Shipping along the North-East passage: Recent trends, potential and challenges

Arild Moe

Energy Studies Institute, Singapore, 9-10 January 2012
Traffic developments

- Fall in traffic since mid 1980s
- Most cargoes are not transit
- 25 of 50 ports no longer operational
- 200 communities - especially in the East - closed.
Nuclear icebreakers – a prerequisite for extended navigation

Увеличение продолжительности навигации в западном районе Российской Арктики за период 1920-2006 в зависимости от роста мощности обеспечивающих ледоколов.

Aтомные ледоколы

Дизель-электрические ледоколы

Паровые ледоколы

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>5000</td>
<td></td>
<td>8000</td>
<td></td>
<td>10500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIII</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XII</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N л.с.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
<th>110</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIII</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XII</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Problem status

- No modernization of ports since 1990
  - Need for upgrading, excavation of deeper ports
  - Low quality or lacking facilities for waste disposal and collection of oil spills.

- Navigational systems and hydrographic support in critical condition

- Limited rescue capacity

- New ship designs promising, but still need for icebreakers

- Nuclear icebreaker fleet soon phased out....
Can an ‘icebreaker pause’ be avoided?

Diesel icebreakers also soon decommissioned
The changing ice situation

- Less and thinner ice, periodically no ice
  - September 2010 ice free
- Longer navigation season than before
- Route can be moved further north – avoiding shallowest straits with their size limitations
- More ice-strengthened vessels available
- More commercial interest in NSR?
Reach of diesel icebreakers

Reach of nuclear icebreakers

October - June

Source: Rosatomflot
The new wave of transit shipping

- **Beluga Shipping - transit summer 2009:**
  - Heavy lift cargoes Korea-Yamal

- **Sovkomflot September 2010:**
  - 100,000 ton voyage with gas condensate from White Sea to South-East Asia

- **Tschudi Shipping 2010**
  - Bulk carrier with iron ore from Kirkenes to China

- Not time sensitive cargoes
- Extensive icebreaker support
Big relative increase….

…. but still small volumes
2011: A breakthrough?

- More transits: 34
- Larger vessels:
  - 162,000 dwt – supertanker
  - 75,600 dwt bulk carrier
NSR – Russian goals and means

- 2011-2015: «Build and develop infrastructure for the Northern Sea Route making transit between Europe and Asia possible»

- 2016: 1 new nuclear “Vitus Barents”, 3 new diesel icebreakers
  - Status?

- Go ahead for 2 additional nuclear and 3 diesel icebreakers
  - Uncertainties: Financing, yards, time-frame
Reach of diesel icebreakers

Reach of nuclear icebreakers

July-September

Source: Rosatomflot
Political motivation for Russian financing of NSR

- NSR as a continuous national transport infrastructure that should be maintained and developed
- Important element in jurisdictional claims in the North
- Fear of losing control over NSR
  - Interpretation of UNCLOS Art. 234
    - International passage or Russian control
- Large discrepancy between Russian state ambitions and willingness to provide state funding
  - NSR is only one instance of neglected infrastructure

- New law
  - Possibility of extending NSR region, increasing income base of Atomflot
  - Still icebreaker monopoly
  - Centralised NSR administration
Internal disagreement

- Western part of NSR: Bulk of shipping activities
  - Struggle between Atomflot and main cargo owner, Norilsk Nickel
- Increased shipment of hydrocarbons expected, Yamal peninsula, Pechora Sea
  - but are nuclear icebreakers required?
- Shipowners want to pay only for the services they use
Key issue: Tariffs

- Ice breaker fee – traditional approach
  - Cover (operating) costs of icebreaker fleet and infrastructure
  - Prohibitive fees => reduced shipping => reduced income

- New approach: Competitive pricing
  - Still important source of income for icebreaker fleet
  - Atomflot still maximises the requirement for nuclear icebreaker services
  - Compulsory fee
Challenges for international shipping

- Are the new tariff terms sustainable?
  - Cost of alternative routes - Suez

- Are conditions predictable?
  - Is infrastructure able to handle more traffic?
  - Will sufficient icebreaker capacity be available

- Will fees be reduced if icebreaker support only through straits is sufficient?

- Will Russia insist on keeping year round transit capacity (and have users pay for it even if they don’t use it)?
Thank you for your attention!

arild.moe@fni.no