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RESEARCH REPORT

COMMITTEE: UNITED NATIONS ENVIRONMENT PROGRAMM

ISSUE: THE USE OF OIL RESOURCES IN THE ARCTIC

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INTRODUCTION:

Overview, The Arctic designates the region surrounding the North Pole; its limits are often defined as being the limits of the Arctic circle, an imaginary line that circles the globe at 66° 32' N. Although it is near the North Pole, this region is in reality much warmer than Antarctica. It can be defined as a partly frozen ocean surrounded by land belonging to various countries; almost 4 million people live in the Arctic.

Political and geographical status, The Arctic is not considered as a continent because its lands belong to several countries which are themselves part of different continents. This region includes almost the entire territory of Greenland, parts of the USA, Canada, Finland, Norway, Sweden, Iceland and Russia. These eight states have therefore created the Arctic Council in order to defend their interests in the region.

Environmental particularities, Although the ice field does not shelter any living species, the Arctic Ocean represents an important reserve of fishing resources. Moreover it is used as a migratory way for several marine mammals. The Arctic also includes territorial lands which vegetation is called the tundra; it corresponds to very low vegetation, only a few small trees are able to grow. Despite these difficult climatic conditions, the Arctic shelters several animal species and especially protected ones such as polar bears, white wolves, Arctic foxes... Furthermore because of the absence of reptile predators, the tundra is an important place of nesting for birds. The Arctic is estimated to hold the world's largest remaining untapped gas reserves and some of its largest undeveloped oil reserves. The presence of these resources brings out the question of their exploitation in a very fragile environment due to its very short periods of reproduction, the few present species and fundamental importance of its water in the ocean food chain.

Effects of global warming on the Arctic, Annual temperatures in the Arctic will gain 3 to 7 C° over the next century and therefore the ice field will keep reducing. At a global level, the melting of the ice would have two major impacts: the rise of sea-level, and the accentuation of global warming as the ice will no longer be reflecting solar energy. Moreover, this climate change will disturb the reproduction and the alimentation of several animal species, including species of fish sold on world markets. Fishing resources constitute an important alimentary resource for world's population as well as a vital role in the economy of the region.



KEY TERMS

GLOBAL WARMING: an increase in the earth's average atmospheric temperature that causes corresponding changes in climate and that may result from the greenhouse effect.

GREENHOUSE EFFECT: a phenomenon in which the atmosphere of a planet traps radiation emitted by its sun, caused by gases such as carbon dioxide, water vapor, and methane that allow incoming sunlight to pass through but retain heat radiated back from the planet's surface.

ARCTIC SHRINKAGE: the phenomenon of climate change in the Arctic, including warming temperatures, the melting of the Greenland ice sheet, and a loss of sea ice.

UNCLOS: The 1982 United Nations Convention on the Law of the Sea (UNCLOS), which came into force on November 16, 1994, is an international treaty that provides a regulatory framework for the use of the world's seas and oceans, inter alia, to ensure the conservation and equitable usage of resources and the marine environment and to ensure the protection and preservation of the living resources of the sea. UNCLOS also addresses such other matters as sovereignty, rights of usage in maritime zones, and navigational rights.

UNCONVENTIONAL OIL: A type of petroleum that is produced or obtained through techniques other than traditional oil well extraction (refers to fracking most of the time).

CONVENTIONAL OIL: Conventional oil and gas refers to petroleum, or crude oil, and raw natural gas extracted from the ground by conventional means and methods.

OIL SLICK: a mass of floating oil covering an area of water, esp oil that has leaked or been discharged from a ship.

HUBBERT PEAK AND PEAK OIL: The Hubbert peak theory says that for any given geographical area, from an individual oil-producing region to the planet as a whole, the rate of petroleum production tends to follow a bell-shaped curve due to the exhaustion of the resource.

