FACTSHEET

Developing Oil and Gas Resources in Arctic Waters: The Final Frontier?

Overview

Exploitation of hydrocarbons in the Arctic region has many faces: Alaska holds most of the region's oil reserves, while reserves in Russia are dominated by natural gas; onshore resources have been producing for decades while offshore is largely a frontier region. What is common is that the development of the Arctic's offshore hydrocarbon resources faces an uncertain future.

Many parts of the Arctic Ocean are becoming more accessible due to improved technologies, as well as diminished sea-ice due to climate change. Concurrently, interest in exploiting offshore oil and gas in the Arctic has grown in recent years, while progress continues in development of onshore resources. Largely untapped to date, the resource base is significant yet the technical and environmental aspects and high costs of operating in extreme conditions present particular challenges to developing the Arctic's offshore oil and gas resources.

"Many parts of the Arctic Ocean are becoming more accessible owing to improved technologies, as well as diminished sea-ice due to climate change."

Investment in exploration and development are influenced by global markets, energy demand and policies concerned with economic development, energy security and climate change, among other dynamic variables. So the extent and timing of oil and gas exploitation in the Arctic is not easy to predict. Yet it is clear that those resources may have important influences on the Arctic environment, economies and societies. The prospect of oil and gas exploitation also has implications for the European Union (EU) economic, political and environmental landscape.

This factsheet highlights offshore oil and gas resource exploitation, its drivers, possible impacts and relevance in relation to the European Union. Nevertheless much of the discussion about the factors motivating oil and gas developments, impacts and role of the EU are also applicable to onshore hydrocarbon resources.

ARCTIC

European Commission

Website: www.arcticinfo.eu

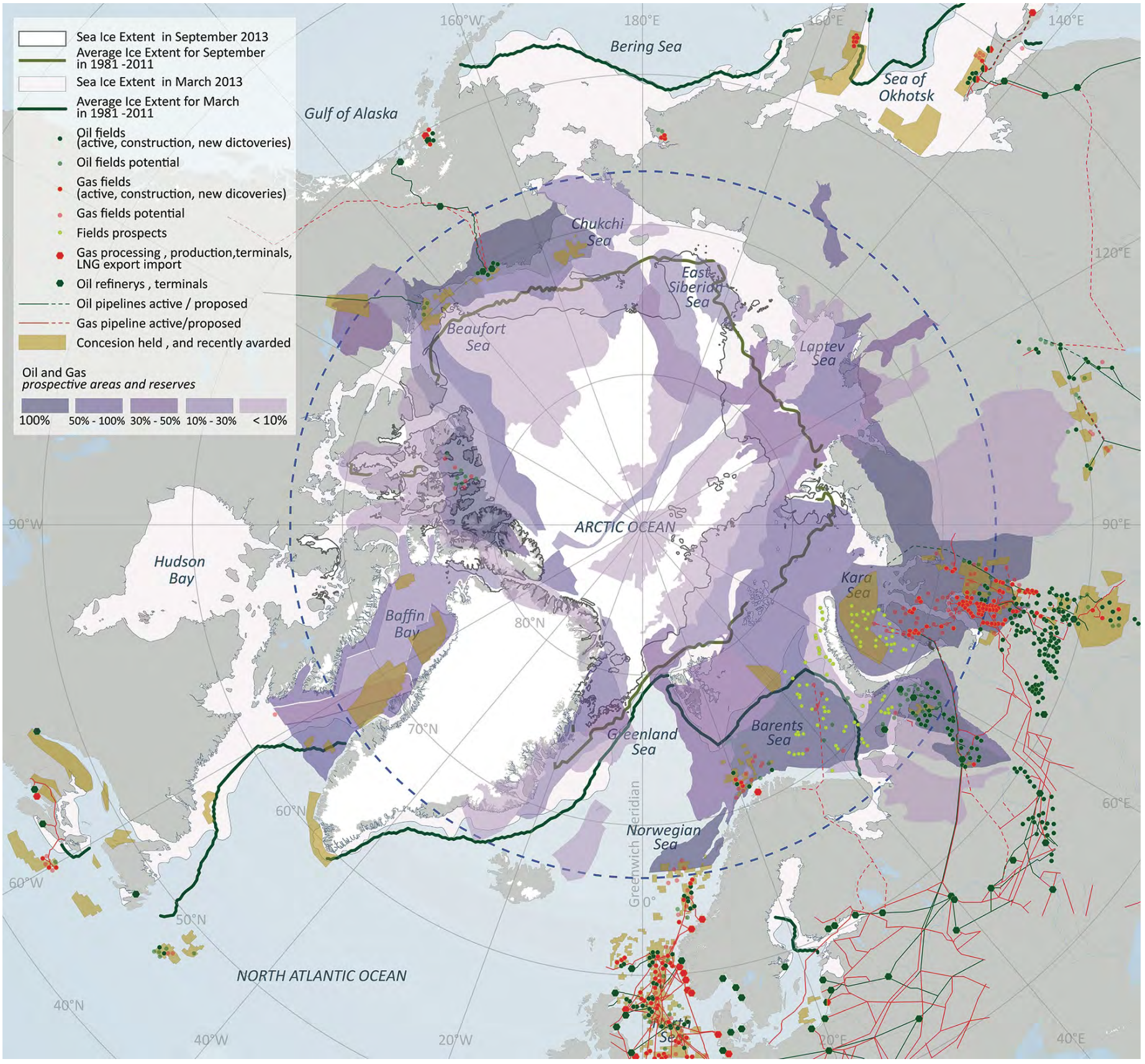
Strategic Environmental Impact Assessment of Development of the Arctic

