

The New Northern Silk Road: New Arctic Sea Routes and the Future of Global Trade

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Choice of Shipping Routes

Nautic Evaluation

- Navigational safety
- Safety of the ship
- Hydrometeorological conditions
- Conditions of navigational equipment
- Political and economic restrictions

Economic Evaluation

- Transportation costs
- Time
- Ship parameters
- Transportation energy (fuel)
- Political and economic restrictions

Case study: From Rotterdam to Shanghai

- Through Suez Canal: 10,800 nm → 25%
- Around African Continent: 14,100 nm → 70%
- Through Panama Canal: 14,000 nm → 1%
- Northern Sea Route: 9,000 nm → 4%

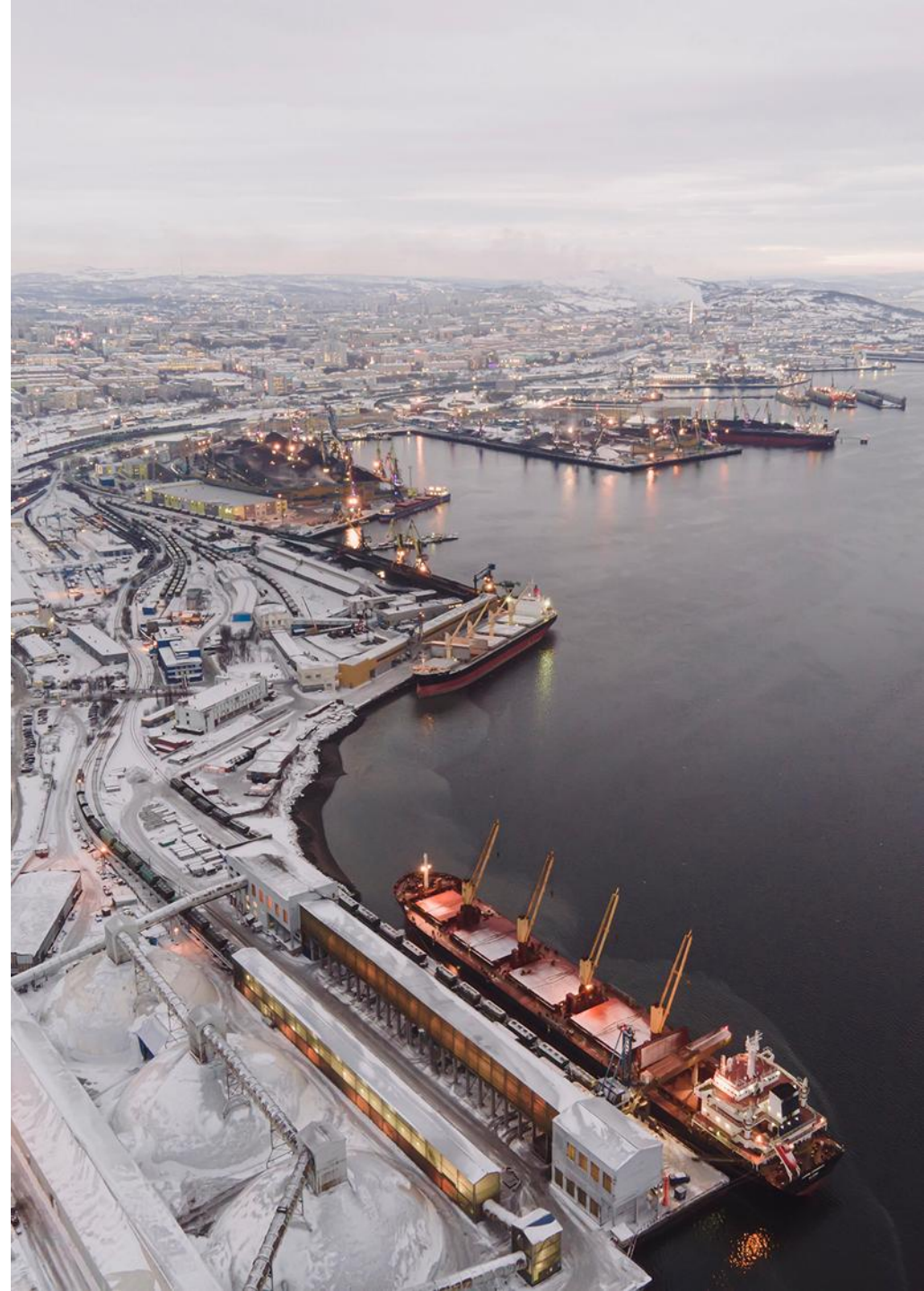
Comparison of Shipping Routes

Data	Suez Canal	Africa Route	Panama Canal	Northern Sea
Total distance	10,800	14,100	14,000	9,000
Distance limitations	140	-	80	2500
Speed, knots	17	17	17	17
Limitation sections	12	-	17	17
Waiting time, hours	10	-	10	-
Sailing time, days	27	35	35	29
Transportation price	1500	2200	2200	2600
Fuel consumption, tons	3050	4900	5000	3300
CO2 generation, tons	9800	15000	17000	11000
Index	1.16	1.34	1.50	1.60



External factors

- Suez Canal bottleneck issues (2021, Ever Given)
- Political insecurity in Red Sea, Suez Canal and surrounding states, need for diversification
- Prices sensitivity regarding fuels
- Climate change and longer ice-free seasons



Northern Sea Route

Data	Northern Sea
Total distance	9,000
Distance limitations	2500
Speed	17
Limitation sections	17
Waiting time, hours	-
Sailing time, days	29
Transportation price	2600
Fuel consumption, tons	3300
CO2 generation, tons	11000
Index	1.60



International cooperation – Key Actions

- Big Push in Arctic Infrastructure: Ports, terminals, icebreakers, and navigation aids
- Ensure Safety and Risk Management: Search and rescue, risk control and ice monitoring
- Streamline Regulations & Policies: Simplify permits, harmonize laws and provide shipping incentives
- Enhance Commercial Viability: Affordable insurance, cost-efficient logistics and strategic cargo partnerships
- Leverage Technology and International Cooperation: Ice-class ships, satellite navigation, data sharing and joint ventures

Thank you!



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