



Ladies and Gentlemen.

My name is Geir Hestvik. I am from Norway, and I work as a staff officer for the Combined Joint Operations from the Sea Centre of Excellence in Norfolk, USA.

- In May 2018, we completed an information paper with the title: "China and the Arctic; should China's advance in the Arctic be a concern for NATO?"
- During my presentation I will focus on background information and statistics as introduction or basis for this work-shop
- And if time permits I will briefly touch on some of the possible NATO-implications due to an increased Chinese footprint in Arctic.
- I would prefer to answer questions after my presentation.



Disclaimer



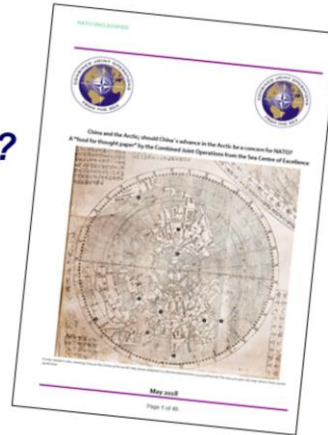
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- ***It is produced for the SFA workshop and does not necessarily reflect the notions of NATO, Norway or any other participating States of the CJOS COE.***



Agenda



- **Who – is in the Arctic?**
- **What – is the Arctic?**
- **Why – is the Arctic important?**
 - **Oil and gas**
 - **Fishery**
 - **Tourism**
 - **Maritime trade routes**
 - **Minerals and metals**
- **China & Arctic – possible NATO implications**



During the Arctic Circle Assembly in Reykjavik, Iceland, last month, Brage Bakkeli, the State Secretary to the Minister of Transportation and Communication in Norway said that three things categorizes the Arctic:



Arctic Circle Assembly, 2018



“Three things categorizes the Arctic

1. International cooperation

2. Stability

3. Cold weather *(understand: protect the environment)*

Norway is working to keep it this way”

Brage Bakkeli

***State Secretary to the Minister of Transportation and Communication
Norway***



Who is in the Arctic? It depends...



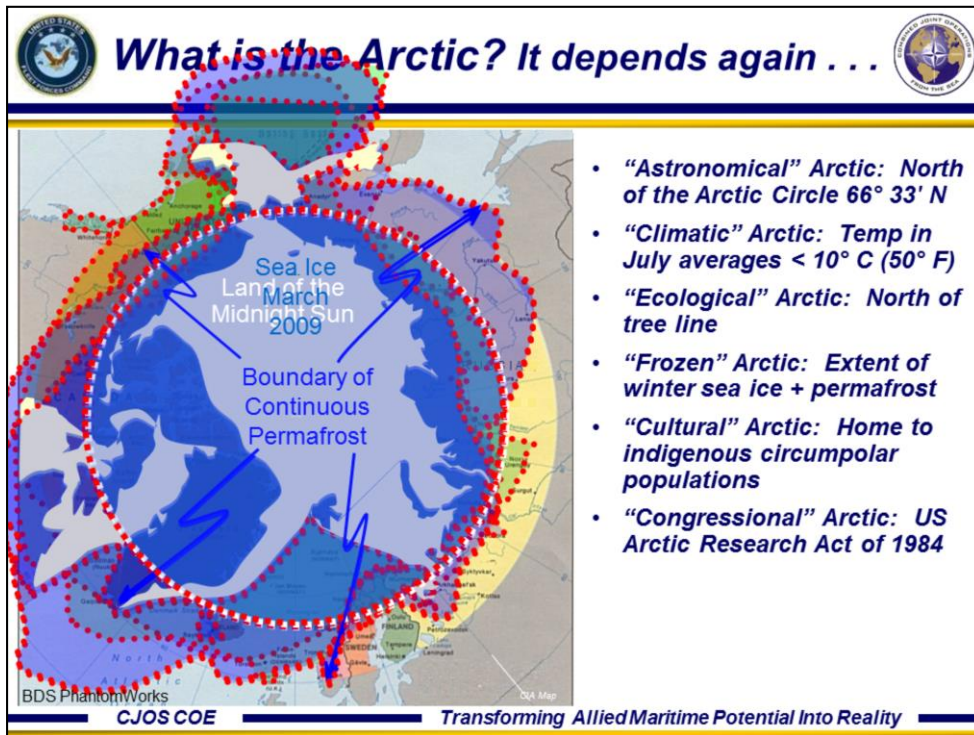


- **Countries with:**
 - **Arctic Ocean coastline:** Canada, Denmark (Greenland), Norway, Russia, USA
 - **Territory north of the Arctic Circle:** Finland and Sweden
 - **Only Exclusive Economic Zones north of the Arctic Circle:** Iceland
- **Indigenous Peoples**
- **Organizations:**
 - Arctic Council
 - NATO
 - European Union
 - United Nations

