Arctic maritime activities in changing climatic and market conditions: Impacts on local community security and adaptation

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First round-trip in NEP

(Photograph: Oyoyoy)
## Effects of increased shipping activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipping activity in general</strong></td>
<td>Oil spills, waste water, rubbish, development of harbors and other infrastructure, ice breaker activity</td>
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<tr>
<td><strong>Cruise tourism</strong></td>
<td>Increased number of visitors to heritage sites</td>
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<td></td>
<td>Increased number of boats and helicopter landings</td>
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<td></td>
<td>Infrastructure on shore</td>
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<td></td>
<td>On-site accidents</td>
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<td></td>
<td>Underwater equipment, platforms, pipes, &amp; ports</td>
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<tr>
<td><strong>Shipping associated with</strong></td>
<td>Bottom trawling</td>
</tr>
<tr>
<td><strong>prospecting and exploration</strong></td>
<td>New infrastructure</td>
</tr>
<tr>
<td><strong>Fisheries and military activity</strong></td>
<td>Operations</td>
</tr>
</tbody>
</table>

*AMAP/CAFF/SDWG 2013*
Positiv impacts

- Improved access to goods and services, including medical
- Increased awareness about heritage in the wider society
- Economic, employment and income opportunities
- Stimulus to research and financial support
- Funding for cultural resource surveys
- New opportunities for fishing, market for fish
- Discovery of underwater sites
- Infrastructure
## Negative impacts from increased shipping activities

| Shipping activity in general | Impact on archeological sites  
Demographic and cultural change (due to workforce influx)  
Social and health issues  
Loss of natural resource base and traditional knowledge |
|-----------------------------|------------------------------------------------------------------|
| Cruise tourism              | Impact on surface, increased erosion, vandalism, amateur surveys, etc.  
Destruction of sites and objects  
Loss and damage of heritage sites and historic properties on land and underwater |
| Shipping associated with Prospecting and exploration | Direct impact on shoreline and underwater sites |
| Fishing activity            | Disruption of Coastal fisheries by large/scale fisheries |
| Military activity           | Restriction on local use  
*AMAP/CAFF/SDWG 2013* |
Vaygach Island

Wikipedia.org
Safe navigation requires

• Land-based infrastructure including search-and-rescue facilities
• The availability of reliable maps and charts
• Traffic control
• Communication capacity
• Forecast of daily sea-ice variability
• Forecast of weather conditions
• Features of the delivery system (with Just-In-Time system ships are being pressed for time to deliver)
• Involvement of local communities in SAR activities
IMO Criteria for Sensitive Sea Areas

• Social and economic dependency: use of living marine resources of particular importance, and dependence on access

• Human dependency: Particular importance for traditional subsistence, food production, cultural resources

• Cultural heritage: presence of significant historical or archaeological sites
Sensitive Sea Areas in Arctic Norway. Social, cultural and economic criteria.

- Cultural heritage zone
- UNESCO World Heritage Sites
- Settlements
- Subsistence fisheries (human dependency area)
- Social, economic and human dependency areas
- Marine protected areas (social and economic)
- Coastal protected areas (social and economic)
- Vulnerable areas Barents Sea (social and economic)

Map: Camilla Brattland, NIKU

AMAP/CAFF/SDWG 2013
IMO Polar Code

The Polar Code ratification is due to 2017

• Adoption of the safety section (November 2014)
• Adoption of the environmental component (May 2015)
Co-management as an analytical approach

• What is co-management and why is it important here?
• How are coastal communities involved in development of the Polar Code?
• Which communities are particularly dependent on the interaction with the sea and its resources?
• What do we know about traditional use areas and how are these included in regulations and agreements?
• Are there particular concerns for indigenous peoples?
References


Thank you for listening!

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