

## **The Barents Region – Where Gas Meets Ore**

Kirkenes, 22 – 23 June 2010

Seminar Paper

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*This paper offers a synopsis of the views and perspectives put forward through presentations and panel discussions at a high-level seminar in Kirkenes, on 22 – 23 June 2010. With the title “The Barents Region – Where Gas Meets Ore”, the seminar focused on opportunities for transboundary cooperation, and sustainable value creation, in combining natural resources (such as ore, mineral deposits and natural gas) with new technologies. Focus was also directed at the Barents Region’s environmental challenges and industrial framework conditions. The seminar brought together policy-makers and representatives of industry and commerce from Finland, Norway, Russia and Sweden. The European Union was represented by its ambassador to Norway. The seminar programme and the list of participants are presented at the end of this document.*

### **Abstract:**

Forceful and dynamic development currently characterises the technological and industrial situation in the High North. This reflects the fact that the countries of the Arctic region currently are engaging in this in developing High North/Arctic strategies, focusing in particular on energy supply and energy security, environment and climate policies and new avenues of cooperation.

For Sweden the chairmanship of the Barents Euro-Arctic Council is an important incentive to explore challenges and opportunities in the High North environment. For Norway the High North policy is given highest priority and Finland is preparing a new Arctic cooperation strategy. Also Russia has obvious and significant interests in the region. All of this plays into areas of technology, research and business development.

Since the region is one of the world’s richest, geologically speaking, with great energy and mineral resources, focus will increasingly be on extractive mineral industries’ encounter with the new high tech energy businesses’ mainly offshore-based realities and potentials, especially natural gas.

The aim of this seminar was to catch these recent developments and focus on new possibilities for cooperation between economic actors in these fields, and to set a trans-boundary perspective by focusing on questions of transboundary obstacles, labour mobility, logistics and development of infrastructure. The seminar also aimed to reflect the interplay between culture, business and industry in the High North.

The seminar had three main themes:

- Industrial value creation from geological resources (ore and mineral deposits) and natural gas: current situation and possibilities.
- Energy and energy efficiency: technological possibilities, climatic and environmental challenges, development of renewable energy resources.

- Industrial framework conditions in the Barents region – what needs to be done - in the fields of logistics, infrastructure and labour mobility, and reducing border hindrances?

A follow-up seminar will be arranged at Voksenåsen, Oslo, on 18 November 2010.

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Session summary:

### **Opening Session – Government representatives:**

*Moderated by: Ambassador Michael Sahlin*

Ambassador Michael Sahlin welcomed all participants to the seminar. A process of Swedish-Norwegian cooperation in the High North started when the Swedish Foreign Minister Carl Bildt and Minister of Industry Maud Olofsson, accompanied by a large business delegation, visited the High North (Tromsø and Melkøya) in June 2007. This visit marked the start of a comprehensive bilateral collaboration in the High North on a broad range of political and commercial fields (e.g. marine bioprospecting, industrial research). A follow-up seminar, focusing on commercial and industrial cooperation, was held in Tromsø in September 2008.

Cooperation in the High North is a confidence-building measure. In light of the rising focus on the Barents Region's rich base of natural resources (such as mineral resources, oil and gas) along with the development of new technologies, the ambassador took the initiative to host a third get-together, this time with a principal focus on industrial value creation from geological resources and natural gas.

He maintained that almost everyone could agree on the Barents Region's inherent and vast potential. The challenge before us was to find the right measures and balance in order to realise this potential. Sweden currently holds the chairmanship of the Barents Euro-Arctic Council, which in itself was an important incentive to explore challenges and opportunities in the High North.

The Ambassador pointed out that a range of economic interests and policy converge in Kirkenes; a good reason in itself to invite broadly from all the Barents Countries and also the European Union. He also talked about the importance of value creation, indigenous peoples' values as well as about infrastructural conditions. A follow-up on this seminar in Kirkenes will be arranged at Voksenåsen on 18 November this year.

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Referring to the vast potential of the Barents Region's mining industry (not least for Kirkenes after AS Sydvaranger reopened the local mines after a 13-year standstill), the agreement between Norway and Russia on the bilateral maritime delimitation in the Barents Sea (pending ratification) and eventual impact of a navigable northern Searoute, State Secretary Pål Julius Skogholt (Norwegian Ministry of Trade and Industry) drew a promising picture for more cross-border cooperation and high value creation.

As a stable and long-term provider of refined products, raw materials, energy, and not least, technology, the Barents Region will be increasingly important for the EU. He also stressed the

importance of reconciling exploitation of natural resources with high environmental standards.

He argued that realisation of the Barents Region's vast potential required a combination of natural-based advantages, bright minds, smart policy-making and cooperation across industries and across borders. Skogholt stated that the government will do its utmost in order to support the development of the industry.