This factsheet is to stimulate dialogue between stakeholders, Arctic experts and EU policymakers. Stakeholder input informs the analysis of trends and the role of the European Union in shaping Arctic developments. It will lead to recommendations to EU policymakers and be published as the Strategic Assessment of Development of the Arctic Report in spring 2014. The European Commission-funded project is implemented by a network of 19 institutions lead by the Arctic Centre in Rovaniemi and is linked to the EU Arctic Information Centre initiative.

How Much Is There and Where Is It?

Today about 25% of the world's natural gas and 10% of oil is produced in the Arctic (Figure 1). Yet hydrocarbon provinces in the Arctic are largely untapped. These undiscovered resources could amount to 90 billion barrels of oil, up to 50 trillion cubic metres of natural gas and 44 billion barrels of natural gas liquids, according to a 2008 estimate by the U.S. Geological Survey. That is about 13% of the world's undiscovered technically recoverable oil and up to 30% of its gas and some 84% of it is offshore. Undiscovered natural gas is three times more abundant than oil in the Arctic and is largely concentrated in Russia.

Figure 1: **Main Oil & Gas Areas, Mining Sites and Sea-Ice Extent in the Arctic**



Source: Arctic Portal, based on Nordregio, Johanna Roto and José Sterling, 2011, www.nordregio.se

Snapshot of Today's Development Landscape

Arctic oil and gas have been exploration and development targets for decades with onshore production dating to the 1920s and offshore since the 1970s. Alaska's Prudhoe Bay field was discovered in 1967 and production started in 1977. Several near-shore hydrocarbon reservoirs have been developed via onshore wells drilled directionally.

Due to the challenges of working in extreme conditions, offshore exploration and extraction has developed at a slower pace. Exploitation also differs across resource provinces, for instance the Barents Sea seems to be a less risky and difficult location than other Arctic offshore areas.

Arctic oil production in Norway is planned to start in late 2014 at the Goliat field in the Barents Sea about 50 kilometres southeast of Snøhvit — a natural gas field in production since 2007 (Figure 2). Norway and Russia signed an agreement in 2010 defining their maritime boundaries in the Barents and Arctic Seas resolving a 40-year dispute and boosting long-term prospects for exploration in both countries.

Rosneft, Russia's state-owned oil giant, signed Arctic strategic exploration agreements with Norway's Statoil, Italy's ENI and ExxonMobil in 2012. As well, Rosneft set out its Declaration on Protection of the

"Arctic oil and gas have been exploration and development targets for decades with onshore production dating to the 1920s and offshore since the 1970s."

Environment and Biodiversity for Oil and Gas Exploration and Development on the Russian Continental Shelf.

