

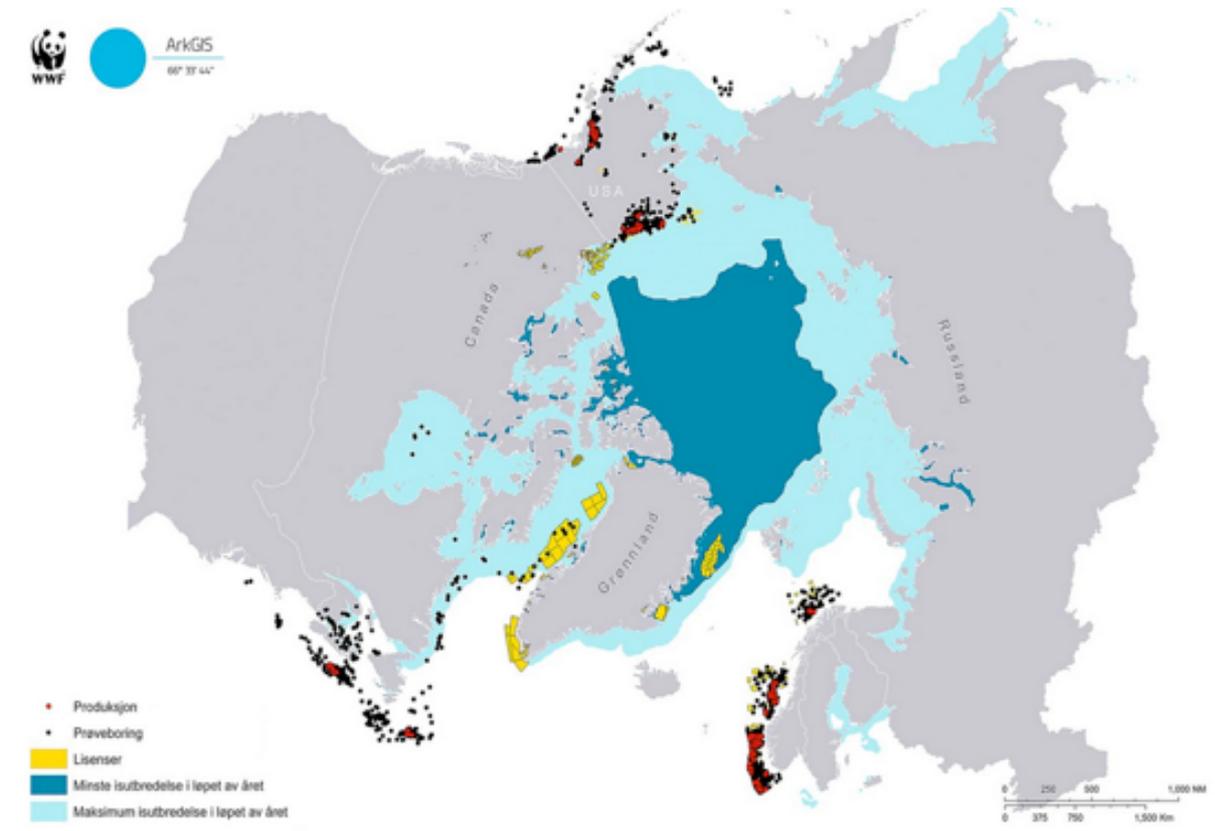
## Briefing Note

# Oil Drilling & Ecosystem Management Planning of the Barents Sea

Allan Sande

### Introduction

Biodiversity conservation in the Arctic is on the international agenda at the United Nations (UN). Greenpeace International calls upon the UN and governments for an immediate moratorium to save the Arctic Ocean from industrial development. The Arctic Ocean has historically been covered by sea ice, which has today suffered a significant reduction due to climate change. According to Greenpeace, the long term solution is an inter-governmental agreement to a permanent, equitable and overarching treaty or multi-lateral agreement that protects the Arctic Ocean's environment and ecosystems and the peoples who depend on them (<http://www.greenpeace.org/international/en/>). The International Association of Oil and Gas Producers (IOGP) is working on a Joint Industry Programme (JIP) for technological innovations in oil drilling in Polar Oceans to develop new technology for the emergency planning and management of large oil-spill disasters in ice conditions (Øvrebekk Lewis, 2013). This article presents the Norwegian solution to the oil and gas exploitation and biodiversity conservation of large sea areas in the Barents Sea, which is a part of the Arctic Ocean (Figure 1). In accordance with international UN agreements, the Norwegian state has implemented an ecosystem based management plan for large areas in the Barents Sea (Ministry of Environment, White paper nr.8, 2005-2006). This initiative is linked to the international conventions of biodiversity conservation and the Malawi convention of ecosystems (Sandstrøm, 2008). These international guidelines are based on user management at the lowest democratic level, the conservation of a large ecosystem and the use of local knowledge and natural science in the governance of nature.