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Who is in the Arctic, it depends:

- Countries with:
 - Arctic Ocean coastline: **Canada, Denmark (Greenland), Norway, Russia, USA**
 - Territory north of the Arctic Circle: **Finland and Sweden**
 - Exclusive Economic Zones north of the Arctic Circle: **Iceland**
- Indigenous Peoples
- Organizations:
 - Arctic Council
 - NATO
 - European Union
 - United Nations



What is considered to be the Arctic, it depends again....

There are several definitions that can be used to determine the Arctic.

Astronomical Arctic

Climatic Arctic

Ecological Arctic

Frozen Arctic

Cultural Arctic and the

Congressional Arctic



- ***In the CJOS COE report, the Arctic was defined as the region that lies north of the Arctic Circle at 66° 33' North latitude***
- ***However....***



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- In the CJOS COE report, the Arctic was defined as the region that lies north of the Arctic Circle
- However
- Nations like Japan, the Republic of Korea and China have their own Arctic Policies
- And as the European Union Ambassador at Large for the Arctic, Marie-Anne Coninx, said during the Arctic Circle Assembly last month (October 2018)....



“What happens in the arctic affects the rest of the world”

I think the quotation from the EU Ambassador shows great foresight and good understanding of the Arctic.

Further, I would argue that a specific definition is maybe not that important (for the Strategic Foresight Analyses), and that on should rather try to see the overall picture....

And how actions and development in the Arctic can shape and influence the future for NATO nations?



Why is the Arctic Important?

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Why is the Arctic important?



Oil and gas



- **Oil prospects – 412 billion barrels**
- **Gas prospects – 1,669 trillion feet³**
- **Natural Gas liquids – 44 billion barrels**



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WHY IS THE ARCTIC IMPORTANT:

- The United States Geological Survey (USGS) maintain that the Arctic holds around 25% of the undiscovered resources of oil and gas (12-13% oil and 30% gas). The total numbers are depicted on the slide.
- To put this into perspective, more than 400 oil and gas fields have been discovered north of the Arctic Circle.
- One of the largest Russian oil fields, the Prirazlomnoye, can alone supply the world's five largest oil-consuming nations (US, India, Russia, China and UK) with their petroleum needs for 20 years (around 34 million barrels of oil annually).
- Though the energy prospects in the Arctic are significant, the natural resources can be hard to extract. The extreme weather conditions and very low temperatures in the Arctic area makes it a challenging area for oil and gas exploration, and many of the expected resources are also located offshore. These challenges may seem to slow down the process but it will not stop nations and international companies in the long term, too much money is involved.



Fishery



- **Arctic Ocean – More accessible**
- **Arctic – Increased interest (China)**
- **Worldwide – 80,9 million tons**
- **Arctic & Antarctic – 311 896 tons**

Table: Fishery capture production by principal producers in 2015 (UN, 2016, 31)

Country	Country comparison world	Capture production (tons)
China	1	17 591 299
United States	3	6 485 320
Russia	6	4 457 138
Norway	9	2 293 698
Iceland	19	1 317 349
Denmark	22	869 119
Canada	23	851 119

Food and Agriculture Organization of the United Nations: <http://www.fao.org/3/a-i7989t.pdf>, page 31.

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When I first read about fisheries as one of the new Chinese focus areas in the Arctic, my first thought was so-what? and then I started to do some more research....

According to the United Nations, in 2015, China was the largest fish capturing nations in the World, and also the largest exporter.

But as you can see of the table many of the Arctic nations are among the largest fish capturing nations worldwide.

There are around 4.5 million fishing crafts worldwide. China has 1 million of them.

(The worlds second largest fish exporting nation has around 6000 registered fishing vessels).

- However the invasion of fishing boats in the Arctic, which I envisioned, seems to be delayed. As many of you know an Arctic Ocean Fishery Agreement was signed last month.