Rosneft signed an agreement with the China National Petroleum Corporation (CNPC) in March 2013 to explore fields in the Barents and Pechora Seas. In June 2013, CNPC acquired a 20% share in Novatek's Yamal liquefied natural gas project.

Iceland, an untapped frontier for the oil and gas industry, is likely to become another target for Chinese investment in the hydrocarbons sector, especially since Iceland became the first European country to sign a free trade agreement with China in April 2013. In fact, China National Offshore Oil Corporation is actively pursuing a deal on Iceland's continental shelf.

Two major Arctic liquefied natural gas (LNG) projects (Yamal and Shtokman in Russia) are influenced both by the changing natural environment and market developments. Output could reach growing Asia-Pacific markets via the Northern Sea Route for part of the

Figure 2: **State-of-Art Technology in Arctic Conditions: Melkøya LNG Production Facility**

- Snøhvit gas field in the Barents Sea has no installations visible above the surface.
- The world's longest unprocessed multi-phase pipeline at 143 km.
- Melkøya, Norway is the world's northern-most LNG facility at 70 degrees north.
- Annual capacity of 5 million tonnes LNG, production started in 2007.
- Injection/storage of CO2 equal to emissions from 280 000 vehicles.

Photo: Helge Hansen, Statoil.

year, but would risk displacing a portion of Russia's existing exports via pipelines to European markets at other times.

Given the high level of dependency in the EU on Russian gas imports, such developments could have broad economic impacts.

LNG exports to the United States are not economically viable given its shale gas bonanza with production that expanded more than 45% per year between 2005 and 2010. This influenced Gazprom's decision to shelve phase one of its flagship Shtokman project in August 2012.

More positive signs for Russian Novatek's Yamal LNG project include the CNPC's recent acquisition of a 20% stake which gives China's energy giant access to Russia's planned Arctic infrastructure hub. It includes a commitment to buy 3 million tonnes per year of Russian LNG.

This provides a long-term buyer in one of the world's most intensively developing gas markets. When fully developed, the Yamal LNG project will produce 16.5 million tonnes of LNG per year, most it to be exported via the Northern Sea Route. Operation is planned for 2016.

The Yamal LNG facility will be connected with the Sabetta port, a new key infrastructure project in the Russian Arctic. The new port is planned to be operational all-year-round, despite the highly complex ice conditions of the Ob Bay.

What is Driving Oil and Gas Exploitation in the Arctic?

Arctic resources have considerable economic potential. High energy prices, dynamic global energy supply and demand shifts, as well as technical advances that improve prospecting and development techniques and reduce risks, increase the attractiveness of Arctic oil and gas developments. More navigation routes due to climate change might broaden potential markets for the energy products.

Arctic resource development in the 21st century and in the context of rapidly changing conditions is unique. It remains both high-cost and high-risk. Within each of the drivers presented in Figure 3 there are underlying sets of specific factors, processes and issues that must be considered as key determinants.

These elements may reveal opportunities and/or restrictions for further development of Arctic oil and gas resources, generating important environmental, economic and socio-political implications.

"The Yamal LNG facility will be connected with the Sabetta port, a new key infrastructure project in the Russian Arctic. The new port is planned to be operational all-year-round, despite the highly complex ice conditions of the Ob Bay."

Figure 3: **Primary Drivers of Oil and Gas Exploitation Trend**

Scope and pace of climate change in the Arctic	• Decline of sea-ice coverage. • Expanding access and transport routes. • Unprecedented extreme weather conditions. • Increased coastal erosion. • New Arctic pollution sources. • Additional local emissions contributing to climate change, e.g.,ozone, black carbon, aerosols.
Economic conditions and global markets	• State of national and regional economies. • Economic potential of hydrocarbon development. • Global energy landscape is dynamic. • Interactions between different fuels, technologies, markets and prices are intensifying.
Advances in technology, especially in offshore and maritime transport industries	• Improved technology for offshore oil and gas exploration and development to reduce environmental impacts and enhance safety. • Infrastructure for production and transport. • Co-operative approaches and technical capacity to address pollution, oil spill and rescue operations.
Political significance of Arctic hydrocarbon development at local, regional and global scale	• Government policies. • Global and regional climate agreements and regulations. • Development of international governance frameworks and rules for oil and gas extraction. • NGO pressure.