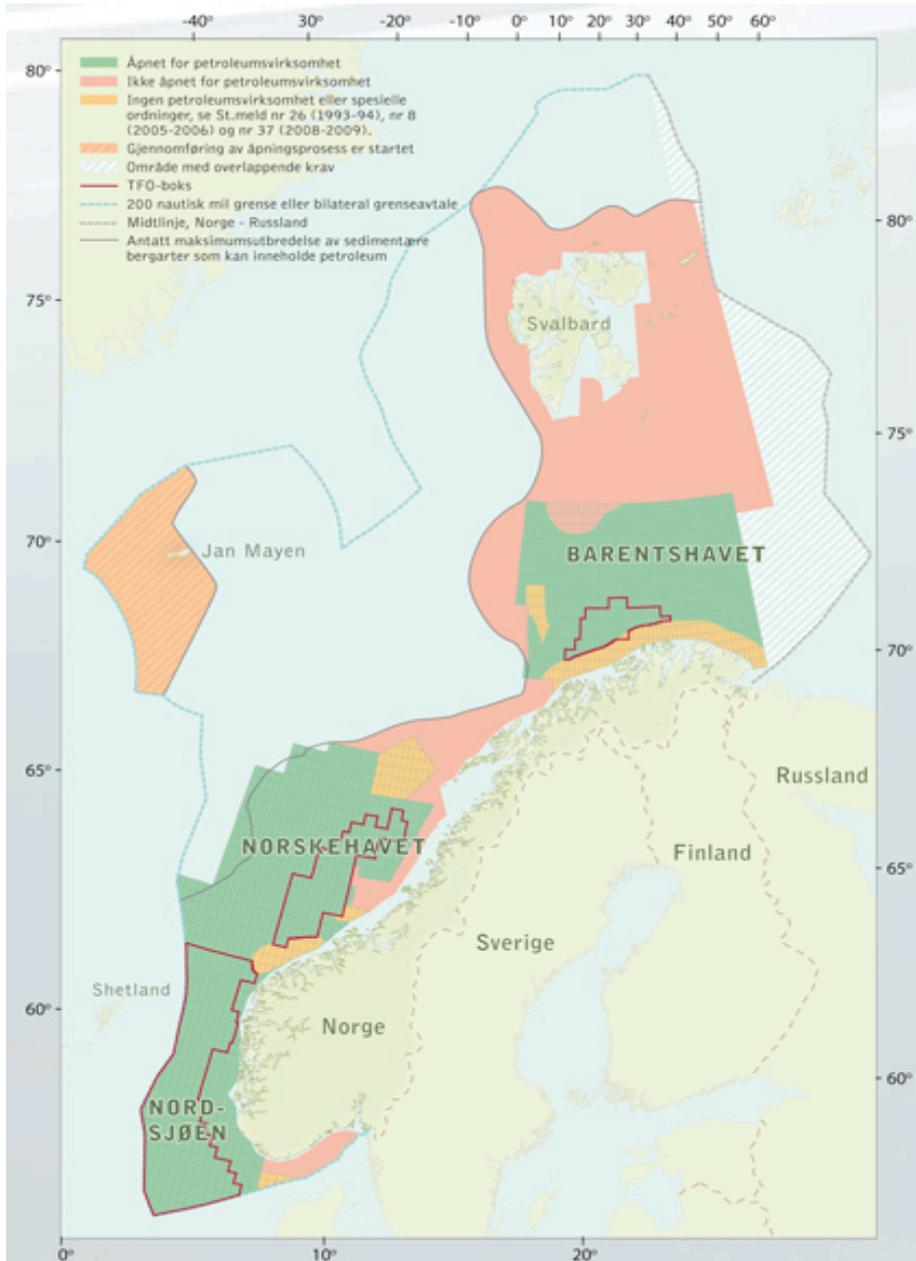


**Figure 1:** WWF map of oil drilling in the Arctic Ocean. Red dots: Production of oil and gas. Black dots: Oil drilling for exploration. Yellow dots: Oil blocks with licences. Dark blue area: Permanently ice in summertime. Light blue: Ice-front maximum in wether time. Source: WWF ArkGIS.

The Norwegian state owns and governs the search for new petroleum on the continental shelf as far as 200 km off the coastline. The sea areas in the North Sea, the Norwegian Sea and the Barents Sea, are *seven times larger* than the onshore area of Norway (2 140 000 km<sup>2</sup> of sea areas) (Figure 2).

According to international figures, 25% of the world's undiscovered petroleum resources are located in the Arctic Ocean (Walsh, 2012). The Barents Sea is a part of the Arctic Ocean with a sea area of 1 300 000 km<sup>2</sup> and is the most promising area for exploration by the international oil industry. Because of global climate change and rising temperatures, the sea ice is receding and the Arctic Ocean is now open for petroleum research and production. However, these marine areas have very important functions in the structure of the ecosystem of the Barents Sea because the important species of fish, birds and whales use these sea areas as spawning grounds in the spring and summertime. According to scientists at *The Institute for Marine Research*, these biological processes in the coastal zones and at the ice-front have key functions in the structure of the ecosystems in the Norwegian Sea and the Barents Sea (*The Institute for Marine Research*, 2010: 1a and 2013: 3). The search for new oilfields in the Arctic Ocean is potentially dangerous because large oil spills kill fish, birds and young mammals in particular. In the Arctic, with low sea temperatures and ice conditions, large oil spills have a greater capability of damaging large ecosystems for long periods (Fall, Miraglia, Simeone, Utermohle and Wolfe, 2001; Ott, 2005). Today the ecosystem of the Barents Sea holds the world's largest populations of cod, herring and sea birds (Sundby: *The Institute for Marine Research*, 2013: 3). Large scale commercial fisheries of

