

## Project information

### Project title

Drivers for Arctic shipping: Transport alternatives, demand for minerals, and supply and demand of Russian icebreakers – Part II

### Year

2015

### Project leader

Eirik Mikkelsen

### Participants

Norut: Anne Katrine Normann,

*Fridtjof Nansen Institute (FNI):* Arild Moe, [www.fni.no](http://www.fni.no)

*Akvaplan-NIVA (APN):* Rune Rautio, [www.akvaplan.niva.no](http://www.akvaplan.niva.no)

*Lawson Brigham*

*Capia:* Stian Berger, [www.capia.no](http://www.capia.no)

### Flagship

Arctic Ocean

### Funding Source

Fram Centre

## Summary of Results

The project is running 2014-15. The project has the following objectives, with status for the work with each objective:

**Main objective:** To better understand major drivers and barriers for development of Arctic shipping, particularly along the Northern Sea Route.

A synthesis of the results from the part objectives will be made at the end of the project period. A model for integrating results from studies of different types of drivers is under development and used to make the synthesis. It distinguishes between drivers/factors that qualitatively enables/disables traffic, and factors that affect the volume of traffic quantitatively.

**Part objective 1:** Map and analyse transport alternatives, policies and plans of the mineral sector in the different regions of the Russian North, and estimate increased future use of the NSR for mineral transport for these regions for the coming 20-30 years.

A comprehensive mapping of all the Russian mining industry has been performed: Russian mineral and metal ore deposits and mines, railroads, Russian public development strategies (energy strategy, port strategy and railroad strategy), and strategies of the mining industry (major companies). A report is finished: Rautio and Bambulyak 2015. Even though the report was finished in January 2015, some figures and information have been updated in the database for this. (Rautio, Rune and Alexei Bambulyak 2015: Drivers for increased use of the Northern Sea Route - Russian mining industry status and prospects. Akvaplan Niva report 6545 / 6872).

A presentation based on the combined results of objective 1 and 6 is accepted as poster for Arctic Frontiers 2016.

**Part objective 2:** Establish an automated retrieval, management and presentation system for supply and demand data for Arctic relevant minerals that can be useful for assessing likely future production volumes of minerals from different deposits or regions of the Russian North.

The mapping under Part objective 1 revealed it was particularly relevant for shipping in the Northern Sea Route to gather world market, trade, export and transport data on Bauxite, Coal, Copper and nickel, and Iron ore. Data from various sources have been collected into a database that allows for easy compilation, presentation in tables, diagrams and maps, and analysis.

**Part objective 3:** Get an overview of oil and gas fields in northern Russia, transport options and company strategies of relevance for Arctic shipping.

Data has been gathered and is being analysed and compiled now.

**Part objective 4:** Present and understand Russian perceptions of the need for icebreakers, and discuss consequences for Russian policy, contribute with our own assessment of the need.

Based on data collection in Helsinki (Arctic shipping forum) and in Russia, as well as studies of statistics and reports, a paper is published

(Moe 2014).

A paper co-authored by Moe and Brigham is in its final stages. The focus is on the organization of icebreaking and the status prospects for the icebreaker-construction program. The paper also discusses the expected need for icebreaking and possible alternatives to the present organization. The paper will be submitted to a journal and is also accepted for presentation at Arctic Frontiers.

**Part objective 5:** Study the plans and assess the realism in building new and higher capacity railroads, and how this might affect future seawards transport on the NSR.

Information on strategies for railway development and transportation policy has been collected as well as data on industrial development projects, particularly Siberia. They will be combined to see how development may affect the cargo potential of the Northern Sea Route.

**Part objective 6:** Determine/estimate actual shipping volumes of major minerals and metals from Russian Arctic regions/ports for 2012-2013, how they vary with world market prices, and review long-term forecasts of world market for the major relevant minerals and metals relevant for our study.

Data on actual shipping by ship type and size have been collected (from havbase.no ), and are now being analysed together with Russian trade statistics and other data like company annual reports to segment and estimate the Russian Arctic shipments. By analysing the datasets we have constructed of the Russian Arctic shipments together with world market data (primarily prices), we will attempt to establish correlations between them. A presentation based on the combined results of objective 1 and 6 is accepted as poster for Arctic Frontiers 2016.

