Challenges for Shipping in the Arctic – Practical Issues

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Hamburg, 14 March 2015
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Source: Wikimedia Commons
What it can be like sailing „rough seas“
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

- 8,000 km

- 4,200 km
Arctic Route – CO₂ emissions of a 2,500 TEU container vessel

via Suez:
40 tons of HFO/day * 34 days = 1,360 t HFO → 4.235 t CO₂

via NSR:
40 tons of HFO/day * 20 days = 800 t HFO → 2.491 t CO₂

Northern Sea Route (NSR): 13,000 km

via Suez Canal: 21,000 km

- 250,000 $ at 400 $ / t HFO
- 1,700 t CO₂
3.114 g CO₂ per g HFO
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
“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
Opportunities: Tourism
Offshore support vessels (already significant)

Extraction of natural and mineral resources

Bulk shipping of raw materials
Safety issues

Accident with helicopter on icebreaker ARAON, Antarctica, December 2013

Polar Code

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