pelagic species provide 3 million tons of commercial fishery resources which provide the livelihood for fishermen and are the most important industry in rural communities in the North Atlantic region (Jentoft, 1998; Holm, 2001; Sundby, 2013). Industrial fisheries in the Arctic provide large export incomes and the basic conditions for human settlement in Norway and the Barents region of Russia. The new petroleum activity provides opportunities as well as a great challenge to other human activities such as fisheries, tourism, shipping and outdoor recreation (*The Institute for Marine Research*, 2010: 1 A; Sande, 2013). These human activities and settlements onshore depend on the human exploitation of the natural resources produced in the ecosystem of the Barents Sea.



**Figure 2:** Ecosystems and management planning by the Norwegian Government: The North Sea, Norwegian Sea and the Barents Sea. Green sea areas: open for petroleum exploration. Yellow sea areas: Temporarily closed for oil drilling. White diagonal striped areas: New area in the Barents Sea for oil drilling in 2013. Red sea areas: Temporarily closed for oil-drilling because of ice-conditions or biodiversity reasons. Source: The Norwegian Ministry of Oil and Energy, White Paper nr. 28 2011-2012).

The empirical qualitative material used in this study is from the democratic decision-making in Norwegian society regarding the development and implementation of the management of the ecosystem in the Barents Sea (see Figure 2). Key areas at sea are at stake for lots of different stakeholders, local communities and interest groups in the Norwegian society. In regard to international collaboration between the national states in the Arctic region, petroleum and fish are treated as common resources divided between the national states of Russia, Denmark, Iceland and Norway. The national states' sovereignty over sea areas and the property rights over natural resources depend on international and bilateral recognition of borders at sea between national states.