Impacts of Oil and Gas Resource Development

The high probability of finding hydrocarbon resources and the decline in ice coverage makes the Arctic an interesting and likely economically viable region to explore and develop, but what are the consequences?

Resource exploration and extraction activities have considerable effects on the environment, economy and society. Impacts vary depending on the spatial scale, type of activity, stage of development, the technology and infrastructure.

Based on global experience in oil and gas exploration and production, there is substantial evidence suggesting the nature of these impacts. For example, the size and type of a given geographical area or the scale and life-cycle stage of a given activity have been shown to have strong potential to influence natural and social environments.

Generalised impacts associated with oil and gas development in the Arctic are highlighted in Figure 4.

> "Impacts vary depending on the spatial scale, type of activity, stage of development, the technology and infrastructure."

It is important to keep in mind that the impacts and consequences:

- Cannot be considered in isolation from one another, but usually are closely interlinked.
- Are unevenly distributed, e.g. physical disturbance of the environment from oil and gas activities and infrastructure has a larger impact on people in the specific area compared to those more distant, whereas financial benefits can extend far beyond the region.
- Even impacts that look similar may lead to dissimilar outcomes depending on the particular situation.
- Impacts must be considered in terms of long-term effects on the environment and society.

Workers on an Oil Rig

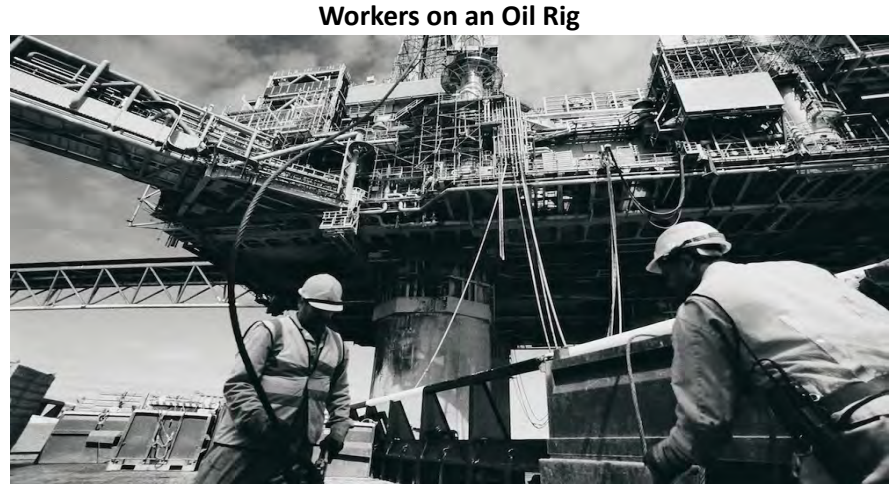


Photo: GettyImages

Figure 4: **Main Impacts**

ENVIRONMENTAL

- Physical impacts on marine and terrestrial ecosystems, including air pollution and noise.
- Risk of long lasting negative impacts from catastrophic events, e.g. oil spill.
- Effects on biodiversity terrestrial and marine and their habitats: directly on species confronted with pollution and disturbance; indirect effects of pollution that disrupt food chains.
- Production and consumption of additional hydrocarbon resources adding to greenhouse-gas emisssions.
- Increased concentration of climate forcers, e.g. ozone, black carbon.
- Damage to important ecosystem services of value to humans, e.g. fisheries.

SOCIAL

- Demographic trends, e.g. influx of workers, migration patterns.
- Increased economic and employment opportunities.
- Social relations and health.
- Education and training patterns, e.g. new opportunities.
- Increased urbanisation.
- Cultural and economic factors, e.g. indigenous livehoods, traditional practices, contact with nature.

ECONOMIC

- Macroeconomic effects, e.g. projected increase in national and regional GDP.
- Microeconomic effects, e.g. expected increase in economic opportunities, incomes, growth of businesses, increased employment and stimulation of overall economic activity.
- Multiplier effect and imploved services.
- Increased public revenues from royalties and other payments or production sharing approaches to fund services and support sovereign wealth fund.
- Risks to traditional livelihoods.