Arctic Ocean Fishery Agreement



- **Central Arctic Ocean**
- **2.8 million km³**
- **16 years period**



European Commission > Food, farming, fisheries >

Fisheries

- Fisheries
- Home
- Policy
- Advisory bodies
- News and events
- Press releases
- Events

EU and Arctic partners enter historic agreement to prevent unregulated fishing in high seas – Frequently Asked Questions

03/10/2018

What is the Arctic region? While various definitions for the Arctic exist, we consider the notion "Arctic region" to cover the area around the North Pole, north of the Arctic Circle (latitude 66 degrees, 32 minutes)

- **Canada**
- **China**
- **Denmark**
- **EU**
- **Iceland**
- **Japan**
- **Norway**
- **Russia**
- **South Korea**
- **USA**

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- October 3RD (2018), 9 countries and the European Union signed an Arctic Ocean Fishery Agreement.
- The Fishery Agreement is established in order to prevent unregulated commercial fishing on the high seas of the central Arctic Ocean.
- This is the first multilateral agreement of its kind to take a legally binding, precautionary approach to protect an area from commercial fishing before that fishing has begun



Tourism



- **Tourism – Increasing**
- **Examples – Alaska & Norway**
- **Cruise ships – Increasing**



Picture from: <http://www.knom.org/wp/blog/assg/og/a/8/home-hosts-arctic-cruises-tourism-expected-to-expand-and-diversify/>

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Statistics from the United States and Norway show an increase in Arctic tourism and cruise traffic.

- According to the McDowell Group, in the period 2010 to 2016, the State of Alaska had an increase of visitors during summer time from around 1,5 million to around 1,8 million (1,532,400 to 1,857,500).
- In 2016, around 55% of these visitors came by cruise ships (McDowell Group, 2017)
- If we look at statistics from Norway. In 1997, around 25,000 visited the Svalbard area in Norwegian Arctic with cruise ships.
- In 2007 the numbers had increased to around 50,000 And in 2017 the number was increased to 85,000

Another aspects worth taking into consideration is the worldwide increase in the number of cruise ships.

- According to the European Maritime Safety Agency (2017-report), from 2005 to 2016 the number of cruise ships worldwide increased from 5771 to 7011.
- Continuing increase in the Arctic tourism is expected, increasing the need for sufficient SEARCH AND RESCUE COVERAGE and environmental protection means.



Maritime trade routes



- **Reduced sailing distance**
- **Savings**
- **Number of transits**



January 2018: The icebreaking LNG Carrier "Eduard Toll" the 4th of 15 sister ships. First ever to sail NEP in winter without assistance from icebreaker.



Figure: Northwest and Northeast passages (Breaking Defense).

Port (from)	Rotterdam (Netherlands), via:	
	Suez Canal	NEP
Shanghai, China	10,557 nm	8,046 nm
Hong Kong, China	9,701 nm	8,594 nm
Yokohama, Japan	11,133 nm	7,010 nm
Busan, South Korea	10,744 nm	7,667 nm

Port (from)	Potential savings	
	Distance	Time
Shanghai, China	2,511 nm	10.46 days
Hong Kong, China	1,107 nm	4.61 days
Yokohama, Japan	4,123 nm	17.18 days
Busan, South Korea	3,077 nm	12.82 days

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- Jan 2018 the icebreaking LNG Carrier Eduard Toll sailed the NEP without any support. This was the first a commercial vessel sailed the NEP in the wintertime without icebreaker assistance (Teekay, 2018)
- For a tanker with daily rate's of \$40,000 and a speed of 12knots, the potential savings from Shanghai to Rotterdam is:
- 2,511 nautical miles, 10,46 days and 418,400 US Dollars

According to the US National Ice Centre 207 ships sailed the North East Passage in the period 2011 to 2015.

