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OIL AND GAS IN THE HIGH NORTH – A PERSPECTIVE FROM NORWAY

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Oil and gas in the High North – a perspective from Norway[1]

The land and sea areas of the European High North are dominated by Norway and Russia (Figure 1). The first licenses for oil and gas exploration in the Norwegian Barents Sea were awarded in 1980, leading to the discovery of Snøhvit in 1984. On the Russian side, seismic surveying started in the 1970s, leading to the discovery of giant fields like Shtokmanovskoye, Ledovoye and Ludovskoye. Further south in the Pechora Sea many smaller fields were identified. More than 100 wells have been drilled in total, and the assessment is at present that there is some 5-6000 mtoe (million tons of oil equivalents) in the Barents Sea, some 80 % of this on the Russian side. In the Kara Sea, to the east of Novaya Zemlya, Russians have discovered two other giant gas fields (Leningradskoye and Rusanovskye). In addition there is also potential for oil and gas deposits in the disputed area between Norway and Russia, where no drilling has as of yet taken place. The seismic surveying conducted in the area by the Soviet Union prior to 1982 provided cause for optimism (Moe 2004).

So far only one field (Snøhvit) has been considered commercially viable (and is under development). But exploration activities have not been very intensive on either the Norwegian or the Russian side. The assessment of the reserves is accordingly somewhat vague. The assertion that 25 % of world reserves are to be found in the Arctic (US Geological Service) remains unfounded. But there is no doubt that reserves are substantial in a global context. Some ¾ of these are expected to be natural gas. The exploitation of most of these resources depends, inter alia, on the availability of new subsea technologies and concepts, substantial amounts of capital, political will and, on the Russian side, a predictable legal and political framework.

Figure 1: Petroleum Reserves and Borders in the Barents Sea

The reason for energy consuming countries' interest in Barents Sea oil and gas is heavily linked to current high international oil (and other energy) prices. The high energy prices are predominantly driven by high economic growth in Asia, coupled with concentration of resources and a lack of sufficient production increases in the Persian Gulf, or elsewhere. Demand is growing faster than supply and has given us a 4th oil shock. Political unrest and war in the Middle East creates an additional pressure on prices. Consequently, there is a desire from consuming countries to increase and diversify the supply of fossil fuels.

High prices create the prospect of expensive field developments that in a low price scenario would not be profitable. Development of Barents Sea oil and gas depends on higher prices than for example North Sea oil and gas. High prices, and company interests in attaining profit, are together with energy consuming countries' push for more energy, heavily influencing domestic petroleum policies and contributing to a speeding up of field developments in both Norway and Russia.

This article provides an overview of challenges for Norwegian petro-

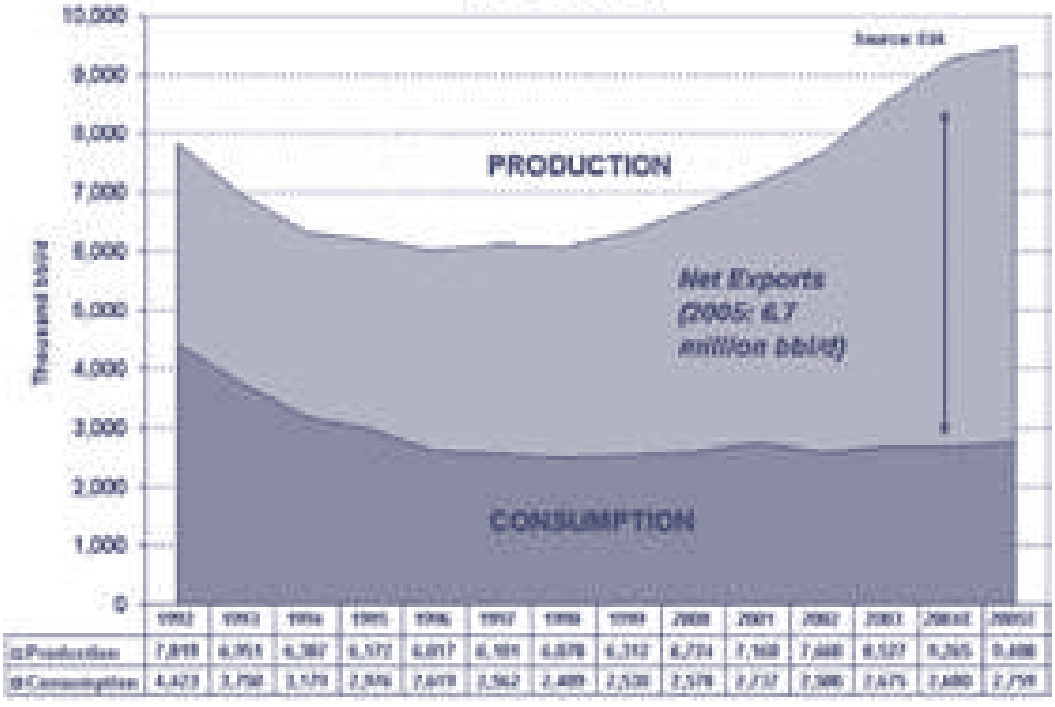
leum policy during expansion into the Norwegian and Russian Barents Sea. The main focus is natural gas. The first section of the paper focuses on positions of major powers Russia, US and the EU. The second section focuses on challenges for Norway. Norwegian areas of interest discussed are related to the petroleum industry, rent & control, the environment, regional matters, fishery, jurisdictional problems, security-of-energy-supply, foreign relations and military security. The closing comments draw together aspects of present challenges.