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State Secretary Ola Alterå (Ministry of Industry of Sweden) thanked the ambassador for organising this seminar. "This must be the place to be right now", he said, referring to astonishing view of the midnight sun but also the increasing focus on the Barents Region's great potential. "Perhaps more so than in Helsinki or Stockholm, the forces of globalisation can be felt in Kirkenes," he said, arguing that rising demand for the region's resources from emerging economies in Asia, but also the European Union, is a recognition of this region's growing relevance.

Despite current times of economic crisis, the world economy will keep growing and demand for resources will skyrocket, he said. Nevertheless, this vision of the future challenges the way we look at resource extrication and of course our vulnerable environment. It requires us to think smarter and it calls for necessary, and sustainable, solutions for the development of an eco-efficient economy. "We must do more with less," he said. This is also a central theme for the Swedish chairmanship of the Barents Euro-Arctic Council. He pointed to the need for more knowledge, more renewable energy and more streamlined infrastructure to fully realise the potential of the Barents Region.

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Under-Secretary of State Peter Stenlund (the Finnish Ministry of Foreign Affairs) thanked the Swedish ambassador for planning, organising and hosting the seminar.

He also acknowledged the importance of a breakthrough between Norway and Russia on the maritime delimitation line in the Barents Sea, and the positive implications it could have for the region as a whole. It will strengthen, he argued, the impression of the Arctic as a cooperative low-tension circumpolar region, and it follows that there will be an even better environment for cooperation and value creation for the region's commerce and industry.

Although Finland does not have an Arctic coastline, Finland is every aspect an Arctic State, he said. A new Finnish Arctic Cooperation Strategy is in the making, and will be implemented as foreign policy, as well as a national and regional policy. The strategy will also focus on indigenous peoples' needs.

He pointed to the Finland's strengths as an Arctic State, referring to know-how in Arctic shipping, and Arctic technology. For Finland, bringing Arctic issues to the European Union has been, and still is, a priority. Brussels has a key role in global efforts into finding the right solutions for a sustainable development of the world economy, and a leading role in international climate policies. Eco-efficiency, including energy-efficiency, is important for Finland.

Noting that there is a “mining revolution” unfolding in Norway, the ambassador pointed to Finland’s mining policy and strategy which had been very positive. He also mentioned the Finnish-Norwegian seminar for cooperation in the High North which took place in Kirkenes in April 2008. Then, as now, better infrastructure and sound logistics were held out as prerequisites for realising the potential in almost every industry in the Barents Region.

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Ambassador and Head of Delegation János Herman (Delegation of the European Union to Norway) expressed gratitude to Ambassador Sahlin for putting together a well-timed and interesting seminar focus and programme. Noting that time was running out, he promised he would be brief by pointing out that “life is good when sausages are long and speeches are short.”

The Ambassador mentioned that there is currently deep discussion going on in the European Union, particularly in the European Parliament, whether we should exploit the natural resources in the Arctic or not. Heeding to environmental concerns and making precautions is imperative, nonetheless, he pointed out, there is a great need for these resources.

The European Union is very much interested in Arctic Affairs, he said. Member States - such as Denmark, Sweden and Finland - are pushing for more Arctic attention in Brussels. He pointed to the Northern Dimension and the forthcoming EU Non-Energy Raw Materials Initiative which will direct the EU’s eyes towards to north in the years to come. A progress report will be presented end of June 2011 on Arctic policy and raw material strategy. The EU can contribute in many ways to sustainable exploitation of the Arctic resources, he argued.

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### **Session 1 - Industrial value creation from geological resources (ore and mineral deposits) and natural gas: current situation and possibilities**

*Moderated by: Hogne Hongset, The Research Council of Norway*

The key-note speech for the seminar’s first sessions was offered by Mats Hallin, representing LKAB. He drew a promising picture for the Barents Region’s potential of producing steel in an environmentally-friendly way. Through the IRONMAN project – a forward looking Swedish-Norwegian industrial concept – LKAB, Statoil and Höganäs have all the resources available in one place – technology and infrastructure – to produce steel in an environmentally-friendly way: A concrete example of an industrial process where gas meets ore. The IRONMAN partners are using existing technology and infrastructure. The technique is dramatically reducing CO2 emissions in steel production: by 75%.

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Jostein Gaasemyr (Statoil) gave a presentation of the energy company’s operations in the High North: it has developed its own corporate “High North Strategy” through the Northern Area Initiative, it is by far the largest operator on the Norwegian Continental Shelf (NCS), the world’s largest operator at depths deeper than 100 metres, it employs 912 people in Norway’s northernmost counties (Troms and Finnmark) and Hammerfest and the Goliat field are

increasingly important for the company. “So, what can oil and gas activities entail for this region,” he asked and followed up with his own answer: “Look at Western Norway.”