The Norwegian state policy of gaining legitimacy in the international community consists of using international agreements regarding managing sea areas, ecosystem management and the world heritage in the Barents Sea. This political process of decision-making has resulted in a national controversy within local communities, the government and parliament regarding conflicts between the development of petroleum, the fisheries and the world heritage status (Kristoffersen, 2011, Andersen, 2011, Sande, 2013). This briefing report is an attempt to analyze the democratic decision-making regarding the use of the key areas for large scale ecosystem planning. The question then is as follows: Does government based ecosystem management planning provide an institutional framework for solving the conflicting interests between oil drilling and the conservation of large areas of the Arctic Ocean?

National states govern large ecosystems, governing all human use of natural resources (Berkes, Colding & Folke, 2003: 75). The challenge for national governance is to integrate and coordinate international, national, regional and local interest groups in decision-making and implementing environmental policy (Jentoft, 1998, Carlsson, 2008). National governments have the political task of making decisions amongst conflicting human interests in regard to the exploitation of natural resources, creating a balance between different political goals, and finding solutions to social problems and conflicts of interests. The task of developing an environmental policy is a national obligation as a consequence of the ratification of international agreements, such as the Rio Declaration and UNESCO agreements (Ulstein, 2001; Hovi & Underdal, 2008; Sande, 2013). The methods used in this study are based on participant observation in national decision-making and a qualitative study of public documents (Sande, 2013).

## **National Government and Holistic Ecosystem Management of the Barents Sea**

In 1980 the Norwegian Parliament opened the Barents Sea for oil drilling and exploitation. The sea area is south of 74 degrees north, which is now the limit of sea ice in wintertime. The Norwegian government has given 53 permits for oil drilling and exploitation in the Barents Sea. International oil companies have drilled 86 wells and discovered several fields for the production of oil and gas (Ministry of Oil and Energy, White Paper nr. 28, 2010-2011: 104). According to the Directorate of Oil, international oil companies have plans for 15 new wells in the Barents Sea in 2014. Due to the risk of large oil spills and the total destruction of the ecosystem in the Arctic Ocean, the Norwegian Parliament made a decision in 2002 to create a totally new system of management of large sea areas (Ministry of Environment, White Paper nr. 12.2001/2002; Knol, 2010; Arbo & Hersoug, 2010, Sande, 2013). The Ministry of Environment was given this task

and developed a new system of “*holistic governmental planning for large sea areas*”. The Ministry of Environment invited the natural science research institutes and directorates responsible for managing natural resources onshore and offshore to take part in this development. In the process, 150 natural science researchers at 27 different research institutes and directorates used 500 million Norwegian crowns (100 million US dollars) in research and the development of a natural science-based management system of sea areas and large-scale ecosystems. This new policy was presented to the Norwegian parliament in 2005 and accepted as a new offshore policy (Ministry of Environment, White Paper nr.12, 2005-2006). The new management system is based on governing all human use of natural resources and the conservation of all parts of the ecosystem structure and functions (Knol, 2010). The decision in the Parliament related to research and planning and required revision periods of 5 years. Only the government and parliament have the opportunity to make decisions regarding the governance of all human activities at sea. The decision-making is institutionalized at the level of national Government and the decision uses only natural scientific knowledge as it is presented to them to make political decisions governing all human usage of the ocean. In March 2011 the Norwegian government finally announced its decision under its new revised management plan for the Barents Sea (Ministry of Environment, White Paper, nr. 10, 2010-2011). The national policy closed the sea area outside the Lofoten and Vesterålen Islands to petroleum activities and the area within 50 km of the ice-front, defined as the limit of 40% ice-cover in wintertime over the latest 10 years. As a political compensation, the Parliament opened, in 2013, 40 000 km<sup>2</sup> of new coastal areas for petroleum activity in the Barents Sea along the border with Russia. These new concession blocks for petroleum activity are situated 35 km off the coast of Norway in the Barents Sea and south of 74 degrees north parallel. The political compromise within the government opened new areas for petroleum activity in the Barents Sea. The new conservative government of Erna Solberg supported in 2013 this policy of closing new areas in the Norwegian Sea, the Barents Sea and Coastal zone of Norway for oil drilling for four years (Governmental declaration, Sundvolden, 2013-2017).