Interests of major powers

Russia

After years of production decline during the transition period following the Soviet break-up, a significant recovery in Russian oil production has taken place (Figure 2). In 2005, it reached some 9.5 mbd (million barrels per day), of which almost 7 mbd were exported. It is believed that Russia will be able to expand its oil production still further. Oil reserve figures indicate that Russia can be one of the world's key oil producers for at least the next 40 years.

Figure 2: Russian Total Liquids Production and Consumption (1992-2005E)



Reserves of Russian natural gas are even more abundant than oil and estimated to be available for the next 100 years at current production levels. With almost no decline after the break-up, Russia produced 600 BCM (billion cubic meters) natural gas in 2005 (7.5 times more than Norway). Production is projected to increase in the coming years and reach some 900 BCM by 2020 (EIA 2006).[2] Russia is now the world's largest producer and exporter of natural gas, and the second largest of oil, making it the major single energy producing country in the world.

The Ukrainian gas dispute[3], that reached a preliminary climax in January 2006, added to the Russian's feeling that they were politically and economically locked in. Russia needs foreseeable terms of trade and transit with CIS (Commonwealth of Independent States) countries. Russia also needs more alternative transportation routes. The dependency on petroleum exports for foreign currency earnings make these issues a top Russian political priority.

Norway and Russia have competed in energy markets since the 1970s, but their adherence to opposite economic and political poles oriented exports to a large extent to different markets. Norwegian oil and gas was almost entirely directed to Western European countries (and some oil to the U.S.), while more than half of Soviet exports were devoted to Eastern Europe and the Soviet Republics. After the break-up, Russia has notably increased its exports to Western Europe. The political awareness of joint interests in market developments, prices and contractual terms between Norway and Russia became stronger in the 1990s.

As Russia moves (slowly) towards a market economy and integration into the EU and world economy, she is converging with Norwegian petroleum policies in some areas (Austvik & Tsygankova 2004). Even though Russia has no EEA agreement with the EU, she is integrated into EU energy markets (although not in such a one-sided manner as Norway), and been influenced in similar ways as Norway by downstream market changes and policy measures, such as market regulation and taxation. While Russian gas policies are not "domestified" within the EU, she has been able to arrange her petroleum industry in a rather independent manner. As a result Gazprom has not been forced to unbundle its activities, and instead strengthened its position over the past years as a producer and transporter of gas within Russia. The government has made efforts to

strengthen the direct control of the company.[4]

The fact that Russia is not fully integrated in the international economy, as for example in terms of membership in the World Trade Organization (WTO), has had some negative impacts on Russia. Relatively low competitiveness of Russian products and a number of out-dated production technologies developed during the Soviet era are still in operation, giving her a technological disadvantage.[5] On the other hand, free trade allows for the import of competitive technology to Norway as a full member of the international trade system, and has contributed to the development of the high-tech Norwegian petroleum industry.

The restructuring of the Russian petroleum industry has not reached completion. There are however significant differences between the oil and gas sectors. There is a struggle over competence between the government and the oil companies, while there may be less political interest in changing the non-competitive structure of the natural gas industry. Any heavy involvement of international oil companies will take time, although the need for it is increasingly apparent. So far foreign companies' participation in Russian oil and gas sector has been very limited. The new German-Russian consortium to build the Baltic gas pipeline may be a signal from the Russians that from a capital and technological perspective they may involve themselves more directly with foreign companies in the future.

The crucial differences in size of the two countries and geographical positions, and not least, in cultural and historical features, create some rather different perspectives. Norway, as a small country, has a relatively insignificant influence on the world community. Russia with its vast territory located in the "middle of the world" and with its enormous natural resource reserves, will inevitably profit from combining economic as well as geo-political goals (as in the Soviet era). The Russians may, hence, from a power perspective more easily than Norway play evenly with the EU, EU countries and the US.

With the development of offshore fields in the Barents Sea, Norway and Russia share interests in the development of infrastructure and industrial technology. Being a small neighbouring country, this may lead the Russians to invite Norwegian companies to participate in the development of high-tech fields in the area, such as the Shtokman field. Given cooperation, Norway will need alliances and partnerships with non-Rus-

sian parties in dealing with her greater neighbour, as when a "mouse goes to bed with a bear". Such cooperation will be especially challenging if cooperation taking place within the disputed area if it remains unsettled (cf. Figure 1 and later comments).