GOVERNANCE/POLITICAL

- New geopolitical roles and economic potential.
- New regional and global relations, e.g. energy security.
- Further development of environment and economic governance for regulation, fiscal regimes, resource management, e.g. development of oil spill preparedness and response regime.
- Strengthen comprehensive and long-term monitoring and research capabilities.
- Improved stakeholder engagement stemming from regulatory and NGO pressures.

Melkøya Processing Facility in Northern Norway

Photo: Joakim Aleksander, Creative Commons Attribution 2.0 Generic License, www.commons.wikimedia.org/wiki/File:Melkoya.jpg.

Flaring is one of the ways extraction and processing of hydrocarbons contributes to atmospheric pollution, which is likely to become more important as these activities increase in the Arctic.

Flaring emissions are particularly high in black carbon (black smoke in the photo), which is known to significantly contribute to climate warming in the Arctic atmosphere and upon deposition to surface snow.

> "The economic impact of oil spills can be measured by the GDP contribution of activities which are affected by an oil spill"

Resilience of the Arctic's ecosystems to withstand risk events is weak. While particular risk events – such as an oil-spill – are not necessarily more likely in the Arctic than in other extreme environments, the potential environmental consequences, and cost of clean-up may be significantly greater, with implications for governments, businesses and the insurance industry.

Given that most Arctic hydrocarbon reserves are located offshore, it is of particular concern that there is little knowledge concerning the suitability of existing methods for oil clean-up in ice-covered waters or in areas of broken sea-ice.

Vicious Circle of Climate Change and Oil and Gas Extraction

The climate change, resulting in decreasing Arctic sea ice extend, is opening Arctic to offshore oil and gas exploitation. However, it is exactly the burning of fossil fuels and resulting GHG emissions that are largely responsible for the human-induced climate change.

According to the International Energy Agency's 2012 World Energy Outlook, two-thirds of all proven fossil fuel reserves must stay in the ground if the world is to avoid dangerous climate change (above 2 degrees Centigrade).

Moreover, opening of the new oil and gas fields locks-in the development for decades as the expensive infrastructures, once constructed, tend to be used for longest possible time, even if stringent climate change measures are adopted in the future.

Therefore, the Arctic oil and gas developments may be caught in the vicious circle – adding to climate change which made these developments possible in the first place. Can there be a balance between utilizing the opportunities arising from Arctic change and preventing further CO2 emissions by limiting the amount of fossil fuels available?

The economic impact of oil spills can be measured by the GDP contribution of activities which are affected by an oil spill.

For example, studies find that the fisheries' sector around the Barents Sea contributes to 8.2% of GDP in the Murmansk region; part of this economic activity is at risk in the case of oil spill in that region.

Oil Spill Related Research

The International Association of Oil and Gas Producers launched a four-year, US$20 million research programme in 2013 to address issues specific to Arctic oil and gas exploitation.

The initiative, which is open to academic collaborators, will include research on the environmental effects of Arctic oil spills, spill trajectory modelling and remote sensing, and oil recovery techniques in sea-ice areas.

It will also test Arctic clean-up technologies in a number of controlled oil releases.

Investment and development of hydrocarbon resources can offer positive social and economic effects. Responsible, knowledge-based governance is key to effectively and successfully respond to the challenges and opportunities presented by further development of the Arctic oil and gas resources.

Economic and Social Benefits: Snøhvit Case

The first offshore gas development in the Barents Sea is a milestone in developing the hydrocarbon province. About 2 500 people were employed in the five-year construction phase. Operation, maintenance and support services now provide about 400 jobs and 75% of the employees have been recruited from north Norway.

Nearly €380 million of the overall deliveries to the field came from companies registered in north Norway. Assessments show that the development of Snøhvit reversed declining population and employment trends in the Hammerfest area.

New companies were established in the area, housing construction expanded and municipal revenues increased substantially. Significant investments have been made in upgrading schools, infrastructure and in developing cultural facilities.

Source: The High North: Visions and Strategies, Meld.St. 7 (2011-2012), Report to the Storting, Norwegian Parliament.