Holding out the ripple effects for community as a whole, Gaasemyr argued that most people would welcome a development of the oil and gas fields in Norway’s High North. There are ripple effect possibilities in exploration, construction, operation offshore and onshore: supply base, fleet base/airport, service businesses, and oil spill response. There is room for local businesses, local society, and local competence.

He maintained that Northern Norway would make the most out of the ripple effects by focusing on education and training. Smaller companies can benefit from cooperation with the bigger ones established in the north, he said.

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Øystein Rushfeldt (NUSSIR) described Norway’s mining industry as being in its infancy compared to the well-developed industries in both Sweden and Finland. He called for a national mining strategy, and he maintained that such a strategy would be necessary to further develop the industry. “Oil and gas has been good for Norway,” he said. But the emphasis on this industry has made focus on other industries – such as mining – more challenging. A national strategy will entail more visibility and signal the necessary determination and political willingness to make the most of the opportunities which the mining industry represents. He welcomed the Mineral Act, which was endorsed by the Storting earlier this year. Now, we need a Mineral Strategy, he said.

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Jack Ødegård (SINTEF) followed up by saying that we now see a “great window of opportunity” in the High North for more value creation. Referring to the “Where gas meets ore” concept he showed how major resource streams of minerals and gas could jointly optimise a complete system for sustainable materials production and energy production. This is the cluster way of thinking, he said. The “Where gas meets ore” concept could, if realised, be a major contribution from the Nordic Countries to the global challenge of fighting climate change.

Ødegård thought commercial aspects were more important than foreign policy aspects in the High North. Accordingly, he argued, a stronger industry-oriented profile should be developed within the Arctic Council, BEAC and the Nordic Council of Ministers (toppforsknings-initiativet).

Ødegård finally proposed a project interaction model, where Nordic governmental funding together with relevant industry funding was fed into a “wheel of research - innovation – industrial development”. A basis could be the ongoing GeoNor pre-project (funded by Ministry of Foreign Affairs through the Barents 2020 programme, and the Nordland, Troms and Finnmark County municipalities).

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Maja Usisu gave a presentation of the mining industry in Finland. The Fennoscandia Shield is similar to what you find in Canada and Australia, she said. It has good potential with gold,

base metals, diamonds and industrial minerals. There are excellent data bases available but underexplored. It is in an area that is politically and economically stable. There are many new and new/old mine projects coming, which again creates a potential for sub-contracts and technological development.

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## **Session 2 - Energy and energy efficiency: technological possibilities, climatic and environmental challenges**

*Moderated by: Kåre Tormod Nilsen, Energicampus Nord*

In his key-note speech, Håvar Risnes (Innovation Norway) gave an overview of Innovation Norway's activities and priorities for the High North. The Barents Region is a prosperous region, he said. As an example he referred to the Goliat Field which is to be in operation by 2013, with Norwegian technology. More than fifty companies have already achieved contracts. Front-runners are positioned for growth, locally as well as globally, he said.

New emerging markets in the global economy carry along new opportunities but also new challenges. Risnes argued that the Barents Region had all the preconditions to become a "front runner" for both local and global markets.

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Toini Løvseth (Finnfjord AS) presented her company and focused her speech on eco-efficiency. Finnfjord AS produces ferrosilicon, an alloying element, which is essential in steel production. Emissions are under control, close to nothing, she said. The company has a specific focus on climate and they are efficient producers with clean energy.

China and India are now producing more and more steel. We should produce metal in the High North to save the climate, she argued. Products made from ferrosilicon are climate friendly and valuable goods. She argued that Norway, and the Barents Region, was not in the periphery pointing to the fact that all the input - electricity and quartz - is found in the region providing for an efficient, clean and cost-effective production. That is why we should continue to focus on this production in the Barents Region, she said.

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Audun Hustoft, representing Statnett, gave a presentation on the substantial power grid development plan for Norway's two northernmost counties (Troms and Finnmark). The foremost priority is to enhance security of supply in critical areas. Demand for power will only increase with the development of the region's industry (e.g. Melkøya and AS Sydvaranger in Kirkenes). New lines should also provide for more wind power in the region. Wind power will provide for much of the future energy needs. Connection to Finland will be strengthened.

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Erling Sæbø representing Det Norske Veritas (DNV) gave a presentation on a Norwegian-Russian project aiming at harmonising and strengthening Health Security and Environment

Standards (HSE) for the Barents Region. Oil and gas operations in the Barents region must be carried out with an acceptable safety level. The project includes all aspects of offshore petroleum activities and explores drilling production, transportation and support activities.