It is however important to notice that the Barents Sea poses only one of several options for the Russians in their desire to increase (oil and) gas production. Even more abundant resources are located in Western Siberia, mostly onshore, cf. Figure 3. Many fields are also located in Eastern Siberia and can serve Chinese and other Asian markets in quite near future. Because of the anticipated lower costs of these fields, their relative proximity to fast growing energy-needing Eastern markets, as well as the Russians' long expertise in mastering land based gas projects without the help of foreign companies (although often inefficient), it is not certain that they will choose to develop Barents Sea gas first. Although Gazprom expresses a desire to expand in several markets simultaneously, and is planning for extensive field and infrastructural developments, the Russian may run the risk of an "imperial overstretch" as the world energy superpower. This may be part of the reason for the continuous postponement of announcing partners in the Shtokman field development.[6]

Figure 3: Oil and Gas Development in Northern Russia

The United States

In the 1980s the U.S. interest in Norwegian petroleum policy was predominantly founded on super-power rivalry with the Soviet Union. The break-up of the Soviet Union and the evolving global economy in the 1990s changed U.S. interest in Norwegian petroleum. With the end of the Cold War and the internationalization of the economy and globalization of markets, U.S. energy policy has become more global and comprehensive. The geopolitics of energy has become more important for international affairs and U.S. foreign policy. Norwegian oil and gas is now of prime importance for the overall global energy balance, as part of U.S. interests and worldwide foreign policy.

Planned supplies from the Barents Sea directly to the U.S. create however a bilateral interest in the development of the Norwegian (and Russian) natural gas sector. The US Ambassador to Norway expressed in a speech in Stavanger on January 26 2005 a desire to speed up Barents Sea gas developments on both the Norwegian and Russian sides (Lie 2005).

In a situation with high energy prices and no specific restrictions on Norwegian production, as opposed to in the 1970s and 1980s when the US pressured for higher Norwegian gas production (Austvik 2003:174-193), the energy-relations between U.S. and Norway is at present not controversial. Rather the two countries may work together to realize projects. If, however, Norway should choose to delay decisions and exploration activities where field developments are commercially possible, one might expect American pressure to change Norwegian policy.

The European Union

Until Snøhvit gas is produced and gas is used for power production in Norway, all Norwegian gas will continue to be sold to EU countries. Germany is the most important country in terms of economic and political size, energy consumption and geographical location in the market as a transit country for both Norwegian and Russian gas. EU countries have an interest in Barents Sea developments both from a security-of-supply and industrial perspective. From both perspectives they will have an interest in participating in projects, including industrial cooperation and partnership.

Norwegian – EU processes from the 1970s and 1980s were in many

respects replaced by a "domestification" of Norwegian policies by EU policies from the mid-1990s. The relationship between Norway and the EU has changed and political arrangements are not only negotiated at the international EU-Norway table anymore. The EEA agreement from 1994 made laws and regulations in the EU more or less automatically Norwegian law. The influence of EU policies is however not limited to the EEA agreement. The market integration of Norwegian gas into EU single energy markets is also important. As economic integration leads to political integration, Norway is affected by EU policies, irrespective of the EEA agreement. This is however to some extent true also for Russia.

The initial rather orthodox form of gas market liberalization that took place within the EU was possible because processes for the most part took place when energy prices were modest and international affairs calm. The power that Norway and other resource-rich states were assumed to have in the 1970s and 1980s were in Europe to a large degree replaced by EU power to regulate markets and pass taxes in the 1990s and beyond. The jura and norms for regulating the market(s) were however not directed towards the particularities of (oil and) gas as a non-renewable resource. On the contrary, general competition principles were laid down to guide the regulation of the natural gas market.

The reciprocal dependence between Norway and the EU and EU countries is not symmetrical, and seems to change in favour of Norway when markets are tight and in favour of the EU when markets are weak. In tight markets, resource ownership gives Norway (and Russia) high profits and a leverage to influence the terms of exchange, while in weak markets the EU is stronger in formulating market regulations and taxation on general competition principles.

When oil prices started to increase from 2000 and world politics became tense after 11th September 2001, the issue of security-of-supply returned to the top of the political agenda, as it was in the 1970s and 1980s. This started to modify EU energy policies, and it shifted the balance of dependence somewhat back to (oil and) gas producers. The EU-Russian and German-Russian energy dialogues are examples of policy change; speeding up as supply and transit problems through Ukraine and other countries have come increasingly into focus.

The EU will need much more natural gas over the next decades and

most of it must come from "new" production areas. In this context, the EU and EU countries are those with the most direct interest in speeding up the development of Barents Sea gas. As with the Americans, Norway may find useful partners in these activities with European companies, EU countries and the EU. If however activities are slowed down or delayed, one would expect a pressure on Norwegian policy in the direction of speeding up developments from the EU as well as from the Americans.

Challenges for Norway

Already, Norway and Russia share the dominant positions in the European gas market, with Russia as the leader. Norwegian gas production reached 85 BCM in 2005. While Norwegian oil production is expected to have peaked at 3.3 mbd in 2004, its potential for natural gas production is higher than 100 BCM per year in a few years time. Market shares are expected to grow to between 30 and 40 percent in important countries like Germany, France and Belgium. Together with high oil production and high oil prices, the growth in natural gas exports will give the petroleum sector an even more important role in the Norwegian economy. Figure 4 shows the historical development of Norwegian oil and gas production since the beginning in 1971 and expectations towards 2030.

There is now less conflict between the international interest in increasing natural gas production and domestic interests as previously expressed in politics. In the 1970s and 1980s, a specific Norwegian production ceiling was set; 50-90 mtoe combined oil and gas production as opposed to an actual production of 223 mtoe in 2005. As first of all the Ministry of Finance earlier put restrictions on production levels in order to avoid "Dutch disease" problems in the Norwegian economy, the creating of the Petroleum Fund in the 1990s removed much of their cautiousness against too high production levels.