EEZ (EXCLUSIVE ECONOMIC ZONES): extend from the country's baseline up to 200 nautical miles and gives nations control of natural resources, primarily fisheries and seabed resources, such as oil and gas.

MARINE PROTECTED AREAS (MPA): Marine protected areas (MPA) are protected areas of seas, oceans or large lakes. MPAs restrict human activity to protect natural or cultural resources. Marine resources are protected by local, state, territorial, native, regional, or national authorities and differ substantially among nations. This variation includes different limitations on development, differing regulation of fishing practices, fishing seasons and catch limits, of moorings and bans on removing or disrupting marine life.

MULTILATERAL ENVIRONMENTAL AGREEMENT: Multilateral Environmental Agreements or MEAs are international agreements or conventions on the environment that are agreed by more than two countries. These agreements are predominantly United Nations-driven primarily because of the UN's representation in the international community.

PIPELINE: A long pipe, typically underground, for conveying oil, gas, etc. over long distances.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

The Arctic Council: intergovernmental forum promoting cooperation, coordination and interaction between the Arctic states on common issues and especially on sustainable development and preservation on the arctic environment. It was established by the Ottawa Declaration of 1995 which included the active participation of the indigenous communities of the Arctic in the process.

Permanent members: The 8 nations of the Arctic circle: Norway, Denmark (because of its links with Greenland), Sweden, Finland, Iceland, Russia, the United States of America and Canada.

Permanent organisations represented: the Aleut International Association (AIA), the Inuit Circumpolar Conference (ICC), the Russian Association of Indigenous Peoples of the North (RAIPON), the Saami Council, the Gwich'in Council International, the Arctic Athabasca Council (these organisations represent the indigenous communities present in the Arctic) and the observer members (6 non arctic states): France, Germany, the Netherlands, Poland, Spain, the United Kingdom.

The Circumpolar Protected Areas Network (CPAN): designed to oversee and advance the CPAN program and provide the CAFF (Conservation of Arctic Flora and Fauna) Board with advice on needed actions. It aims to ensure sufficient protection of all habitat types in the Arctic.



Protection of the Arctic Marine Environment Working group: PAME is the focal point of the Arctic Council's activities related to the protection and sustainable use of the Arctic marine environment. It has a specific mandate to keep under review the adequacy of global and regional legal, policy and other measures, and where necessary to make recommendations for improvements that would support the Arctic Council's Arctic Marine Strategic Plan (2004).

WWF: international non-governmental organisation working on issues regarding the conservation, research, and restoration in the environment.

International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC): International maritime convention establishing measures for dealing with marine oil pollution incidents nationally and in co-operation with other countries.

POSSIBLE SOLUTIONS

Solutions need to take into account the importance of the arctic ecosystem at a global level as well as the difficulties brought by the ice field and the arctic climate in general. On the other hand, the need to find new fossil resources due to “peak oil” also has to be taken into account: delegates, for those representing states against the exploitation of the Arctic resources, would eventually have to consider alternatives to oil in terms of energy.

The need to preserve the culture and the economy of the indigenous population is also an important factor in the resolution of this issue. Moreover, the exploitation of oil resources in the arctic would eventually mean new rivals in the oil market for oil exporting countries. It would also mean a significant increase in income for countries which benefit from Arctic resources.

The creation of new legal instruments such as international laws or treaties might be considered: the setting up of an Arctic treaty has already been suggested by WWF but no concrete treaty has been written. Another solution might also be to recognise the Arctic as a natural reserve as the UN did for Antarctica in 1991.

TIMELINE

1977: The Inuit Circumpolar Council, a multinational non-governmental organization (NGO), met for the first time. Originally known as the Inuit Circumpolar Conference, the ICC represented the 150,000 Inuit (often referred to as Eskimo) people living in the United States, Canada, Greenland, and Russia.

