Arctic Marine Shipping Assessment (AMSA): Status for the Senior Arctic Officials

Arctic Council SAO Meeting
Narvik, Norway

29 November 2007

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Vice Chair, PAME & Chair, AMSA
U.S. Arctic Research Commission ~ Anchorage
“Stricken cruise ship off Antarctica evacuated” MSNBC - 11/23/07
Arctic Council
Arctic Marine Shipping Assessment (AMSA)

Reykjavik Declaration, 4th Ministerial (Nov 2004)

“Request PAME to conduct a comprehensive Arctic marine shipping assessment as outlined in the AMSP under the guidance of Canada, Finland, and the United States as lead countries and in collaboration with the EPPR working group and other working groups of the Arctic Council and Permanent Participants as relevant.”
Arctic Marine Shipping Assessment (AMSA) Key Points

- AMSA Natural Follow-on to:
  - Arctic Climate Impact Assessment (ACIA)
  - Arctic Marine Strategic Plan (AMSP)

- Circumpolar, yet Regional and Local Focus

- Use Large Marine Ecosystems (LMEs) Concept

- Global Maritime Industry ~ Many Non-Arctic Actors

- Focus: Marine Safety & Arctic Marine Environmental Protection

- Member State Commitment & Support with Data Collection Effort (Survey to SAOs)
AMSA Final Report Structure
Chapter Outline & Recent Accomplishments

Chapters

1: Introduction & Geography (US)
   Drafting Underway

2: History of Arctic Marine Transport & Governance (US, CAN)
   Drafting Underway for All Sections
   ‘Governance Team’ Experts from Dalhousie University in Halifax

   Data at 75%; More Required from 2 Arctic States; 2004 Adjustments
   Formatting for GIS; Exploring Mapping Options
Arctic Marine Vessel Activity ~ AMSA Ship Types ~ 75%

- Tankers ~ Bulk Carriers
- Container Ships ~ Tug-Barge Combinations
- Fishing Vessels ~ Ferries ~ Passenger Vessels/Cruise Ships
- Research Vessels ~ Offshore Supply Vessels
- Icebreakers (Government & Commercial) ~ Others
4: The Human Dimension: Town Hall Meetings & Impacts
(Temporary Co-Leads: US & CAN) (Future: US & DEN)

Town Hall Meetings in Canada, Iceland, Norway, US
More Planned in Canada, US, Greenland, Norway
Survey in the Russian Arctic (RAIPON)

5: Scenarios & Futures (2020/2050) (US)
Scenarios Workshops San Francisco (April) & Helsinki (July)
Scenario Narratives (Stories) in Draft Form
3 Regional (2020) Case Studies Underway

6: Environmental Impacts ~ Current & Future (NOR, RU)
Co-Lead Authors Identified by Norway & Russia
Workshop at Arctic Frontiers ~ Contributing Authors: US & CAN
Input from Oil & Gas Assessment & Arctic LMEs (from PAME WG)
Scenarios on the Future of Arctic Marine Navigation in 2050

**Arctic Race**
High demand and unstable governance set the stage for a “no holds barred” rush for Arctic wealth and resources.

**Polar Lows**
Low demand and unstable governance bring a murky and under-developed future for the Arctic.

**Arctic Saga**
High demand and stable governance lead to a healthy rate of development, includes concern for preservation of Arctic ecosystems & cultures.

**Polar Preserve**
Low demand & stable governance slow development in the region while introducing an extensive eco-preserve with stringent “no-shipping zones”.

AMSA/GBN Scenarios Workshops ~ April & July 2007
The Future of Arctic Marine Navigation in 2050
7: Arctic Marine Infrastructure & Anticipated Needs

(Co-Leads: US, CAN, Iceland, EPPR, RU)


Ottawa Workshop 29-31 Oct 07: Drafting Underway

Baltic Case Study Underway (Finland)

Arctic Incidents Workshop ~ 18-20 MAR 08 (US-NOAA)

8: Findings of the Assessment (All Authors)

Compilation Underway

First Review June PAME Meeting

AMSA Research Agenda, Appendices
**Chapter 4 ~ Human Dimension**

Town Hall Meetings ~ Review & Analysis
Outcomes from Chapters 2,3,5,6, & 7
Current Marine Uses (Arctic States & PPs)

**Chapter 5 ~ Scenarios and Futures**

Scenarios to 2050
   *Framework, Assumptions, Key Drivers*
Regional Case Studies to 2020
   *Bering Strait (US)*
   *NW Russian/Norwegian Offshore (FIN ~ ARCOP)*
   *Canadian Arctic (CAN)*
Future of Arctic Marine Tourism (?)
Arctic Sea Trends (ACIA, IPCC, Regional) ~ Review
Comments ~ Trans-Arctic Plausibility (?)
AMSA Timeline
November 2007- Spring 2009

JAN
Arctic Frontiers Chap 6 Env Impacts Workshop

MAR
UNH Arctic Incidents Workshop

APR
AMSA Data Workshop

MAY
Regional Case Studies

Continuing: AMSA Town Hall Meetings DEC 07- MAY 08

JUN
PAME & AMSA Meetings Chap 1,2,3,5 Governance Workshop

* Continuing: PAME Human Dimension Chap 6 Env Impacts

AUG
Chap 7 Infrastructure

DEC/JAN
AMSA Findings to PAME

SPRING
AC Ministerial Recommendations & Findings: PAME to SAOs

2009

NOV
Findings to PAME to SAOs

NOV
Chap 4- Human Dimension Chap 6- Env Impacts

MAY
Regional Case Studies
Potential AMSA Findings

Primary Driver ~ Regional & Global Natural Resource Development
Lack of Integrated Governance-Regulatory Framework
Continued Sea Ice Retreat ~ Increased Access
   Winter Arctic Sea Ice Cover Remains
New Ship Technologies ~ Allow Greater Access & Independent Operations (No Convoys)
Global Maritime Industry ~ Key Stakeholders
Minimal Arctic Infrastructure to Support Expanded Marine Activity & Provide Adequate Safety Net
Sectors: Oil & Gas, Hard Minerals, Tourism, Fishing & Water
   Greatly Enhanced Monitoring Required
Intense Development ~ NW Russia & Norwegian-Barents-Kara Seas
Balance ~ Freedom of Navigation with Coastal State Marine Safety & Environmental Protection Interests
Lack of Experienced Mariners
Challenges

- Timeline ~ Spring 2009
- Capacity ~ Require Experts / Contributing Authors for Chapters 4,5,6 & 7
  - Engagement of the Arctic State Governmental Maritime Organizations
- Complete AMSA Data Survey & Conduct Analysis
  - Funding ~ Editing and Production
The Maritime Arctic of the Future?

Improving Coastal Access 2007 to 2030

Summer 2025 ?
Summer 2040 ?
Fishing

Summer 2030 ?
Fishing

2007 to 2030+

by Mapping Solutions, Anchorage 2005 for L. Brigham, USARC
CHALLENGES & RISKS

Northwest Passage

Central Arctic Ocean Route

Northern Sea Route

MULTIPLE ROUTES & MODES

Intra-Arctic Route

Sea Ice

Cold Climate Ice-Free Ops

Sea Ice

Draft

Sea Ice

Draft

Sea Ice

Draft