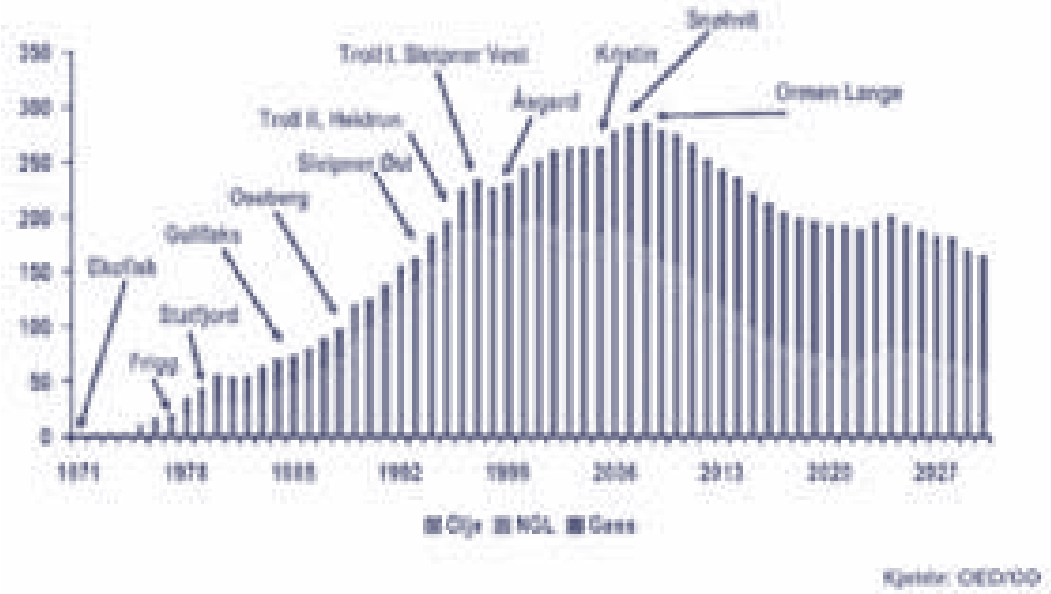
Norway has developed and maintained a highly professional petroleum administration led by the Ministry of Petroleum and Energy. The ministry and the bodies under it, together with the Ministry of Finance, have been rather successful in making industrial arrangements efficient and to the interests of the Norwegian government and companies. Industrial interests seem however to have become more important in the definition of a relevant Norwegian production level. Furthermore, other governments

express a desire to speed up developments from a security-of-supply perspective, making an influence on the Ministry of Foreign Affairs and it to be an explicit part of Norwegian foreign policy.

The definition of what is a "national interest" is ambiguous and changes with the constellation of domestic actors (Putnam 1988). As Norwegian national interests (implicitly) are defined today, there seem at present not to be any strong political domestic "macro" - force against a further increase in production levels and the development of the Barents Sea, except for environmentalist group.

The situation however poses huge challenges domestically, with respect to creating macroeconomic, social and alternative industrial policies. Apart from the petroleum industry and some regional interests, Norwegian domestic economic interests may not necessarily share the logic and emphasize on expanding the petroleum sector still further. Instead, they desire the creation of a more competitive industry in other sectors and the development of society at large. Some of this is shown in a gradually more intense debate about how to use the Petroleum Fund domestically, i.e. for infrastructural purposes. One should expect rivalries between such interests in the future, if political actors do not balance them well.

Figure 4: Total Norwegian Petroleum Production and Start-Up of Important Fields 1971-2030



Industrial interests

Both the maturing of the Norwegian petroleum industry and international economic and political integration processes led to its internationalization. The industry became competitive at home, and a strong interest in competing abroad emerged. With the privatization of Statoil in 2001 the profit horizon became shorter, with the consequence that the company is interested in higher production and new licenses faster than before.

The highly competent and specialized Norwegian petroleum "cluster" is well positioned to the development of fields on both Russian and Norwegian sides (Hydro, Statoil, Aker Kværner and others). The sub-sea technologies developed at Ormen Lange and Snøhvit, horizontal drilling expertise, laying of long-distance sub-sea pipelines, LNG-technology and other innovations are important elements with respect to "know-how". Parts of this Norwegian technological leadership are shared by sub-contractors in a European and international network. Capital needs are another element where other international companies and financial institutions may contribute, including holdings in the fields, as in other parts of the NCS (Norwegian Continental Shelf).

If engaged on the Russian side, however, the Norwegian industry needs to be supported politically in order to achieve stable and predictable law making, taxation policies, political good will, and infrastructural development, secure sub-deliveries etc. Norwegian authorities must provide this support, but the industry could also need the support of EU countries and the US. EU and American companies may become partners with Norwegian companies and / or suppliers to projects on both Norwegian and Russian sides.

