Challenges for Shipping in the Arctic – Practical Issues

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German Shipowners' Association

Adolf Erik Nordenskiöld by Georg von Rosen

Source:
Wikimedia Commons

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URHO
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SPAARNEDIEP
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FEDERAL DANUBE

What it can be like sailing „rough seas“

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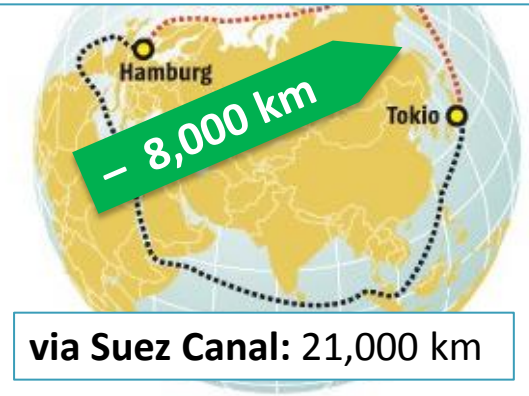
Arctic Route – Possible cost savings

Northern Sea Route (NSR): 13,000 km



via Suez Canal: 21,000 km

North West Passage:
14,000 km

via Panama Canal: 18,200 km

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Arctic Route – CO_2 emissions of a 2,500 TEU container vessel

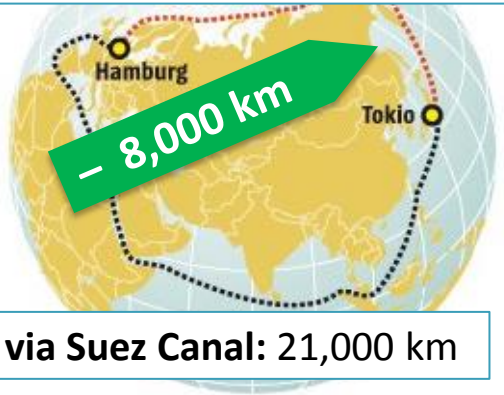
via Suez:

40 tons of HFO/day * 34 days = **1.360 t HFO** → **4.235 t CO_2**

via NSR:

40 tons of HFO/day * 20 days = **800 t HFO** → **2.491 t CO_2**

Northern Sea Route (NSR): 13,000 km



via Suez Canal: 21,000 km

– 250,000 $
at 400 $ / t HFO

– 1,700 t CO_2
3.114 g CO_2 per g HFO

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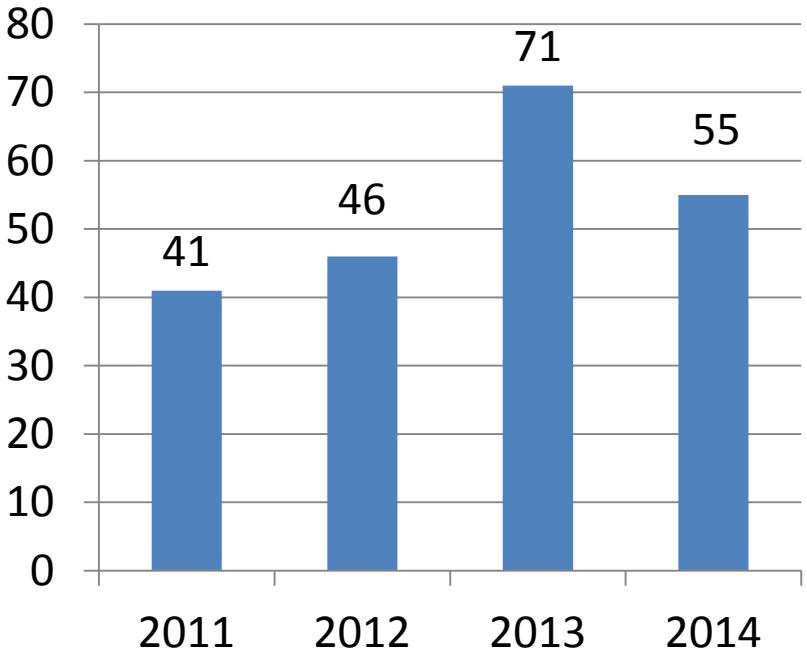
Arctic Shipping – Limiting Factors

- weather conditions
- transit time hard to calculate
- additional costs for icebreakers
- costly insurance