Sæbø said that the challenges in the Barents region (e.g. low temperatures, ice, darkness, remoteness, a vulnerable environment) are more daunting than in other places. The winds, waves, depths in the Barents Sea are different from those in the North Sea. There are higher risks in the Barents Sea.

By now, DNV have recommended 130 international standards. The new delimitation line in the Barents Sea makes this work more relevant than ever. DNV has now been tasked with a project which will compare the standards in Norway to those in the Mexican Gulf.

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Representing the Raw Materials Group (Umeå University), Magnus Ericsson echoed the views of his previous speakers stating that a continuing boom in the demand for minerals and metals provides for huge opportunities for the Barents Region.

The mining sector has been halved from 1958 to 2008 in Europe and Africa to the advantage of Latin America and Australia-Oceania. Global development will demand more metal. The market fundamentals are positive, metal supply is in political focus.

Yet, competition for investments is fierce. He also raised the question: is China friend or foe for the region's mineral industry? He landed on the "friend" alternative, and argued that rising demand in China should be an asset for the Barents Region.

He argued that the Nordic countries should take a lead in Europe, merge geological services, coordinate strategies, legislation and cooperate in research and development.

The message to the EU is: there is a lot of knowledge in the Barents Region, it is important for the EU. Sweden and Finland should take a more active role in this. We must attract more young people, he argued.

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### **Session 3 - Industrial framework conditions in the Barents region**

*Moderated by: Urban Wråkberg, Barents Institute*

On the second day of the seminar, John Sanderson – representing Northern Iron – gave his view of the region's prospects in light of his role in the reopening of the Sydvaranger mines. The Sydvaranger mines reopened last year after at 13 year standstill. Nearly 400 people have been employed in Kirkenes. Lots of positives but there have also been challenges such as rising and higher costs than expected; it has also taken longer to contract and commission than planned.

Touching on the industry's macro conditions, he said that China's development took everyone by surprise. And despite the current global economic climate, there are no signs of this development slowing down. Demand for iron ore will continue to grow, and the company will

continue to invest in people and technology to make the most of this development. The reopening of the Sydvaranger mines had been aided through support and better business conditions from the Norwegian government, and also Innovation Norway.

Although demand for iron ore is destined to soar, history has taught everyone in the mining industry positives can quickly turn. The company's strategy is to plan for fluctuating market conditions, and thus makes sure that operations will continue in Kirkenes for a long time.

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Inge Berg Nilssen (Norut Alta) focused on the ripple effects from the Snøvit and Goliat developments in Northern Norway. Snøvit is now producing at full capacity with one cargo of LNG shipped out to overseas markets every five days. Goliat will have a floating production unit with shuttle tankers every seven days. A new construction phase is planned for 2010-2013. Currently, 2 318 people are working with at the Snøvit and Goliat fields; the work force comprises many nationalities. On land, LNG is distributed by tank trucks, and thus providing for a meeting of gas and ore.

Gas developments in Northern Norway has provided for multiple spin-offs: suppliers, education, industrial projects, services, population growth.

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Representing Northland Resources, Jonas Lundström offered a logistics perspective in conjunction with the Pajala-Kolari iron mine. As a striking example of lack of good infrastructure, Lundström said that he had to travel via Stockholm and Oslo in order to reach Kirkenes; his starting point was Luleå.

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Felix Tschudi (Tschudi Shipping Company) argued that the key for unlocking the potential values of natural resources in the High North was dependent on efficient logistics and sound infrastructure.

What is needed are a fleet of icebreakers, better infrastructure, operational knowledge and regulatory skills. The prospect of a navigable Northern Sea route would have dramatic implications for the region, for international shipping and the world economy, he argued. The route is probably ready but the commercial international fleet and market might not be – yet.

Timo Lohi (Nord-Lappland Regionråd) elaborated on the need for better infrastructure and logistics in the Barents Region. Referring to a pre-study for an Arctic railway from Rovaniemi to Kirkenes, he argued that the realisation of this project would have significant and positive impact for improving the region's infrastructure. If extended to Kolari and Nikel, along with the estimated growth of need for transportation from Europe to Asia, the railway would be important for realising the region's full potential.

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Morten Smelror (NGU) gave a presentation on behalf the geological surveys in Norway, Sweden and Finland. He pointed out that the Fennoscandian Shield comprises a diversity of geological settings containing large resources of mineral deposits, and that the Barents Region



is one of the most important sources for metals and minerals in Europe. The resources include industry mineral for a number of applications and uses, energy minerals and not at least important metals. Due to the sharp increase in demand for such natural resources, it is not surprising that billions of euros have been, and will be, invested in mining areas and processing facilities in the area. In this context, geological surveys and other public institutions hold a key position in providing the industry and decision-makers with information and knowledge - a geological infrastructure.