Governance and Best Practice

Effective governance, regulations, international standards and best practices are crucial factors to reduce the risks of negative environmental and socio-economic effects of oil and gas activities. Many international conventions and agreements are applicable in the Arctic (Table 1). They address the following key areas:

- Nature conservation and environmental protection, including environmental impact assessments.
- Rights of indigenous peoples.
- Oil spill preparedness, response, and co-operation for ships and offshore facilities.
- Occupational safety and health requirements.
- Marine pollution from ships.
- Liability and compensation for damage from pollution incidents.
- Minimum standards for the construction and operation of ships; training and certification of seafarers.
- Rules to prevent collisions at sea relevant to the transport of oil.

A study of the current international framework at the global level related to offshore oil exploitation highlights both its fragmented and incomplete nature. To some extent, the lack of adequate international and regional authorities contributes to a shortage of current, comprehensive and effective enforcement of rules covering the Arctic marine area. Part of the solution could be to combine governance norms, national and international, with corporate social responsibility standards of operating companies.

Table 1: **Selected International Instruments Relevant to Arctic Offshore Oil and Gas Activities**

Conventions, Agreements, Standards and Guidelines	Year
United Nations Convention on the Law of the Sea	1982
International Convention for the Prevention of Pollution from Ships (MARPOL)	1973/78
International Convention for the Safety of Life at Sea (SOLAS)	1974
Agreement on Co-operation on Marine Oil Pollution, Preparedness and Response in the Arctic	2013
The Convention for the Protection of the Marine Environment of the Northeast Atlantic (OSPAR)	1992
International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC)	1990
Protection of the Marine Environment (PAME) Arctic Offshore Oil and Gas Guidelines	2009
PAME Guidelines for Transfer of Refined Oil and Oil Products in Arctic Waters	2004
International standards for safe exploration, production and transportation of oil and gas, *e.g.* ISO 19906 – Petroleum and natural gas industries – Arctic offshore structures	2010

Health, Safety and Environmental Protection Industry Standards

Recognised technical standards are used worldwide by the oil and gas industry. Accumulated experience over many years and from all parts of the world influence the standards through systematic updating and issuance of new standards. The standards represent best international practice to achieve an acceptable level of safety. Yet, updating standards is a time-consuming process requiring consensus from many parties.

Existing regulations and technical standards generally have not been developed to address the Arctic's harsh offshore conditions. Existing technical standards need to be supplemented for the Arctic challenges with:

- Definition of societal and company safety objectives.
- Risk assessment from concept to execution, operation and decommissioning.
- Acquisition and analysis of site specific environmental data and loads.
- Definition of additional or modified functional requirements.
- Adaptation for site-specific and project-specific conditions.

Adapted from Barents 2020, Det Norske Veritas, 2012.

Arctic Council Facilitates Crucial Regional Solutions

The eight member countries in the Arctic Council have signed two agreements with particular relevance to oil and gas development. The 2011 Search and Rescue Agreement, a legally-binding instrument, co-ordinates life-saving international maritime and aeronautical coverage and response across an area of about 34 million km2.

In May 2013, the states established a legally-binding Agreement on Co-operation on Marine Oil Pollution Preparedness and Response in the Arctic to improve oil spill management.

> "The challenges of Arctic development call for co-ordinated responses where viable, common standards where possible, an ecosystems-based approach, transparency and best practice."

There are major differences between regulatory regimes, standards and governance capacity across the Arctic states.

The challenges of Arctic development call for co-ordinated responses where viable, common standards where possible, an ecosystems-based approach, transparency and best practice.

These frameworks need to be in place to support sustainable development and uphold the public trust.

How Oil and Gas Development in the Arctic May Affect the European Union

The EU is an enormous energy market with a variety of producers and consumers. EU policies relevant to, inter alia, economy and trade, energy and environment alongside national policies of its Member States makes for a complex policy landscape.

> "The EU energy market is increasingly looking to imports to meet energy demand."

Take for example growing demand for transport fuels, currently largely based on oil, versus EU policy approaches to reduce greenhouse-gas and other emissions, and to curb fossil fuel use.

Stakeholders in Arctic Oil and Gas Developments

Engaged stakeholders are numerous. Some of the principle stakeholders include national, regional and local authorities; local communities; the oil and gas industry and its service providers; public and private interests (financial institutions, construction, management, maritime transport, insurance, etc.).

