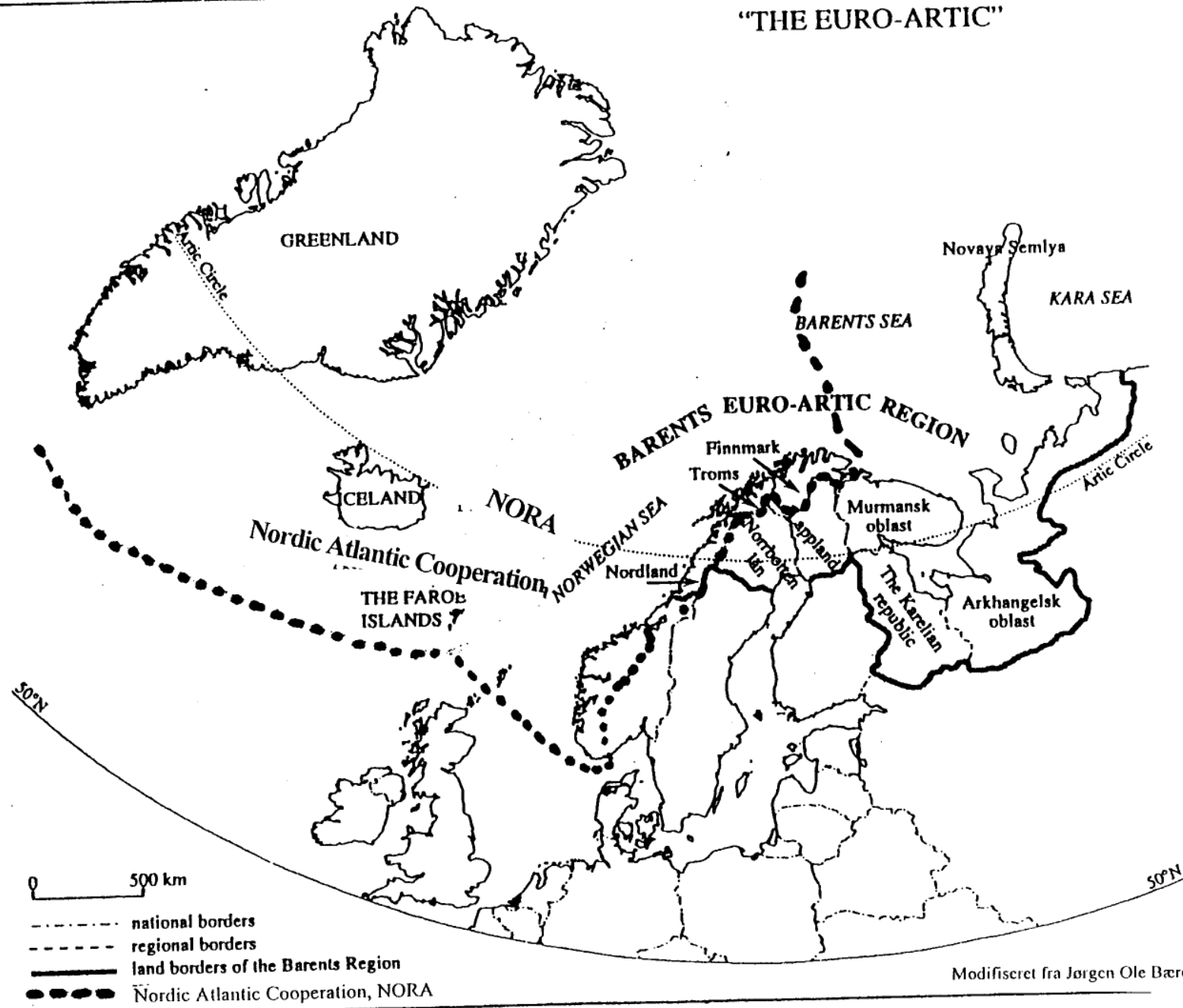


AMAP Area



The Euro Arctic

"THE EURO-ARTIC"



Modifisert fra Jørgen Ole Bævre

Northern Dimension area



Norwegian, Danish, Swedish Arctic Council chairmanships 2006-2012

- Climate change
- Integrated management of resources
- The International Polar Year 2007-2008 (IPY)
- Indigenous peoples and local living conditions incl. marine mammals

Arctic Policy

- Alert over scramble for control of energy resources in the Arctic Early March 2008 by Javier Solana, the EU's foreign policy supremo, and Benita Ferrero-Waldner, the commissioner for external relations.
- In fisheries issues no alert so far. There is a patchwork of cooperation in fisheries matters already: Bilateral arrangements, coastal states cooperation and multilateral cooperation in RFMOs and RSPs, North Atlantic Fisheries Ministers' Conference , North Atlantic Conference
- Nordic Council of Ministers

Northern European Cooperation

- Northern Dimension partners: the EU, Iceland, Norway and the Russian Federation. I attach a document from the EU website that gives some information.
- Greenland some years ago tried to insert an “arctic window” into the Northern Dimension policy
- UNESCO Management of Social Transformations (MOST) Programme - Circumpolar Coping Processes Project (CCPP)
- Nordic Council of Ministers

West Greenland during the period of warming from 1920

Changes in distribution and abundance	Fish species
Species previously absent, which appeared from 1920	<i>Melanogrammus aeglefinus</i> , <i>Brosme brosme</i> , <i>Molva molva</i>
Rare species which became more common and extended their ranges	<i>Pollachius virens</i> (new records of spawning fish), <i>Salmo salar</i> , <i>Squalus acanthias</i>
Species which became abundant and extended their ranges poleward	<i>Gadus morhua</i> , <i>Clupea harengus</i> (new records of spawning fish)
Arctic species which no longer occurred in southern areas, but extended their northern limits	<i>Mallotus villosus</i> , <i>Gadus ogac</i> , <i>Reinhardtius hippoglossoides</i> (became much less common),

Arctic Council ACIA Report

- Species ranges are projected to shift northward on both land and sea, bringing new species into the Arctic while severely limiting some species currently present
- Some arctic marine fisheries, which are of global importance as well as providing major contributions to the region's economy, are likely to become more productive