1980: Pres. Carter signed a law that renamed the Arctic National Wildlife Range to the Arctic National Wildlife Refuge and more than doubled its size. The law directed the Interior Dept. to assess oil potential in 1.5 million acres of the coastal plain. A ban was put on drilling in the Arctic National Wildlife Refuge. In 2002 Pres. Bush pushed to overturn the ban. Estimates on oil there ranged from 3.2 to at least 5.7 billion barrels.

1996: The Arctic Council was founded to promote joint scientific research and to study pollution, conservation and mapping. The Ottawa Declaration named eight members of the Arctic Council: Canada, Russia, Norway, Denmark, Iceland, the United States, Sweden and Finland. The first step towards the formation of the Council occurred in 1991 when eight Arctic countries signed the Arctic Environmental Protection Strategy (AEPS).

1999: It was reported that the Arctic average ice thickness had declined by 4.25 feet since the 1960s, a 40% reduction.

2004: A \$12.5 million Arctic Coring Expedition, run by a consortium called the Int'l. Ocean Drilling Program, drilled into layers of sediment millions of years old.

2005: Indigenous leaders from Arctic regions around the world called on the European Union to do more to fight global warming and to consider giving aid to their peoples.

2005: Climate experts said the Arctic ice cap shrank this summer to its smallest size in at least a century.

2005: Marla Cone authored "Silent Snow: The Slow Poisoning of the Arctic."

2006: The environmental group WWF said toxic chemicals are harming Arctic animals including polar bears, beluga whales, seals and seabirds.

2007: Norwegian environmental group Bellona warned that a nuclear waste dump in the Russia Arctic may be in danger of exploding because of corrosion caused by salt water in enormous storage tanks.

2007: The UN warned in a report that up to 12% of Arctic ice has turned to water in the past 30 years, an alarming fact that only accelerates global warming further.

2008: May 28, The Ilulissat Declaration, was announced by 5 countries adjoining the Arctic Ocean, expressed their commitment to develop the Arctic peacefully and without outside interference. (www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf)



2008: Jun 9, Russia and Norway met for 2-days talks in the hope of making progress in a decades-old dispute over their maritime border in the Barents Sea, a part of the Arctic that could hold large oil and gas reserves. After visiting the Norwegian town of Kirkenes, the ministers will go to Murmansk in northwest Russia.

2008: Dec 16, NASA said satellite data indicated that more than 2 trillion tons of land ice in Alaska, Antarctica and Greenland since 2003 among the latest signs of global warming. A scientist from America's National Snow and Ice Data Center said the shrinking of Arctic ice (and exposure of extra sea to radiation) was warming the world at an accelerating pace.

2010: Michael Byers authored "Who Owns the Arctic: Understanding Sovereignty Disputes in the North."

2011: BP and Russian state-run firm Rosneft unveiled an agreement to swap shares and launch a joint venture to exploit the Arctic's vast untouched energy resources. BP's share in Rosneft would increase to 10.8% and Rosneft would get 5% of BP. Critics held that BP was buying stolen goods.

2011: Norway rejected oil drilling in ecologically sensitive waters just above the Arctic circle, partly because of worries over a disaster like the Gulf of Mexico oil spill.

2012: ExxonMobil finalized the terms of a deal with Russia's Rosneft to invest up to \$500 billion in developing offshore reserves, including in Russia's Arctic Kara Sea.

2012: China signed accords on energy cooperation and the Arctic in Iceland as Premier Wen Jiabao started a tour of northern Europe that will focus on Chinese investment in a continent eager for funds and to trade with the rising world power.