Smelror explained that the main focus at the Nordic geological surveys is on the discovery and evaluation of deposits of industrial minerals and metals, which can be expected to have an economic potential in the future. Today the surveys cooperate closely on providing a common knowledge platform on the mineral resources, as exemplified by the Metallic Mineral Deposits Map of the Fennoscandian Shield and the Fennoscandian Ore Deposit Database (FODD). FODD is a comprehensive numeric database on metallic mines, deposits and significant occurrences in Norway, Sweden, Finland and NV Russia. The database contains information on 1300 mines, deposits and significant occurrences across the region. Of all deposits listed in the database, 56 per cent have not been exploited at all. A number of these might well be economic in the future with additional reserves based on further exploration. The FODD contains information on location, mining history, tonnage and commodity grades with a comment on data quality, geological setting, age, ore mineralogy, style of mineralisation, genetic models, and the primary sources of data.

According to the information provided the geological surveys, the potential is significant, and there are still much more to be found in the Barents Region. However, more exploration is needed, and we need to go deeper into the ground. For this there is a need for new deep geophysical surveys and the possibilities for deep drillings. To better find more scattered deposits, such as deposits of rare earth minerals, we also need detailed geochemical analyses and advanced mineral characterization. We need improved processing technology to fully utilize the potential value of our resources. Other challenges include environmental concerns, potential area conflicts, and of course the access to a well established regional infrastructure.

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Jan Johanson (Nordic Investment Bank) gave a presentation on financing possibilities in the Barents Region through the Nordic Investment Bank.

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## **Closing Session**

*Moderated by: Ambassador Michael Sahlin*

Deputy Director General Ole Lindeman (Norwegian Ministry of Trade and Industry) in his sum-up of the seminar focused on three distinct areas of infrastructure challenges. First, transport and logistics: The main thing is how to get at the resources and how to get them out to markets, he argued. This is about interconnection of rail and sea mostly. Some missing links, like the railroad gap between Kirkenes and the Russian railways are duly noted, he said.

Second, power infrastructure: The mineral and mining industries are power intensive.

The question is how to secure stable supply, and from which sources. This is also a question of future grid interconnectors, new renewable and how to get the gas to the ore, or vice versa, Lindeman noted.

Third, knowledge infrastructure: This is about how to make the R&D effort applicable for commercialisation, and it is about developing clusters in minerals and mining, including with competence on investment and markets. Minerals and mining are interdisciplinary and embraces high tech and high educational standards in several fields. This illustrates the complexity of the mineral and mining industries in the north, and the need for comprehensive approach to policy-making.

According to Lindeman, this accentuates the question of national industrial policies for the sector. In the case of Norway, a national debate is in the offing. The question of a strategy for the sector or even a Report to the Storting has been raised, and was debated in the Storting on 15 June. The Minister of Trade and industry, who is responsible for the sector, has formally informed that a broad and coordinated national policy effort will be undertaken, but form and content need to be decided.

The premise for the debate is that mineral and mining industries have regional and national significance. Extraction of mineral resources raises considerable challenges, inter alia environmental issues and framework conditions. National industry development must be seen in a Nordic perspective. It is necessary to develop the competitive edge of the Bothnian cluster, including Russia. The most important framework condition, the Norwegian Mineral Act, is in place, and this opens for a whole new dynamics in the field. The Nordic challenge is to make the smart connections between sector-overriding and regional initiatives, Lindeman said.

Commenting on new markets and new challenges, Lindeman argued that the question of new markets is easily defined; Asia is opening up with China as the main taker of minerals and metals on the global market. Emerging and developing economies have great need for mineral and metals to sustain growth. But markets are not stable and price fluctuations difficult to avoid.

In terms of large capital investments needed to drive extraction and fill demand, lack of predictability drives risk and the cost of investment. It is a paradox that Nordic mining is losing out in the international competition at a time when global consumption and demand is growing, Lindeman said. The mineral and mining industries are prone to boom-and-bust cycles. Another challenge is that the world's growth models have to change. This will affect minerals and metals. One has to "decouple" economic growth from greenhouse emissions. Energy and eco-efficient mineral extraction and transportation in the Arctic are particular challenges. Thus minerals and mining are linked to the great issues of equitable economic development in the world and new green growth models.

These issues need to be addressed at Voksenåsen in the follow-up conference in November 2010, Lindeman concluded.

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Some comments from the audience:

It was argued that, in Norway, the prime challenge is to operationalise the new Mineral Law (enacted in early 2010). In other words; it must be tested and be put to practice. With this legislation the most important framework condition is in place, according to many accounts. Nevertheless, a range of questions remain unanswered.

Another speaker called for a more nuanced reading of the business structure of the Barents Region. It must not become solely a provider of raw materials to Europe and the rest of the world. There is a huge potential for more local processing on the region's resources, which must be focused in future development scenarios.