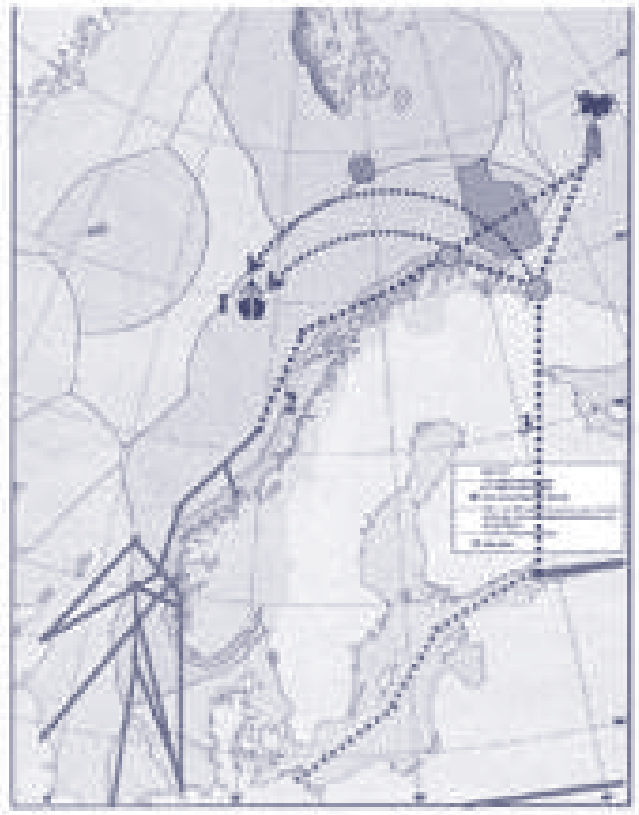
Although Russians primarily seem to wish to develop oil and gas fields by their own efforts, political objections may be outweighed by technological advantages in the West. For Norway, if Norwegian companies were engaged on the Russian side, it would improve the chances of efficient regulation and protect the environment and sustainable resource extraction.

The question of knowledge, good relations and confidence building becomes important for how Norway and Russia can cooperate in the Barents region (in line with the ideas of the established Barents Cooperation since 1993). To further such a demanding integration between the two

in the field of petroleum, there could be reasons to invite the Russians to participate on the Norwegian sector (such as on Snøhvit and Ormen Lange). It would improve communications on a practical level, enhance the competence of the Norwegian petroleum system and possibly help exporting it to (parts of) the Russian system. Likewise, the Russians could invite a Norwegian company to play the role as operator of a field (such as Shtokman) in order to introduce not only technological, but also managerial and organisational, competence to its development and operation.[7]

Another aspect of industrial cooperation could be the transportation of natural gas from the Barents area. Apart from LNG projects, gas must be transmitted in pipelines. With the Russian-German Baltic line now planned, one additional route for Siberian gas to Germany will be established (Figure 5). This line could also supply gas from the Barents area if a link between Kola and St. Petersburg is build. One alternative is however to link Barents Sea gas to an extended Norwegian pipeline system which at present reaches Mid-Norway. Besides the industrial interest of serving as a transmitting country for Russian gas, Norway would gain a more important political position in Europe's most important energy market, and the Russians would further diversify her export routes.

Figure 5: Possible Transportation Routes for Natural Gas from the Barents Sea



Rent distribution

Most countries share Norwegian interests in price and market stability and predictability, but in terms of rent distribution, producing and consuming countries are on opposite sides of the table. Rent can end up with producing companies, the treasuries of producing countries, downstream companies or consuming countries' treasuries. It may also end up as consumer surplus. Rent may be redistributed when prices change, industries are re-organized, ownership changes, market power change, taxation either in producing, transit or consuming countries, law-making, regulation etc.

In this respect Norway should embark upon a dialogue with the Russians – but also with receiving countries like Germany and other EU countries - to create mutual understanding of common interests, so that Norway can attain the maximum sustainable price over time. Norway has an interest in price stability and price levels in order to invest in huge, remote and expensive fields and infrastructure ("security of demand"). As most gas will be delivered to EU countries, Norway has an interest that downstream companies and governments also work for a stable market development, providing a basis for a stable investment climate.

Environment

The Barents area with its cold climate and waters represents a rather vulnerable environment, concerning wildlife, bio-diversity, fisheries and nature. In 2003, the Norwegian government decided to continue oil and gas exploration in the southern parts of the Barents Sea minus some areas defined as especially vulnerable. Environmental regulations are stricter than further south on the NCS. A more integrated plan for the entire Barents Sea concerning resource management, the environment and economic and political interests was presented in spring 2006 (Ministry of Environment 2006). There are no plans so far for the opening of northern parts of the Norwegian Barents Sea.

The biggest environmental threats at present are considered to come from the Russian side. There is already a risk of oil spills from the increased traffic of Russian oil tankers off the Norwegian coast. There are also threats from nuclear accidents and handling waste in the area. The additional concerns raised by an increased petroleum activity, lead to

calls for greater cooperation with the Russians. The industry has argued that the best way of influencing Russian environmental standards and practices is by showing practically how it can be done on the Norwegian side, and by offering partnerships based upon environmentally sound practices on the Russian side. This would reduce environmental risks for the Norwegian coastline and waters as well. However, the situation also demonstrates a need to create a broader European and international understanding about these challenges.

Within Norway, environmental issues have been a cause of controversy between political parties, as shown in the September 2005 election. If the "green side" of the present Government eventually gains a stronger controlling hand on activities in the area, developments on the Norwegian side may be regulated by stricter environmental standards.