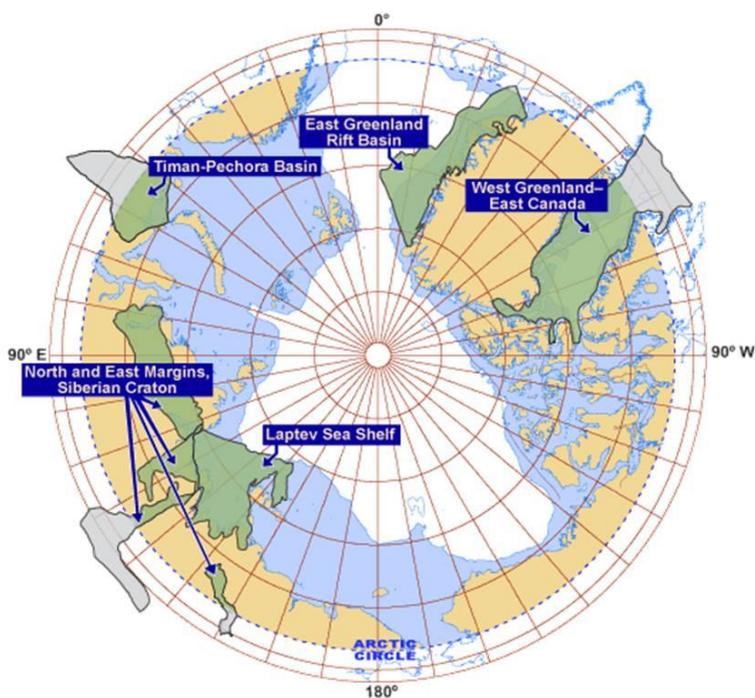
2013: Russian investigators charged 14 Greenpeace campaigners with piracy after an open-sea protest against Arctic oil drilling.

2013: Canada signalled intentions to claim the North Pole and surrounding Arctic waters while announcing the filing of a UN application seeking to vastly expand its Atlantic sea boundary.

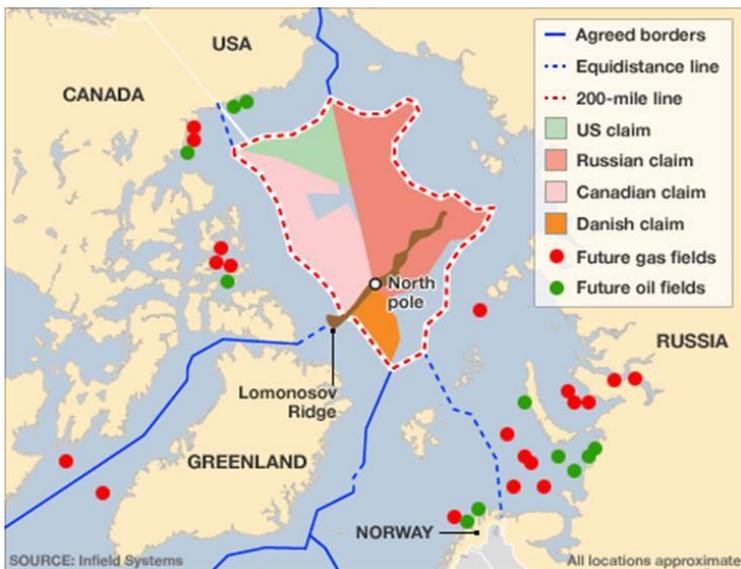
2014: Russia sent six ships carrying personnel to reactivate Cold War base in the Arctic

