The Kingdom of Denmark’s Challenges & Opportunities in the Arctic

6th Symposium on the Impacts of an Ice-Diminishing Arctic on Naval and Maritime Operations 2015

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The impact of the diminishing ice on the operational environment
Seen from the perspective of the Danish Defense
TASKS

JOINT ARCTIC COMMAND

- Military defense of Greenland and Faroe Islands
- Surveillance and maintenance of territorial sovereignty
- Search and Rescue
- Anti-pollution and oil spill recovery
- Police support
- Fishery Protection
- Hydrographical surveys of Greenland
- Support to local communities
Analysis of the Danish Ministry of Defense’s Future Missions and Tasks in the Arctic.

Identify future tasks and needed capabilities within Joint Arctic Command Area of responsibility and interest.

Serve as basis for future initiatives within the present Defense Agreement and in relation to future defense agreements.

The results of the analysis will be put down in a report which will include recommendations of possible ways and means to strengthen the Ministry of Defense’s operations in the Arctic.

**Whole of Government (Kingdom) Approach**
Greenland and the Faeroes, 30+ departments and agencies, 130+ analysts
Mission-areas in the analyses

- Surveillance (land, sea, air, sub-surface)
- Upholding sovereignty
- Search and rescue
- Pollution control/oil spill response
- Safety at sea
- Support to civilian society
- Local recruiting
- Organizing volunteers
- Tests and trials
Our mandate

Recommend within **which areas** and at **what pace** the Ministry of Defence’s engagement in the Arctic **shall be strengthened** including looking at:

- Potential new operational tasks
- Infrastructure
- Logistic support
- Command and control systems
- Communications systems
- Training and education
- Involvement of local population
- Cooperation with other ministries and agencies
- Cooperation with relevant Arctic nations
- Cooperation with civilian stakeholders
- Satellites
- Aircraft incl. fighters
- Unmanned Aerial Vehicles
- Data processing and exchange
- Maritime survey and mapping
- Conducting test and trials to compliment the analysis
For each mission-area:

- Future task
- Future level of ambition
- Propose needed capabilities
Tests and trials
Recommendations

- Initiatives recommended to be implemented in the period 2015-2017

- Initiatives recommended to be implemented in the period 2018-2027

- Recommended initiatives outside the Danish Ministry of Defence’s area of responsibility

- Perspectives – recommendations for further analysis
Analysis concerning the Danish MOD’s future tasks in the Arctic

Flow chart for analysis and recommendations

Operational tasks
- Ensuring and maintaining sovereignty
  - Land
  - Sea
  - Air
  - Sub surface

Support to the civilian society
- Fishery inspection
- Others: EOD, Support to the police, Science, Transportation of passengers, Medical assistance, VIP transport

Search and Rescue
- Maritime SAR
- Aeronautical SAR
- Successive operations

Maritime Environmental Protection
- Surveillance
- Response capabilities

Safety at Sea
- Survey
- Reporting systems
- Safety control
- Ice service
- Notice to mariners
- MAS

Every subject under each operational task will undergo a separate operational analysis including identification of level of ambition and means to reach the ambition.

Operational analysis
- Strategic analysis
- External analysis and reports
- Lessons from operations, exercises, demonstrations
- Comparisons with other nations

Initial conclusion
- Development and trends
- Ability to meet current operational requirements

Completed analysis and recommendations
- Domain awareness
- New concepts for utilizing existing capabilities
- Cooperation: - Within the Kingdom - Across government - Bilateral - Int. organizations
- Procurement
- Production
- Utilization
- Availability
- Cost
- Quality
- Reliability
- Safety

Completed analysis and recommendations
- Operational effectiveness and flexibility
- Ability to accomplish the task
- Ability to be used for other purpose incl. non-Arctic

Par:al conclusion
- Level of ambition to meet the future operational tasks including change concept

Bespoke analysis
- Involvement of Greenland and the Faroe Islands
- Service in Greenland and the Faroe Islands

Ways and means
- Education and training

Partial conclusion
- Concerning identified ways and means to meet level of ambition

Conclusions and recommendations
- On the basis of the synthesis recommended ways and means to meet the future operational tasks in the Arctic are grouped into four categories

Synthesis
- All identified ways and means are held up against and prioritized by the criteria listed below in an overarching analysis: Strategic trends
- National priorities
- Strategic analysis
- Different cost in the development of the operational tasks
- Economy
- Cost benefit analysis
- Dual use
- Talented staff
- Development of joint projects (with other ministerial areas or Danish Ministry of Defense)
- Synergy in the support chain - Infrastructure and logistics - Education and training

Initiatives which are recommended to be implemented in the period 2015 - 2017

Initiatives which are recommended to be implemented in the period 2018 - 2027

Recommended initiatives outside the Danish Ministry of Defense’s area of responsibility

Perspectives
- Development of detailed project plans and business cases

Educa:lon and training
- Infrastructure and logistics
- Same structure as above

Operational ef:ctiveness
- Same structure as above

Conclusions
- Ability to meet the current operational requirements
- Comparison with other Arctic nations

Operational effectiveness and flexibility
- Ability to accomplish the task
- Ability to be used for other purpose incl. non-Arctic

Perspectives
- Development of detailed project plans and business cases

The suggested initiative fails to meet the criteria in comparison with the rest

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Potentials
Potentials
Economic opportunities in the Arctic
With great opportunities comes great responsibilities
Diminishing ice
Impact on Danish Defence Operations in the Arctic
The Ice-Diminishing
The North Atlantic Gyre
Ice around Greenland

Monthly Mean Ice Concentration
from Greenland Overview Ice Charts 2000 - 2010
Late July 2013 vs. 2014
Observations

- Changes in the operational environment in the maritime domain of Greenland is not happening as quickly as we initially thought.

- Consequently the diminishing ice in Arctic as a whole has so far had limited impact on the activities in and around Greenland.

- Commercial activities in Greenland are very sensitive to changes in and expectations to the world’s market prices.

- In the short term tourism and fishery hold the greatest economical potentials.

- Due to the unpredictability in the changes in the activities in and around Greenland and a limitation in resources the Danish Defense’s future capabilities in the Arctic will have to be very flexible in every possible way.

- To support and enable this flexibility Maritime Domain Awareness and communication will be paramount for future operations in the Arctic.

- Great potentials in achieving a higher operational effectiveness and flexibility lie within the ability to identify opportunities of cross agencies national and international cooperation.
2020: The territorial dispute over Hans Island is resolved by the melting of the Arctic ice cap.