Fisheries

In 1977 the Russian-Norwegian management system for fisheries in the entire Barents Sea was established. It entailed the introduction of a 200-mile exclusive economic zone (EEZ), according to United Nations Convention on Law of the Sea (UNCLOS). As fishes do not know the borderlines of international waters, the two countries, and states that have received a Barents quota from one of them, may take part of this quota in the EEZ of the other. The proportion of catch between Norway and Russia is fixed (mostly 50/50) but the total catch is negotiated yearly. There have been disagreements over what is a sustainable catch in the area, where the Russians has argued for higher catches than Norway.

Fisheries and oil activities were in the 1970s heavily debated politically in Norway. The evidence seems however that such conflict is first of all related to problems if an accident occurs and seawaters are heavily polluted. Obviously, in this area with its cold water, oil spills may have greater impact on the environment than in warmer waters.

Regional issues

Development of oil and gas activities in the Barents Area in Northern Norway mostly seen as highly beneficial by politicians (although environmental concerns have been emphasized by some). They look forward to increased activity in the construction periods, benefits of terminals and

supply centres where these are established, and moving the development of the Northern areas higher up the political agenda in Oslo and elsewhere. The Barents Euro-Arctic Region (BEAR) has become a framework for many co-operative projects on the regional level across Norway, Sweden, Finland and Russia.

Security-of-energy-supply

Easier access to pipelines, new pipelines and LNG facilities built, along with expanded storage facilities should all improve security-of-supply for purchasing EU countries. North Sea transportation infrastructure is continuously expanding and is now developed from mid-Norway to England, Germany, Belgium and France (these countries represent almost half of total EU energy consumption). Simultaneously, the first LNG plant connected to the Snøhvit field in the Barents area will soon begin operating. With expanded LNG processing plants the Barents area becomes increasingly more important for the U.S. interest in diversifying their expected increased natural gas import need.

On the other hand, more volatile, uncertain and periodically lower producer prices could lead to a drop in large investment projects and weaken supply security in the long run. Consequently, in terms of economic security-of-supply, it is difficult to see how the EU (countries) can simultaneously offer lower gas prices to consumers, achieve high tax revenues from gas usage, and meet growth in both expected demand and supplies. It will be important for Norway (and Russia) that EU policies are based on the particularities of non-renewable resources, not least with their enormous investment costs in the High North.

The interest in avoiding over-supply of the EU gas market and maintaining a reasonable price are now shared by Norway and Russia. Due to EU interests in ensuring that the European gas market is sustainable over time, and the renewed focus on security-of-supply issues, there could now be room for negotiations between suppliers and the EU on how the market should be organized. EU requirements to increase competition on the supply side have already affected the structure of Norwegian gas industry and changed government control. With only one Russian seller, Russia maintains a stronger bargaining power towards the market and the EU than Norway, leaving Gazprom as the single most important player

on the supply side of the European gas market, with Norwegian gas as a competitive fringe player.

Security-of-Supply is in economic terms often a question of understanding the dynamics of the political economy of oil and gas. Norwegian policies are challenged domestically in establishing this understanding, and together with the Russians, the EU and EU countries and the US, to develop this understanding in a way that is beneficial to security-of-supply for consuming nations, and at the same time also to Norwegian interests.

Jurisdictional issues

The disagreement over the marine delimitation of the economic zone and the continental shelf between Norway and Russia has not been settled. Norway maintains that it should follow the median line principle, while Russia argues that it should follow the sector line principle. The difference represents some 175.000 square kilometres, an area larger than the Norwegian North Sea south of the 62nd parallel (Figure 1 & 6). Negotiations have been going on for 30 years.

Russia has argued that some sort of condominium could be established in the area without settled borders. Norway have maintained that cooperation in the area can only be established when a delimitation line is drawn. For fisheries however, an interim arrangement was made in 1978 in the so-called "Grey Zone", regulating the parties' right to inspect vessels in the area. As shown in Figure 6, this zone covers some, but not all, of the disputed area within 200 miles, but also some undisputed Norwegian and Russian waters

There is no international disagreement about Norwegian sovereignty over the Spitsbergen Archipelago (Svalbard). Through the Spitsbergen Treaty of 1920, Norway was granted "full and absolute sovereignty" over the islands, defined by coordinates and shown in Figure 6 as the Svalbard zone (often called the "Svalbard box"). However, according to the Treaty, Norway cannot discriminate subjects of other signatories and cannot impose higher taxes than needed for the administration of the islands.