However, ship traffic in the Arctic has been increasing. Statistics from the Norwegian National Joint Headquarter reveal that 110 vessels sailed the NEP in 2016 and...(NEXT SLIDE)

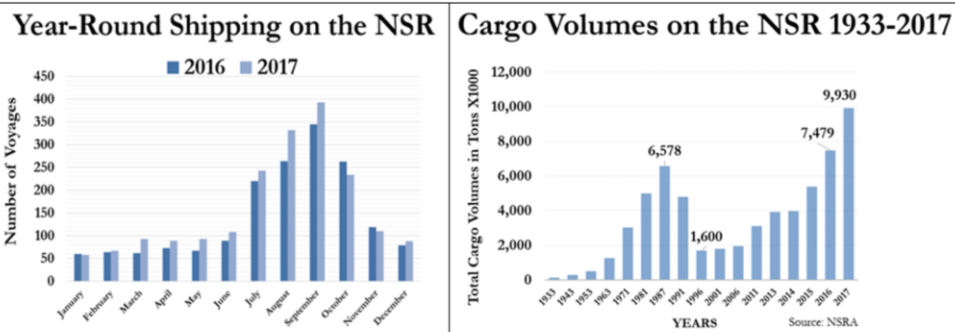
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- In 2008, 21,415 vessels passed through the Suez Canal
 - The receipts totaled \$5.38 billion and The average cost per ship was about \$251,000
 - When a Russian icebreaker supported a bulk carrier sailing the NEP in 2010, the cost was 146 000 euro



Maritime trade routes



- **Number of vessels 297 and 283**
- **Number of Voyages 1,705 and 1,908**
- **Number of shipping companies 129 and 121**
- **Voyages made by Russian vessels 70% and 81%**



Centre for High North Logistics at the Nord University Business School

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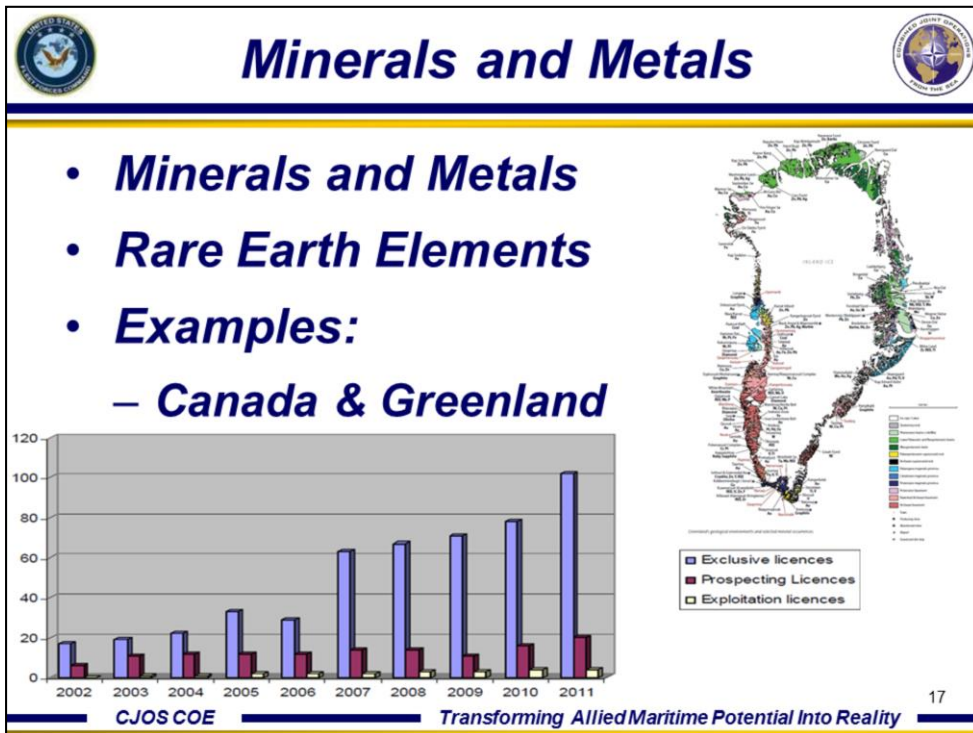
Recent statistics from the CENTRE FOR HIGH NORTH LOGISTICS AT THE NORD UNIVERSITY BUISNESS SCHOOL, in Bodø, Norway confirms increased activity in the NORTH EAST PASSAGE the recent years.

These numbers also includes information on Russian coastal traffic.

The year-round shipping increases most months, with the largest increase during the summer months but there is also an increase in December.

Cargo volumes show a major increase from 2016 to 2017, and is likely to increase more in the future.

Dr. Bjørn Gunnarson from the Centre for High North Logistics at the Nord University Business School in Bodø, Norway.