Indigenous groups, conservation organisations and the scientific community also have a keen stake in development planning and implementation.

In addition to the eight Arctic states, many other countries are moving to assert claims as stakeholders with regard to Arctic issues, e.g. seeking observer status in the Arctic Council.

The European Union has been elaborating its Arctic policy since 2008 and has stated that it would like to engage and play a more active role in the Arctic region.

Greenpeace Demonstration During the Arctic Council Meeting in Kiruna, Sweden, May 2013

Photo: Peter Prokosch, UNEP/GRID-Arendal.

Figure 5: Arctic Oil and Gas Development: Significance for the EU

Changes in EU Energy Demand and Supply Patterns	Challenges and Opportunities for EU Economy	Environment and Sustainable Development
Shifts in regional and global energy markets. • Russia, Norway (interdependency) • US unconventional resources boom	Investment opportunities in Arctic.	Effects on EU energy, economic, geopolitical and climate change policies.
	Opportunities for EU industries.	Environmental risks, e.g. air pollution, oil spills.
Changes in energy consumption patterns. • More use of low-carbon energy. • Accelerated deployment of renewables. • Energy efficiency improvements.	Further development of EU energy market.	EU support for monitoring systems.
	Technology, research and development. Scientific research.	Change in the EU environment and climate footprint.

The EU energy market is increasingly looking to imports to meet energy demand. Energy imports increased from less than 40% of consumption in the 1980s to reach 54% in 2010.

In that year, the highest dependency rates were for crude oil (85%) and natural gas (63%). Russia is the main supplier, accounting for 35% of the EU's crude oil imports in 2010.

> "Meeting the growing demand of EU citizens for energy in a safe and environmentally responsible manner is a key challenge for EU institutions."

Almost 75% of EU imports of natural gas in 2010 came from Russia, Norway or Algeria. An International Energy Agency's 2012 World Energy Outlook projects a big increase: net gas imports into the EU rise from 302 billion cubic metres (bcm) in 2011 to 525 bcm in 2035, with the share of imports in total consumption jumping from 63% to 85%.

Security of supply is a concern if a high proportion of imports are concentrated among relatively few partners. The EU has begun to look to the Arctic as a source of hydrocarbons.

This could potentially increase EU energy security in the coming decades, particularly in the Barents Sea and through its well-established energy trade relationships with Russia and Norway.

Meeting the growing demand of EU citizens for energy in a safe and environmentally responsible manner is a key challenge for EU institutions.

The Arctic region has the potential to play an important role. Therefore, perspectives for the development of hydrocarbons in the Arctic influence EU policies and actions. Selected issues, which are highly correlated, are shown in Figure 5.

How Does the European Union Influence Oil and Gas Developments in the Arctic?

The EU has an important role to play in supporting effective co-operation and helping to meet the challenges that confront the Arctic region.

The EU's strong international efforts to address climate change through the expansion of renewables, energy efficiency and research contribute to efforts to address common challenges.

The EU's most important Arctic energy partners are Russia and Norway, with both of which the EU conducts regular energy dialogue. Because EU energy import dependence is expected to continue to grow, these external energy dialogues will become increasingly important for the EU to influence the environmental footprint of its energy consumption.

The EU is a major destination of resources and goods from the Arctic region. An estimated 24% of Arctic oil and gas output goes to the EU-27. Market influence and co-operation with Arctic partners such as through the European Economic Area (EEA) Agreement enable EU influence in hydrocarbon exploitation.

The EU has existing policies, particularly related to energy and environment, which affect oil and gas developments in the Arctic in direct and indirect ways. Selected mechanisms are highlighted here.

- *Directive on Safety of Offshore Oil and Gas Operations* (considered EEA relevant by the EU, although that is objected by Norway), adopted in June 2013, appeals for special attention to ensure the environmental protection of the Arctic in relation to any offshore oil and gas developments taking into account the risk of major accidents and the need for effective response (2013/30/EU). It encourages EU states that are members of the Arctic Council to actively promote the highest environmental

safety standards, such as through the creation of international instruments on prevention, preparedness and response to Arctic marine oil pollution. It contains direct provisions for licensing, monitoring, reporting and risk management for oil and gas extraction in the EU that places new requirements on operators and administrations.