#### Published Results/Planned Publications

Presentations fully or partially utilising results from this project:

- Berger, Stian 2014: Database related to Arctic shipping. Presentation at Seminar on Russia for Shipping projects. Tromsø, 21 October 2014.
- Mikkelsen, E and JA Røyset 2014: A new tool for actual Arctic shipping data. Presentation at Cooperation 66 Degrees North, Arctic maritime and security forum, 8-9 May 2014, Tromsø.
- Mikkelsen, E 2014: Arctic shipping projects. Presentation at Seminar on Russia for Shipping projects. Tromsø, 21 October 2014.
- Moe, Arild 2014: The Northern Sea Route; Smooth Sailing Ahead?, *Strategic Analysis*, 38(6), 837-55.
- Moe, Arild 2014: Utviklingen av den nordlige sjørute: Ambisjoner og komplikasjoner. Presentation at Seminar on Russia for Shipping projects. Tromsø, 21 October 2014.
- Normann AK and E Mikkelsen 2014: Impact of insurance on developing the Northern Sea Route. Presentation at Cooperation 66 Degrees North, Arctic maritime and security forum, 8-9 May 2014, Tromsø.
- Normann AK and E Mikkelsen 2014: Importance of insurance for developing the Northern Sea Route. Presentation at 10th Annual Arctic Shipping Forum, 8-10 April 2014, Helsinki.
- Rautio, Rune 2014: Kildetilgang ved kartlegging av russisk gruveindustri og strategier med potensial for utvikling av Den nordlige sjørute. Presentation at Seminar on Russia for Shipping projects. Tromsø, 21 October 2014.
- Rautio, Rune and Alexei Bambulyak 2015: Drivers for increased use of the Northern Sea Route - Russian mining industry status and prospects. Akvaplan Niva report 6545 / 6872.
- Moe, Arild: Arctic shipping – Market outlook and developments on the Northern Sea Route, Alfred Wegener Institut, Bremen, 28.10.2014
- Mikkelsen, Eirik 2015: Drivers for Arctic shipping. Presentation for EUs Joint Research Centre and the Norwegian Research Council. Tromsø, 22 January 2015.
- Moe, Arild and Lawson Brigham: Icebreakers – a key to development of shipping in the Russian Arctic. Accepted for Arctic Frontiers 2016 (oral presentation).
- Mikkelsen, Eirik, Rune Rautio and Stian Berger: The Russian mining industry's role for use and development of the Northern

Sea Route. Accepted for Arctic Frontiers 2016 (poster).

- Arild Moe and Lawson Brigham: “Development of icebreaking on the Northern Sea Route” (forthcoming article)
- Arild Moe: “Voyage through the North: Domestic and International Challenges to Arctic Shipping” in Kathrin Keil and Sebastian Knecht (eds.) *Arctic Governance in a Global Perspective*, forthcoming 2016

#### Communicated Results

Mikkelsen, E 2014: “Store mengder is skaper trøbbel i Nordøstpassasjen” (Large amounts of ice create trouble in the Northeast passage), *Aftenposten*, 24 August 2014.

Arild Moe: '[Nordleg sjørute ingen ny Suezkanal](#)' ('- The Northern Sea Route Is No New Suez Canal'), *BarentsWatch*, 16.12.2014. In Norwegian

#### Interdisciplinary Cooperation

The project has been performed by an interdisciplinary team, with researchers from political science, economics, economic geography, business, ICT/programming. This has been very valuable in the project, bringing together a total set of data from different sources and of different type, perspectives and theories that each individual researcher could not had alone, and which helps us understand the multitude of factors that affect future Arctic shipping.

#### Budget in accordance to results

The funding from the Fram centre has been essential to realize this project.

#### Could results from the project be subject for any commercial utilization

No

#### Conclusions

See conclusions from part I of the project, from 2014. Otherwise, conclusions will be ready by the end of the project period, at the end of 2015. We will present results at Arctic Frontiers 2016, as well as through other channels.