- The Arctic holds large amount of minerals and metals. Gold and silver mining in the US and Canada are well known, and in 2016, the Canadian mining industry directly or indirectly contributed 87 billion Canadian Dollars to Canada's gross domestic production, and in the same year it provided 403,000 direct jobs (Canadian Minerals and Metals Plan, 2017, 8). Sweden, Norway and Russia also holds large mineral and metal deposits.
- Another example is Greenland, the worlds largest Island. Greenland could be seen as a "hypermarket" for natural resources. The territory has a variety of minerals and metals as copper, diamond, gold, platinum, titanium and uranium and some of the worlds largest deposits of Rare Earth Elements (REE). In this respect it should be mentioned that China produces around 97% of the worlds demand fro REE.
- The table shows the increase in mineral licenses on Greenland from 2002 to 2011.

REE: Due to so-called "green technologies innovations", electronic devices, defence systems and petroleum refining catalysts, the global demand is growing rapidly. REE are not very rare, but difficult to separate from each other and often dispersed and not often found concentrated in economically exploitable deposits : used in aerospace components, lasers, X-ray machines, fiber optics, computer memories, etc, etc



China and the Arctic





- **China's first Arctic Policy (2018):**
 - Fisheries
 - Tourism
 - Oil, gas, minerals & metals
 - Shipping routes

- **Other assessed priorities:**
 - Reduced strategic vulnerability
 - Access to western technology
 - Military cooperation






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According to the China Global Investment tracker China has more than 300 billion USD in direct investments in the Arctic countries (The American Enterprise Institute and Heritage Foundation).

In the Arctic Policy issued in January 2018, China lists Fisheries, Tourism, Oil-gas-minerals and Shipping routes as areas of participation and development.

With the New Arctic Policy the Chinese footprint is likely to increase further.

OTHER ASSESSED PRIORITIES:

REDUCED STRATEGIC VULNERABILITY:

- 2015, around 80% of the Chinese import of oil was transported through the Malacca strait, which could be considered as a strategic weakness.
- Increased Chinese access to the vast natural resources in the Arctic, development of pipelines (Eastern Siberia and Pacific) and the Northeast Passage as trade route will potentially reduce China's strategic vulnerability.
- In 2015, China became Russia's largest OIL customer.
- Chinese direct investments in Russia, trade-deals and loans to Russian companies amounts to around 800 Billion US Dollars.

ACCESS TO WESTERN TECHNOLOGY

Many of the Chinese investments in the Arctic region are related to technology. US, Canada and the Nordic countries are considered to be technology advanced countries, and are among the leading nations worldwide when it comes to shipping, oil and gas exploration, metallurgy and clean energy technology. This makes them valuable and interesting partners for a forward-looking China. (Geothermal energy-Iceland and bio-economy projects in Finland).



Possible implications for NATO nations



- *Any crisis or conflict with Russia might involve China*
- *Any crisis or conflict with China might involve Russia*
- *Reduced Russian and Chinese strategic vulnerability*
- *Increased dependency on China for NATO nations*
- *May affect Alliance cohesion and resolve*
- *China get more access to western technology*







January 2018: The icebreaking LNG Carrier "Eduard Toll" the 4th of 15 sister ships. First ever to sail NEP in winter without assistance from icebreaker.

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- Possible implications for NATO are depicted on the slide.
- China have made significant investment in the Arctic to increase exploration and development of natural resources, including economic and security cooperation with Russia and other Arctic countries.
- From 2005 to 2016, direct investments in Russia, trade-deals and loans to Russian companies amounts to around 800 Billion US Dollars.
- China are developing and exploiting the trans-Arctic seaway passages. These developments, while peaceful in nature, will bring NATO into more direct contact and potential rivalry with China than ever before in the history of the Alliance.
- While there may not be enough evidence to state China is purposely pursuing political goals through their Arctic policy, one could see the potential for the connection.
- Possible implications for NATO is the potential to create political wedge issues between NATO members.



Increase in Arctic oil and gas extraction, fishery, tourism, mining and maritime traffic!

So What?

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Increase in oil and gas extraction, fishery, tourism and maritime traffic!

So What?

I'm not sure, but as Marie-Anne Coninx, the European Union Ambassador at Large for The Arctic said during the Arctic Circle Assembly:



Arctic Circle Assembly, 2018



“Opening of the Arctic could lead to increased security risk, including possible spill-over effects from other regions”

Marie-Anne Coninsx

European Union Ambassador at Large for The Arctic



Questions?

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