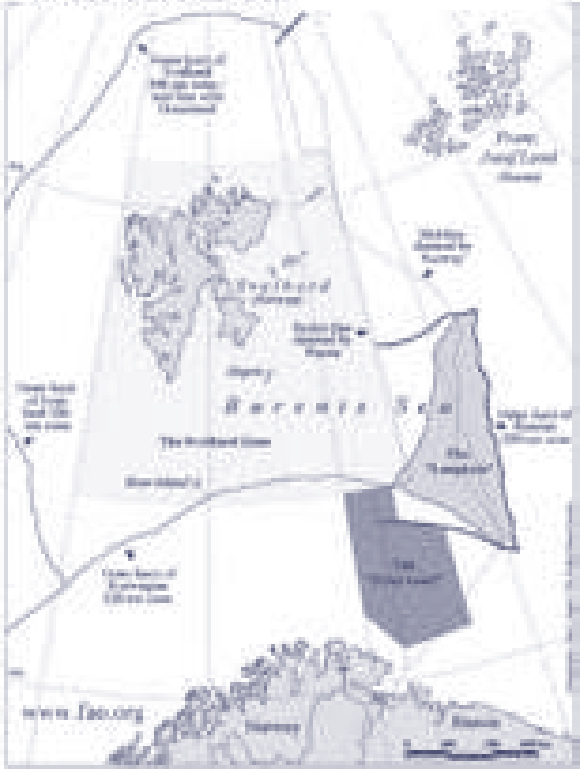
There is some controversy pertaining to the provisions of the Spitsbergen Treaty; especially when it comes to the sea areas beyond territorial waters and the ocean floor. It is not known whether or not there are promising

areas for petroleum activities here. Norway maintains however that the provisions of the Treaty do not apply to the economic zone around the islands, and instead provide unrestricted Norwegian jurisdiction. The continental shelf around Svalbard is a continuation of the continental shelf of mainland Norway (except for the 12 mile territorial waters around the coastline of Svalbard). Some signatories have, contrary to this, argued that Svalbard is entitled to its own economic zone, governed in the same way as the islands.

Norway established a 'Fisheries protection zone' of 200 miles around Svalbard with non-discriminatory regulations in 1977 (same principle as the economic zone but so far only valid for fishery).[8] Those with a Barents Sea quota should accept Norwegian inspections (catch, size etc) in the Protection zone. Several countries deny the Norwegian interpretation of her rights in the area.

The "Loophole" is an area between Norwegian and Russian EEZs and the fishery protection zone around Svalbard, and is judicially international water. The Norwegian-Russian management system for fisheries has sought to include control of vessels also in this area. It a however a lack of clarity as to the authority to perform inspections in the area, and regulations must therefore be done through diplomatic channels to the countries were the vessels are registered.

Figure 6: Zones and Disputed Areas in the Barents Sea



Foreign and security policy

The oil crises around the Persian Gulf and the conflict connected with the construction of the Soviet gas pipeline in the 1980s are examples that energy was one of the most central objectives for great power rivalry during the cold war. Access to petroleum resources, trade and prices had great significance both for the military systems and for the development of Western societies. After the fall of the Berlin Wall and the Soviet Union, international politics have changed character with the U.S. as the only global superpower, but with many regionally strong states. The petroleum resources of the world are however still found in countries with considerable political instability, with room for major market disturbances.

For Norway, security political dimensions to the oil and gas activities have been particularly in focus in connection with the possibilities of production in the polar areas. Because of the vulnerable nature in the area, environmental concerns will be a limiting factor for production and transportation of petroleum. The continued great strategic significance of the Kola bases implies that petroleum activity may seem negative for the operational conditions of the Russian Northern fleet, and particularly for its strategic submarines.

Norway's involvement of Western allies in negotiations about the unsettled issues in the Barents Sea is of especial interest. If allies are concerned first of all with settling an agreement about the encouragement of greater oil and gas activities, but are more neutral as to who gets the benefit, they could also pressure Norway to get a settlement not necessarily optimal for her.

Petroleum activities can influence military air and sea operations in the Barents area. Submarines will more easily remain undetected, as noise from petroleum activities may be stronger. The larger submarines must pass between Bear Island and Norway because of sea depth. Activities in this area make it easier for submarines to pass to and from Russian Barents Sea. This can, of course, be a disadvantage and advantage to both sides. Furthermore, platforms can be used for radar equipment, electronic warfare, and helicopter bases, meteorological and oceanographic data collection. Probably, these elements, together with consequences also for surface vessels and aircrafts, will lead the Russians to adjust their strategy for their Northern fleet. They will most likely be negative towards any at-

tempt at limiting their access to the Atlantic Ocean.

As Norway is so small and Russia is so big, it is necessary for Norway to co-operate with other countries in securing her interests. The question of Norwegian control becomes a central one. Obviously, Norway needs relevant military capability in this area, as a minimum for doing sufficient "police work" at sea and to remain credible to the Russians and other countries.

Norwegian exports of energy have created new types of dependency on other countries. States that are strategically vulnerable to a loss of Norwegian energy production, such as Germany and the UK, form a new resource for military assistance that might be exploited. Those countries that receive Norwegian gas, plus the US concerned over global energy balances, have a clear interest in the shaping of Norwegian foreign and petroleum policy, and helping to secure the area. Joint military interests can also be developed with the Russians, except in those areas that are related directly to Norwegian-Russian controversies.

Closing comments

The large export of petroleum has increased Norway's international economic and strategic significance and moved the country into an exceptional position within the OECD area. An international image of Norway is now that of a petro-economy. In addition to Norway's traditional interests shared with the industrialized world, she now also shares interests with other petroleum exporting countries. These countries are in most cases quite different from Norway in general economic and political affairs, including Russia.

Norway's role as a major petroleum exporter is, accordingly, relevant not only for her industry and economy, but also for her diplomacy, including security and defence policies. This challenge is particularly apparent for the gas sector, as expensive pipelines link buying, transmitting and selling countries closely together.