- *The EU Offshore Oil and Gas Authorities Group*, established in 2012, is a forum for national authorities and the EU to exchange experiences and expertise relevant to major accident prevention and response for offshore oil and gas operations within EU waters and beyond its borders, where appropriate.

- EU framework for *requiring and executing environmental impact assessments* (EIA) based on several directives. Energy installations and related infrastructure subject to EIAs include oil refineries, road construction, extraction of petroleum and natural gas, and petroleum storage facilities.

- *Fuel Quality Directive* seeks to reduce life-cycle emissions from transport fuels by 10% by 2020. Petroleum products must meet quality requirements concerning sulphur and lead content (2009/30/EC).

- *Measures to safeguard security of natural gas supply* (2004/67/EC).

- *Limits on air pollutants* from large combustion facilities (2001/80/EC). It aims to reduce acidification, ground level ozone and particles by controlling emissions of pollutants (sulphur dioxide, nitrogen oxides and dust) from large combustion plants, e.g. power stations, petroleum refineries, other industrial processes running on solid, liquid or gaseous fuels.

- *Renewable Energy Directive* sets a goal of renewable energy comprising 20% of total EU energy consumption by 2020.

- *Energy Efficiency Action Plan* aims to increase total energy savings by 20% in 2020.

- Research projects and facilities that increase knowledge of the Arctic and are very important for oil and gas developments, such as CryoSat-2 an environmental research satellite launched in 2010 to measure sea-ice thickness and the European Earth Observation Programme - Copernicus that offers marine monitoring services and studies land and sea-ice in the Arctic using data from European and Russian satellites.

An Oil Rig is Towed to Shore in Norway

Photo: GettyImages

What is the Role of the European Union in the Arctic?

The European Union is a complex international actor. It has acquired a number of decision-making powers from its Member States and hence influences the content of their national legislation. Based on the European Economic Area Agreement, the EU also influences relevant legislation in Iceland and Norway. The EU also influences outcomes of international negotiations – including those of importance for the Arctic.

Only a small part of the territory of EU Member States - in northern Sweden and Finland – is located in the Arctic and the EU has no Arctic coastline. Nevertheless, EU regulations and actions, including research funding and regional policies, influence Arctic developments. Moreover, the EU is a major environmental and economic actor in the Arctic and has established a special relationship with Greenland.

Since 2008, relevant EU activities have been brought under a common umbrella of “Arctic policy”. A communication in 2012 stresses three key aspects: knowledge – support for scientific research; responsibility – promoting the sustainable use of natural resources; and engagement – enhancing co-operation with Arctic partners.

Key Questions to Stakeholders Regarding Arctic Oil and Gas

1. What is your outlook about environmental, economic and social impacts concerning offshore oil and gas developments in the Arctic?
2. What do you think the benefits and the risks are for oil and gas exploration and development in the Arctic?
3. How will local communities be affected by offshore resource development?
4. Will Arctic oil and gas become/remain important energy sources for the European Union in the next twenty years?
5. Do you think that the European Union has a role in Arctic oil and gas development? In what areas do you think the European Union can have beneficial influence?

Selected References

Det Norske Veritas, (2012), Barents 2020, www.dnv.com; European Commission, (2013), A 2030 Framework for Climate and Energy Policies, European Commission Green Paper, EU Council Conclusions, 22 May 2013; Government of Norway, (2011), The High North: Visions and Strategies, Meld.St. 7 (2011-2012), Report to the Storting; Hasselström, L. et al. (2012): The value of ecosystem services at risk from oil spills in the Barents Sea. Paper prepared for the ISEE conference in Rio de Janeiro 16-19 June 2012; International Energy Agency, (2012), World Energy Outlook – 2012, OECD/IEA, Paris; Rochette, J., (2012), Towards an International Regulation of Offshore Oil Exploitation, IDDRI Working Paper, July 2012; USGS (United States Geological Survey) (2008), "Circum-Arctic Resources Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle", Fact Sheet 2008-3049, USGS, Boulder, United States.

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Photo on page 1: GettyImages

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