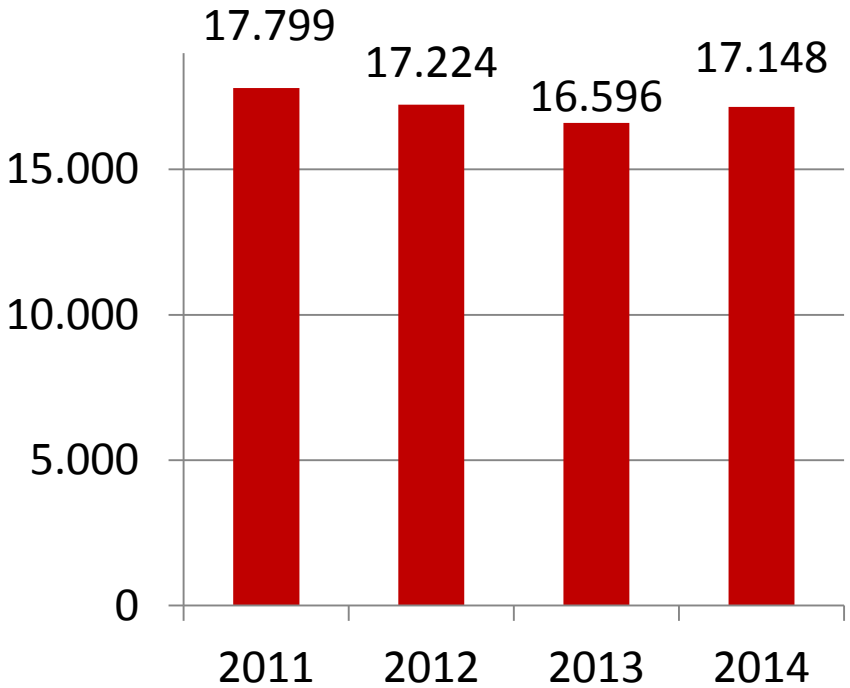
Transits

Northern Sea Route



Source: Northern Sea Route Information Office

Suez Canal



Source: Suez Canal Authority

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Example of a NSR transit

“NSR is an important route which saves time and cost, but it takes experience and the right equipment to succeed. Careful preparation, experience and professional voyage management were key to the successful completion.”

Joerg Roehl, CCO, Hansa Heavy Lift

VDR German Shipowners' Association

Opportunities: Tourism

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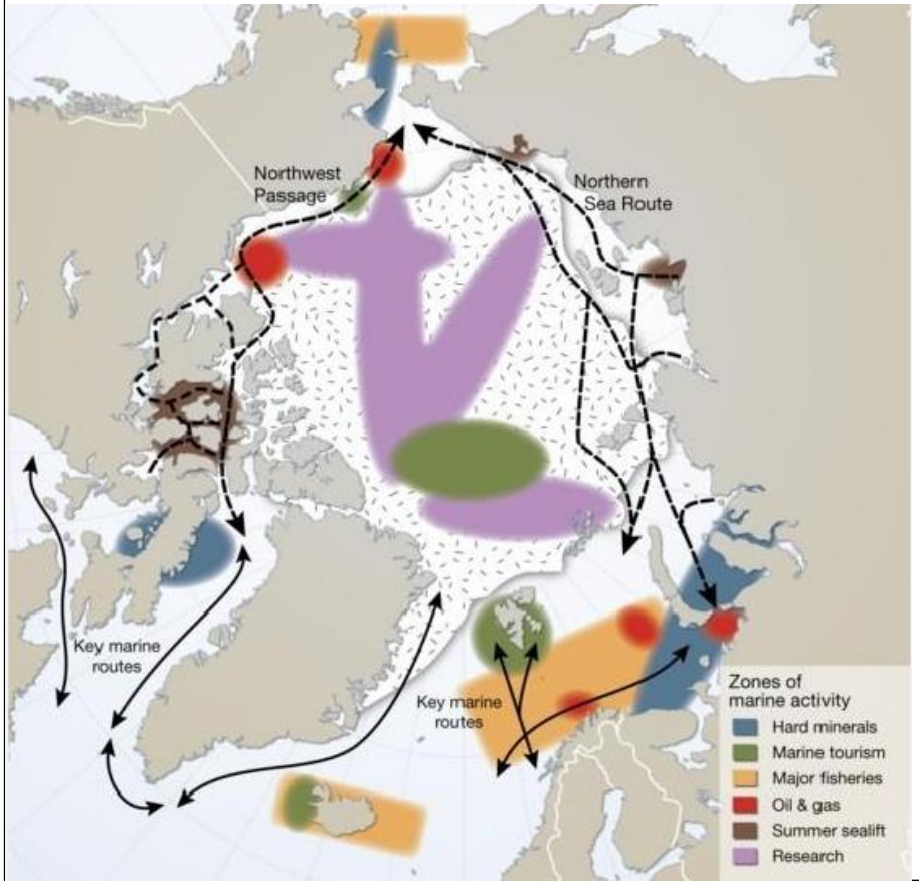
Opportunities: Marine shipping use of the Arctic



- Offshore support vessels (already significant)
- Extraction of natural and mineral resources
- Bulk shipping of raw materials

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Safetey issues

INTERNATIONAL MARITIME ORGANIZATION

Polar Code

- uniform regulatory framework
- safer ship operation
- protection of the polar environment

Accident with helicopter on ice breaker ARAON, Antarctica, December 2013

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