## **Political Government and Social Experiences**

The analytical question is: is government based ecosystem management planning the institutional framework for solving the conflicting interests between conservation and oil drilling in the Barents Sea? This briefing report has presented a case study of national decision-making related to the development of large-scale ecosystem management in the Barents Sea. The issue concerned is the making of political decisions within government regarding conserving maritime biodiversity for the future and developing oil drilling and petroleum exploitation in the Polar Ocean. The national decision is based on national state implementation of different international agreements on the conservation of the Arctic Ocean and maritime biodiversity at the UN. The process of national implementation has produced national conflicts between petroleum stakeholders on the one hand and stakeholders of fishery and maritime conservation on the other. Politically, it is impossible to obtain a decision within the Norwegian government to secure the permanent conservation of key areas of the ecosystem. The key areas are the most important sea areas for the fisheries and for tourism in Norway, the Lofoten and Vesterålen Islands and the ice-front of the Barents Sea. The national experiment with ecosystem-based management has one outcome. The marine ecosystem based management is centralized at the national state level as the

ideal type of national government system. This model of management has become an exclusive partnership between the national government and natural science institutions. This has made the local and regional level of democracy redundant, thereby concentrating power in the national government and parliament. The Norwegian Parliament has, in 2013, opened 40 000 km<sup>2</sup> of the Barents Sea for drilling operations and petroleum exploitation while no new sea areas have been permanently made maritime reserves, national parks or world heritage. The Norwegian Government and Parliament has opened 25% of the sea areas in the Barents Sea and the Norwegian Sea for oil drilling and petroleum production while only 0.13% has been closed permanently as natural reserves, maritime reserves or national park areas.

### **Conclusions: Exploitation of the Barents Sea**

Greenpeace is working internationally for a long-term solution on a governmental agreement embodying a permanent, equitable and overarching treaty or multi-lateral agreement that protects the Arctic Ocean. The solution sought is governmental and international agreement with permanent maritime reserves in the Polar Oceans. The Norwegian policy is permanent conservation of 10% of key areas for biodiversity production which includes the Lofoten Islands and ice-front of the Barents Sea. It has not been possible to implement this policy and thus far only 0.13% of the Norwegian Polar Seas are permanently protected as maritime reserves or national parks. The implementation of ecosystem based management of the Barents Sea has instead given the Government the opportunity to open a new sea area of 40 000 km<sup>2</sup> for oil drilling, which is 3% of the Norwegian part of the Barents Sea. The innovation and implementation of ecosystem-based management has given the government and natural scientists more power at the national level. The result of the implementation of ecosystem management is the opening of 3% new areas for oil drilling and no new areas being permanently closed in regard to the natural conservation of the Arctic Ocean.

### **References**

- Andersen, G. (2011). Paper om systemøkologisk forvaltning av Barentshavet. Notat. Forskningsseminar i Kabelvåg. Bergen, Universitetet i Bergen.
- Arbo, P. & Bjørn Hersoug. (2010): *Oljevirkksomhetens inntog i nord*. Næringsutvikling, politikk og samfunn. Oslo, Gyldendal akademisk.
- Berkes, F., J. Colding & C. Folke. (2003): *Navigating Social- Ecological Systems. Building Resilience for Complexity and Change*. Cambridge, Cambridge University Press.
- Carlsson, L. (2008). Omstridd natur I teori och praktik. I: Sandstrøm, C. S. Hovik og E. I.
- Dale, B. (2011). Managing Contingency: Risks and how they are perceived. Arbeidsnotat til Forskningsseminar i Kabelvåg, 7th-9th February. Tromsø, Universitetet i Tromsø.