During the Cold War security issues dominated Norway's policies in the North, under the US and NATO umbrella. After the break-up of the Soviet Union, international economic and political integration processes have become more comprehensive in depth and scope than ever before.[9] The role of a major gas (and oil) exporter is a challenge for a small state, which otherwise considers herself to be of limited economical and politi-

cal significance to others. As a basis for Norway's national and international petroleum policy, in general, and for the gas sector, in particular, it will be important to have an independent understanding and analysis of how economic mechanisms and political actions and actors work. It is also important to understand how domestic and international commercial and political players can influence the situation. Norway's political and commercial partnerships should be chosen in a way that her mixtures of interests are supported over time.

The Norwegian petroleum cluster, including Hydro, Statoil and Aker Kværner, is pushing developments in the High North ahead in line with security-of-supply considerations from consuming countries. The interest in co-operation from for example German, French, British and American companies is pushing development in the same direction. On the technological level, this includes areas where Norway is considered to have an advantage, such as in horizontal drilling, sub sea technologies and plants for conversion to LNG.

In developing a strategy to handle this situation Norway must anticipate the attention of other nations. As a Western European country, Norway is relatively isolated in her interests as a natural gas exporter, although she may find partners in many single areas. Developments in EU and EU countries as well as in Russia and other gas exporting countries are important. Gazprom as a single company and market leader is of great importance. Market developments and economic interests will have to become part of Norway's traditional foreign and security relations. This will also be expected from foreign companies and governments.

To defend the large economic interest Norway has in securing the value of both present and future gas contracts in a more liberal market environment, authorities and companies should adjust their way of thinking and acting. Policies in the EU are adjusting to the new environment. The present energy crisis has forced the EU to be concerned about the long-term supply of energy. A renewed focus on long-term-contracts may emerge in line with the desire to speed up developments in the Northern areas. The assets of oil and gas that Norway possesses, in a situation where there is a lack of energy, give her the possibility to a larger extent to set business and political terms for their development.

One challenge for Norway is to mark a line of delimitation with the Russians. A settling of the line would add stability to the region and ease

the development of oil and gas resources. When Norway wants to secure a balance with the EU, various EU countries and the US with respect to maintaining sovereignty in the area, she may also face a pressure to settle an agreement. If Russian relations with the West are good, this pressure may work against Norway. Russia will remain the biggest and most important actor in supplying more energy to both Europe and the world, and be of higher importance to the West than Norway. Norway should accept (and possibly expect) the processes still to take much time to be finished. The speeding up of development in the Northern waters obviously involves environmental risks, if plans are not well enough developed. Of special interest will be the issue of transportation. There are plans to build a 2 mbd oil pipeline to Murmansk. This would increase the traffic of oil vessels along the Norwegian coast substantially, and demonstrates the need for proper Norwegian regulations.

For natural gas, a LNG plant on the Kola Peninsula is likely to supply the US market, besides Europe. But gas may also be transported towards European markets through pipelines. Two main options are to link either to the new Baltic line from Vyborg to Greifswald in Germany, or to the Norwegian sub -sea network (cf. Figure 5). Alternative transport solutions for natural gas from the Barents Sea should be studied more closely, and is an example of a possible joint Norwegian - German project to enhance knowledge about the development of petroleum resources in the area.

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Footnotes

[1] This paper was prepared for the Norwegian – German Willy Brandt Foundation and presented at Gesprächkreis, Nördliche Gebiete in Berlin March 15 2006. It is slightly updated for the purpose of this publication.

[2] In this forecast it is anticipated that much of Russia's natural gas production growth will come from independent gas companies such as Novatek, Itera, and Northgaz, although Gazprom will also expand.

[3] See Stern 2006 for a discussion of various aspects of this conflict.

[4] See Stern 2005 for a comprehensive discussion of Gazprom positions and developments.

[5] On the other hand, Russian entry into the WTO will require an increase in domestic oil and gas prices in accordance with world energy prices. As long as there is such high energy intensity in the Russian economy the competitiveness of her products in both international and domestic markets may deteriorate as a WTO member in the short and medium term. Russian governments have been cautious with respect to changing domestic energy policies.

[6] Two Russian companies hold licenses to develop Shtokman (discovered in 1988): Sevmorneftegaz (a subsidiary of Rosneft) and Gazprom. In September 2005, Gazprom selected five companies on a "shortlist" of finalists in a search for partners to develop the field: Statoil and Norsk Hydro from Norway, Total from France and Chevron Corporation and ConocoPhillips from the US. The final choice has been postponed several times. Development costs are estimated at USD 15 billion to USD 20 billion.

[7] When the Norwegian petroleum industry was in its infant stage, the American company Mobil was in 1973 assigned the role as operator of the huge Statfjord field, although it owned only 15 % of it. Statoil owned 50 % but did not, at the time, have the competence to do the job. However, in 1987, Statoil competence had improved to such an extent that the company (according to agreement) took over as operator of the field. The arrangement proved to be very important as part of building the Norwegian petroleum cluster (see i.e. Ryggvik 1997).

[8] The Svalbard Treaty regulates fisheries in territorial (12 miles) and inner waters.

[9] Brunstad et.al. (2004) present three rather different scenarios for the future of Barents Russia as part of these processes.