Jack Ødegård (SINTEF) stressed that research, innovation and development within the mining and its down-stream processing industries would be boosted by the establishment of a R&D Strategy; much along the lines that we have seen from the energy sector in Norway. This work could, and should, be initiated right away. The environmental issue is an important framework condition, which must be addressed in such a R&D Strategy.

Harmonising standards and strategies between Norway, Sweden, Finland and Russia is good. Nevertheless, transboundary harmonisation and cooperation must not reduce the speed of the development within the respective countries.

Finally, drawing on State Secretary Alterå's speech, Ødegård said that "making more of out less" is a fine future vision for business development within the mineral and metallic industry.

As for the Voksenåsen follow-up summit in November this year, Ødegård would like to see down-stream *processing* from different mineral sources as an additional element to be discussed along with topics such as energy, eco-efficiency, mineral extraction and transportation.

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## SEMINAR PROGRAM

### THE BARENTS REGION - WHERE GAS MEETS ORE

KIRKENES 22-23 JUNE 2010

#### Tuesday 22 June

12.15- **Lunch**

13.15-13.20 **Welcome** - Michael Sahlin, the Swedish Ambassador to Norway

13.20-14.25 **Opening Session** - Government representatives

State Secretary Pål Julius Skogholt, Norwegian Ministry of Trade and Industry - *Industrial Policy and the High North. New Perspectives on Traditional Activities.*

State Secretary Ola Alterå, Swedish Ministry of Enterprise, Energy and Communication - *An Eco-efficient Barents region*

Under-Secretary of State, Peter Stenlund Finnish Ministry of Foreign Affairs - *Barents Cooperation in Finland's brand new Arctic Strategy*

Ambassador and Head of Delegation János Herman, Delegation of the European Union to Norway - *The EU and economic opportunities in the Arctic*

14.25-14.45 **Coffee break**

14.45-16.35 **Session 1** - Industrial value creation from geological resources (ore and mineral deposits) and natural gas: current situation and possibilities Moderator: Hogne Hongset, The Research Council of Norway

**Key-note speech:** Mats Hallin, LKAB - *The Ironman Project - modern iron production with use of natural gas - a forward looking Norwegian-Swedish industrial concept*

1-1 Jostein Gaasemyr, Statoil - *The role of Statoil in an energy development scenario for the Barents region*

1-2 Øystein Rushfeldt, Norsk Bergindustri / Nussir AS - *Why Norway needs a national mineral strategy, and its harmonization with neighbouring countries*

1-3 Jack Ødegård, SINTEF - *Where gas meets ore - industrial cluster concepts for sustainable materials and energy production*

1-4 Krister Söderholm, First Quantum Minerals - *Kevitsa Mine - a big Ni-Cu-PGE Mine in Central Finnish Lapland*

16.35-16.55 **Coffee break**



## SEMINAR PROGRAM

### THE BARENTS REGION - WHERE GAS MEETS ORE

KIRKENES 22-23 JUNE 2010

*NOTE: this program is preliminary, the list of presentations will be adjusted as changes are made and speakers confirmed, the most recent updates will be posted on [www.innovasjon Norge.no/delegasjoner](http://www.innovasjon Norge.no/delegasjoner)*

#### Tuesday 22 June

12.15- **Lunch**

13.30-13.35 **Welcome** - Michael Sahlin, the Swedish Ambassador to Norway

13.35-14.35 **Opening Session** - Government representatives

State Secretary Pål Julius Skogholt, Norwegian Ministry of Trade and Industry - *Industrial Policy and the High North. New Perspectives on Traditional Activities.*

State Secretary Ola Alterå, Swedish Ministry of Enterprise, Energy and Communication - *An Eco-efficient Barents region*

Under-Secretary of State, Ambassador Peter Stenlund Finnish Ministry of Foreign Affairs - *Barents Cooperation in Finland's brand new Arctic Strategy*

Ambassador and Head of Delegation János Herman, Delegation of the European Union to Norway -

14.35-14.55 **Coffee break**

14.55-16.40 **Session 1** - Industrial value creation from geological resources (ore and mineral deposits) and natural gas: current situation and possibilities

**Key-note speech:** Mats Hallin, LKAB - *The Ironman Project - modern iron production with use of natural gas - a forward looking Norwegian-Swedish industrial concept*

1-1 Jostein Gaasemyr, Statoil - *The role of Statoil in an energy development scenario for the Barents region*

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1-3 Jack Ødegård, SINTEF - *Where gas meets ore - industrial cluster concepts for sustainable materials and energy production*

1-4 Krister Söderholm, First Quantum Minerals - *Kevitsa Mine - a big Ni-Cu-PGE Mine in Central Finnish Lapland*