- Fall, J. A., R. Miraglia, W. Simeone, C. J. Utermohle & R. J. Wolfe. (2001). *Long-term consequences of the Exxon Valdez oil spill for coastal communities of South central Alaska*. Alaska Department of Fish and Game. Juneau.
- Havforskningsinstituttet. (2010). *Det faglige grunnlaget for oppdatering av forvaltningsplanen for Barentshavet og havområdene utenfor Lofoten*. Rapport fra Faglig forum, Overvåkningsgruppen og Risikogruppen til den interdepartementale styringsgruppen for forvaltningsplanen. Havforskningsinstituttet. Fisken og havet, særnummer 1 a-2010. Bergen.
- Hersoug, B. (2010). Fisk og/eller olje? In: Arbo, Peter and Bjørn Hersoug (red.) *Oljevirkksomhetens inntog i nord*. Næringsutvikling, politikk og samfunn. Oslo, Gyldendal akademisk.
- Holm, P. (2001). *The Invisible Revolution*. The Construction of Institutional Change in the Fisheries. Norwegian College of Fishery Science. Tromsø, University of Tromsø.
- Hovi, J. & A. Underdal. (2008). *Internasjonalt samarbeid og internasjonal organisasjon*. Oslo, Universitetsforlaget.
- Jentoft, S. (1998). *Allmennings komedie. Medforvaltning i fiskeri og reindrift*. Oslo, Ad Notam, Gyldendal forlag A/S.
- Knol, M. (2011). Scientific advice in integrated ocean management: The process towards the Barents Sea Plan. *Marine Policy* 34 (2), page 252-260.
- Knol, M. (2011). *Ecosystem-based management as governance*. PhD theses at University of Tromsø, Tromsø.
- Kristoffersen, B. (2011). Actors and processes in the debate over whether to open for petroleum development in Lofoten and Vesterålen. Paper presented at Workshop in Kabelvåg, 7-9. February 2011. Tromsø, University of Tromsø.
- Miljøverndepartementet. (2005-2006). Helhetlig forvaltning av det maritime miljøet i Barentshavet og havområdene utenfor Lofoten (Forvaltningsplan) St. Melding. Nr 8.
- Miljøverndepartementet. (2011). Oppdatert forvaltningsplan for det maritime miljø i Barentshavet og havområdene utenfor Lofoten. Stortingsmelding nr. 10. Tilrådning fra Miljøverndepartementet av 11. mars og godkjent i statsråd samme dag. Regjeringen Stoltenberg II.
- Ott, R. (2005). Sound truth and corporate myth: The legacy of the Exxon Valdez oil spill. Cordova Alaska, Dragonfly Sisters Press.
- Øvrebekk Lewis, Hilde (2013). Vi kan begynne boring i Arktis nå. Stavanger Aftenblad, 16. oktober.
- Sande, A. (2013). *Slaget om Lofoten. Olje eller verdensarv?* Oslo, Akademika forlag A/S.
- Sandstrøm, C. S. Hovik og E. I. Falleth (red) (2008): *Omstridd natur. Trender och utmaningar i Nordisk naturforvaltning*. Umeå, Borea forlag.

Sundby, S., P. Fossum, A Sandvik, F. B. Vikebø, A. Aglen, L Buhl-Mortensen, A. Folkvord, K.

Bakkeplass, P. Buhl-Mortensen, M. Johannessen, M. S. Jørgensen, Trond Kristiansen, C. S. Landa, M. S. Myksvoll og R. Nash (2013): *Kunnskapsinnbenting i Barentshavet – Lofoten – Vesterålen*. Rapport 3, Bergen, Havforskningsinstituttet.

Ulfstein, G. (2001). Folkeretten og norsk miljøpolitikk. Muligheter og begrensninger. I: *Mot et*

*globalisert Norge?* Bent Sofus Tranøy og Øyvind Østerud (red). Makt og demokratiutredningen 1998-2003. Oslo, Gyldendal Akademisk.

Walsh, B. (2012). The Truth about Oil. New breakthroughs are actually increasing global supplies. But the era of cheap oil may be gone forever. *Tme*, 179 (14) April 9, 2012, page 12.