BACKGROUND INFORMATIONS

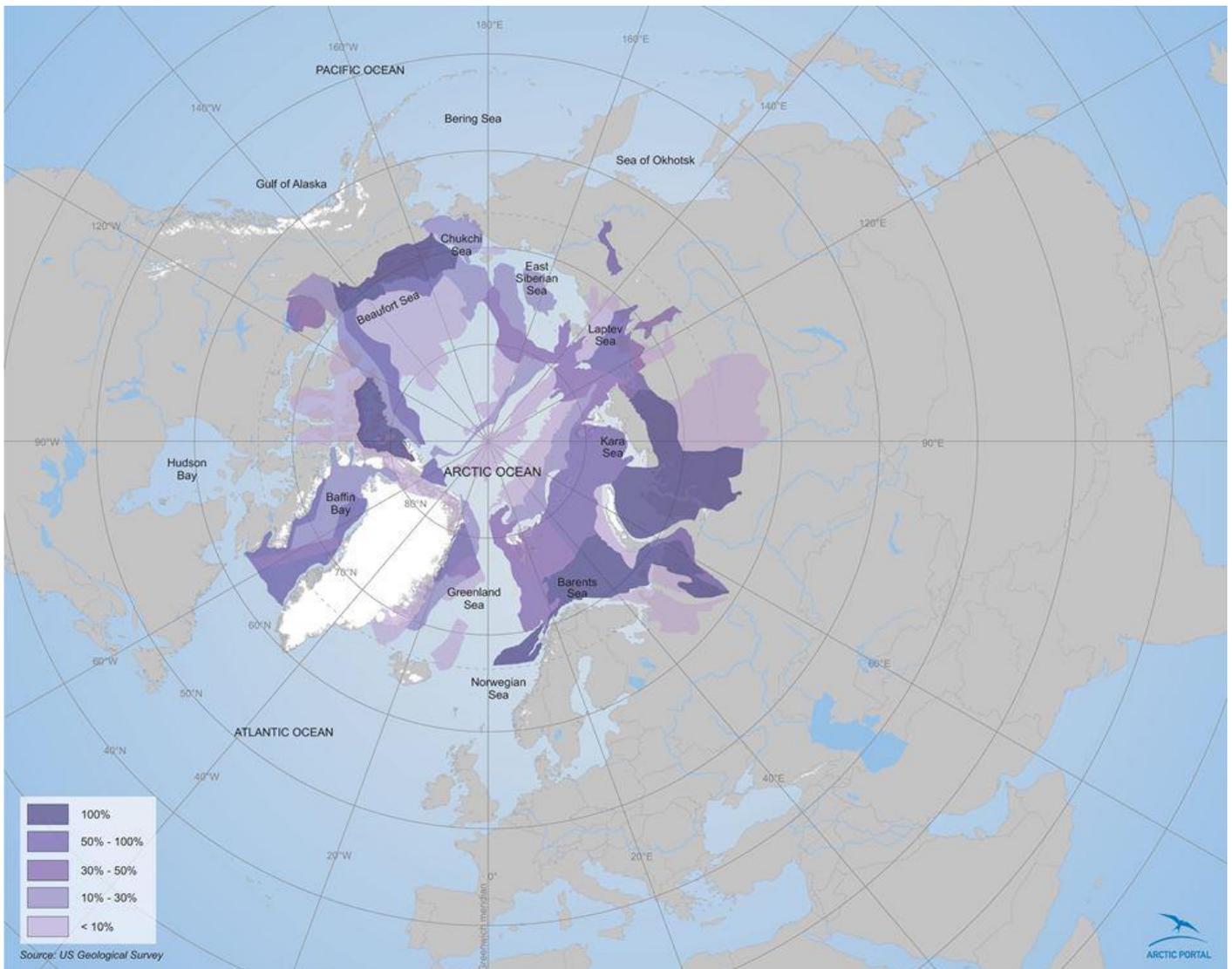
The Arctic is thought to hold around 22% of the world's remaining undiscovered oil and gas reserves, according to a 2008 assessment by the US Geological Survey. Due to peak oil in many regions of the world, the search for unconventional fossil resources has grown over the last 20 years. If this exploitation causes environmental problems due to the methods of extraction used, these difficulties are increased by the particularities of the arctic environment. Indeed, most of the known resources of the arctic are located in the sea, something that brings out the problem of the ice field. If an oil slick were to happen in the Arctic due to the extraction of oil, it would be impossible to intervene before the annual melting of the ice field. The oil would be locked under the ice for almost one year (as in the winter months only 20% of the region can be accessed by boat) leading to an irreversible pollution of the ocean and thus a degradation of the marine ecosystem.



Major oil fields



Territorial claims



Estimated resources of fossil resources in the Arctic

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