16.40-17.00 **Coffee break**

16.55-18.45 **Session 2:** Energy and energy efficiency: technological possibilities, climatic and environmental challenges Moderator: Kåre Tormod Nilsen, Energicampus Nord

**Key-note speech:** Håvar Risnes, Innovation Norway - *Opportunities and challenges within oil and gas and renewable energy in the view of Innovation Norway.*

2-1 Toini Løvseth, Finnfjord AS – *Can energy-intensive industries be environmental friendly? Energy-efficiency by cluster-thinking*

2-2 Audun Hustoft, Statnett - *The power grid development plan; the future outlook in relation to a development scenario in the North*

2-3 Erling Sævbø, Det Norske Veritas - *Responding to Arctic Challenges - Harmonizing HSE Standards for the Barents Region*

2-4 Magnus Ericsson, Raw Materials Group - *The metals boom continues - implications for the Barents region*

20.00 - **Dinner**

## Wednesday 23 June

08.30 -10.45 **Session 3:** Industrial framework conditions in the Barents region Moderator: Urban Wråkberg, Barents Institute

**Key-note speech:** CEO John Sanderson, Northern Iron – *Reopening of the Sydvaranger mines; significant hurdles or just straight forward?*

3-1 Inge Berg Nilssen, Norut Alta - *The spillover effects from the Snøhvit and Goliat developments*

3-2 Jonas Lundström, Northland Resources – *A logistics perspective in conjunction with the Pajala-Kolari iron mine*

3-3 Felix Tschudi, Tschudi Shipping Company & Timo Lohi, Nord-Lapland Regionråd – *Efficient Logistics and infrastructure – the key to unlocking the potential values of natural resources in the High North*

3-4 Morten Smelror (NGU), Elias Ekdahl (GTK), Jan Magnusson (SGU) - *Mineral resources in Norden; status, potential and challenges.*

3-5 Jan Johansson, Nordic Investment Bank - *Financing possibilities in the Barents region through the Nordic Investment Bank*

10.45-11.05 **Coffee break**

11.05-13.00 **Closing session**

Michael Sahlin, Sveriges Ambassad - *Proceedings and findings from the Barents Ministerial on Energy Efficiency, Renewable Energy and Raw Materials in Umeå and the Haparanda Transport Ministerial*

Concluding panel discussion

13.00 - **Lunch**





## LIST OF PARTICIPANTS

## THE BARENTS REGION - WHERE GAS MEETS ORE

KIRKENES 22-23 JUNE 2010

Name	Organisation
Oddgeir Danielsen	The Norwegian Barentssecretariat, Kirkenes
Ann Årefeldt	Ministry for Foreign Affairs, Stockholm
Rune Rautio	Rambøll, Kirkenes
Morten Smelror	Geological Survey of Norway, Trondheim
Andreas Flåm	Nordland County, Bodø
Alexander Ignatiev	International Barents Secrateriat, Kirkenes
Kaj Lax	Geological Survey of Sweden, Uppsala
Pietilä Risto Mikael	Geological Survey of Finland, Rovaniemi
Sofia Rantatalo	Ministry of Enterprise, Energy and Communications, Sweden
Ola Alterå	Ministry of Enterprise, Energy and Communications, Sweden
Eirik Selmer	Finnmark county authority, Vadsø
Hogne Hongset	The Research Council of Norway, Oslo
Joralf Flataukan	Møre og Romsdal County, Molde
Oddgeir Johansen	TOTAL E&P NORGE AS, Harstad
Jack Ødegård	SINTEF Norge, Trondheim
Harald Sørensen	The Norwegian Barentssecretariat, Kirkenes
Øystein Miland	Troms County, Tromsø
Rune Rafaelsen	The Norwegian Barentssecretariat, Kirkenes
Urban Wråkberg	Barents Institute, Kirkenes
Marius Chramer	Troms County, Tromsø
Bengt Ramberg,	BI Norwegian School of Management, Oslo
Bengt Endreseth	Møre og Romsdal County, Molde
Hans Nordgård	The High North Center, Bodø
Jan Johansson	Nordic Investment Bank, Helsinki
Jan Sverre Sandstad	Geological Survey of Norway, Trondheim
Erja Karkkonen	Embassy of Finland, Press & commercial council, Oslo
Hans Ottelin	Charge d'affaires, Embassy of Finland, Oslo
Pär Weihed	Luleå University, Luleå
Peter Stenlund	Ministry for Foreign Affairs, Finland
Aileen A. Espiritu	The Barents Institute, Kirkenes
Arve Tannvik	Kirkenes Næringshage AS, Kirkenes
Asle Johansen	KONECRANES, Oslo
Morten N. Andersen	KONECRANES, Oslo
Lars E. Rønneberg	Nordland County Council, Bodø
Carl Johan Callenholm	ITT Norge AS, Oslo
Timo Rautajoki	Lapland Chamber of Commerce, Rovaniemi
Audun Hustoft	Statnett SF, Alta
Pål Julius Skogholt	Ministry of Trade and Industry, Oslo
Ole Lindeman	Ministry of Trade and Industry, Oslo
Anniken Mordal	Ministry of Trade and Industry, Oslo
Ivar Engan	Ministry of Trade and Industry, Oslo
Morten Often	Store Norske Gull AS, Trondheim
Jack Sture Muotka	Bedriftskompetanse, Vadsø
Tronn Øystein Hansen	The Research Council of Norway, Oslo
Helena Moosberg-Bustnes	Sibelco Nordic, Stjernøya, Alta

Øystein Rushfeldt	Nussir ASA, Tromsø
Marit Helene Pedersen	NHO - Confederation of Norwegian Enterprise, Vadsø
Michael Sahlin	Embassy of Sweden, Oslo
Karl Einar Ellingsen	Embassy of Sweden, Oslo
Emelie Höglund	Embassy of Sweden, Oslo
Jonas Lundström	Northland Resources S.A, Luleå
Bjørn Arne Pedersen	Saab, Vardø
Gunnar Fredrikson	Saab, Norge, Oslo
Toini Løvseth	Finnfjord AS, Finnsnes
Timo Lohi	Region of Northern Lapland, Sodankylä
Maija Uusiusuo	Regional Council of Lapland, Rovaniemi
Felix Tschudi	Tschudi Shipping, Lysaker
Karstein Sandvik	Norut Narvik AS, Narvik
Victor Avershin	Innovation Norway, Moscow office
Hililde Jensen	Troms County, Tromsø
Roald Røkeberg	Troms County, Tromsø
Tor Husjord	Maritimt Forum Nord, Narvik
Håvar Risnes	Innovation Norge, Oslo
Thor Bjørkvoll	Sintef, Trondheim
Stein Mathisen	Innovation Norge, Vadsø
Voktor Svonov	Employment service, Nikel
Cato Lindbäck	NAV, Kirkenes
Wilfred Bang	NAV, Kirkenes
Erling Sæbøe	Det Norske Veritas, Oslo
Inge Berg Nilssen	Norut , Alta
Kristin Omholt-Jensen	Centre for High North Logistic, Bodø
Lisbeth Isaksen	Sør-Varanger Municipality, Kirkenes
János Herman	Delegation of the European Union to Norway, Oslo
Svein Helge Orheim	Barents Institute, Kirkenes
Magnus Ericsson	Raw Materials Group, Solna, Sverige
Knut Audun Mugaas	Norwegian Consulate General, Murmansk
May Griff Bye	Sør-Varanger municipality, Kirkenes
Bente Larssen	Sør-Varanger municipality, Kirkenes
Mikael Klingberg	Voksenåsen/ Klingberg Konsult, Oslo
Margaret Slettevold	Ministry of Foreign Affairs, Norge
Joachim Rønnevik	Institute of Transport Economics, Oslo
John Sanderson	Managing Director, Sydvaranger, Gruve AS, Kirkenes
Mats Hallin	General Manager BF Products, LKAB
Trond Haukanes	Sør-Varanger Invest, Kirkenes
Pål Arne Davidsen	Progress Part Parliamentary Group
Sverre Jervell	Norwegian Ministry of Foreign Affairs
Bjørn Johansen	The Norwegian Confederation of Trade Unions (LO), Finnmark
Knut Veum	Konkraft, Oslo
Mattias Lindgren	International Barents Secretariat, Kirkenes
Kåre Tormod Nilsen	EnergiCampus Nord, Alta
Per Wallén	Swedish Ministry of Foreign Affairs
Jostein Gaasemyr	Statoil
Thore Amundsen	Kirkenes Eiendom
Per Eriksson	Swedish transport Administration
Elena Vikström	Swedish transport Administration
Terje Malvik	NTNU, Department of Geology and Mineral Resources Engineering, Trondheim
Nikolay Ganza	Kovdorsky GOK, Kovdor
Igor Melik-Gaikazov	Kovdorsky GOK, Kovdor
Alexey Tolstyh	Kolskaya GMK, Monchegorsk
Igor Polikarpov	Oktyabrskaya Railroad, Murmansk
Artem Simonov - Beschinskiy	Strategy and M&A of Severstal Resources, Moscow
Thomas Vestergaard	Tschudi Project Transport AS, Denmark



Igor Bulay	Consulate General of Russian, Kirkenes
Alexey Vorobiev	Consulate General of Russian, Kirkenes
Trond Dahlberg	Sydvaranger, Kirkenes

