



REGULATORY CHALLENGES IN THE HIGH NORTH

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Norges
Rederiforbund
Norwegian
Shipowners'
Association


Oslo, 26th of September 2011



More than **90**
percent of
international trade
moves across the
oceans



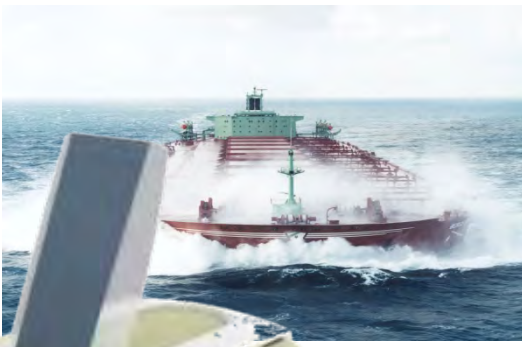
A COMPLETE MARITIME CLUSTER

- 
- A complete cluster of maritime activities
 - Controls 5 per cent of the world merchant fleet
 - World's second largest fleet of offshore service vessels
 - 20 per cent of the world's ship insurance market
 - Classifies 17 per cent of the world fleet
 - World's leading shipping banks
 - Leading manufacturers of ship equipment
 - A number of the world's leading ship broker firms
 - Cutting edge maritime R&D
 - 60 000 seafarers, of which 30 per cent Norwegians
 - Highly competent maritime authorities

NORWEGIAN SHIPOWNERS' ASSOCIATION



LEADING THROUGH CENTURIES



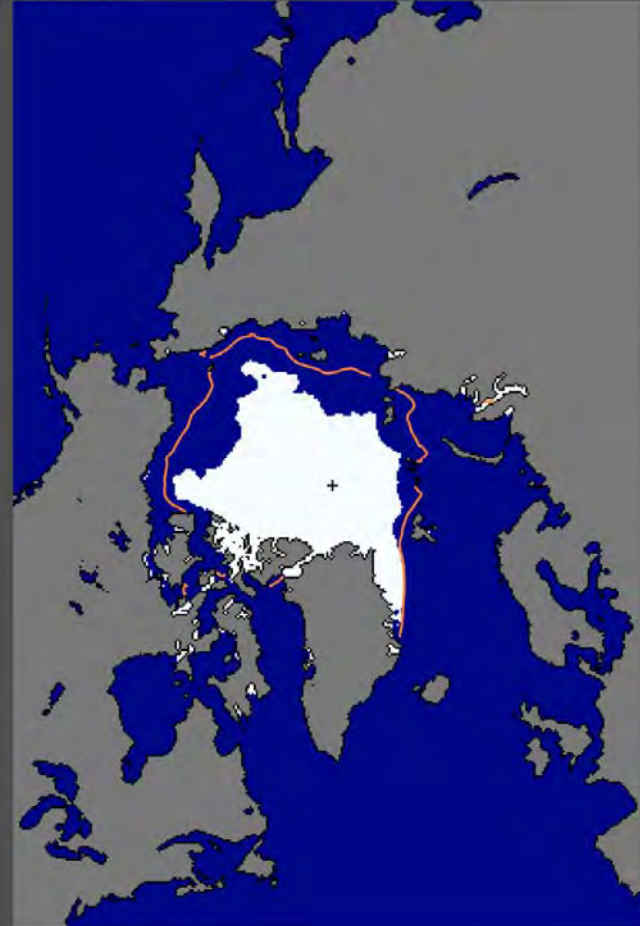


ARCTIC – A CLIMATE FOR CHANGE:

- Temperature is rising
- The sea ice is melting
- The inland ice is melting
- The snow cover is decreasing
- The flow of water in rivers increasing
- The salt content in oceans lessen
- The tundra defrost



Sea Ice Extent
09/21/2011



National Snow and Ice Data Center, Boulder, CO

median
1979–2000



MARITIME BUSINESS OPPORTUNITIES

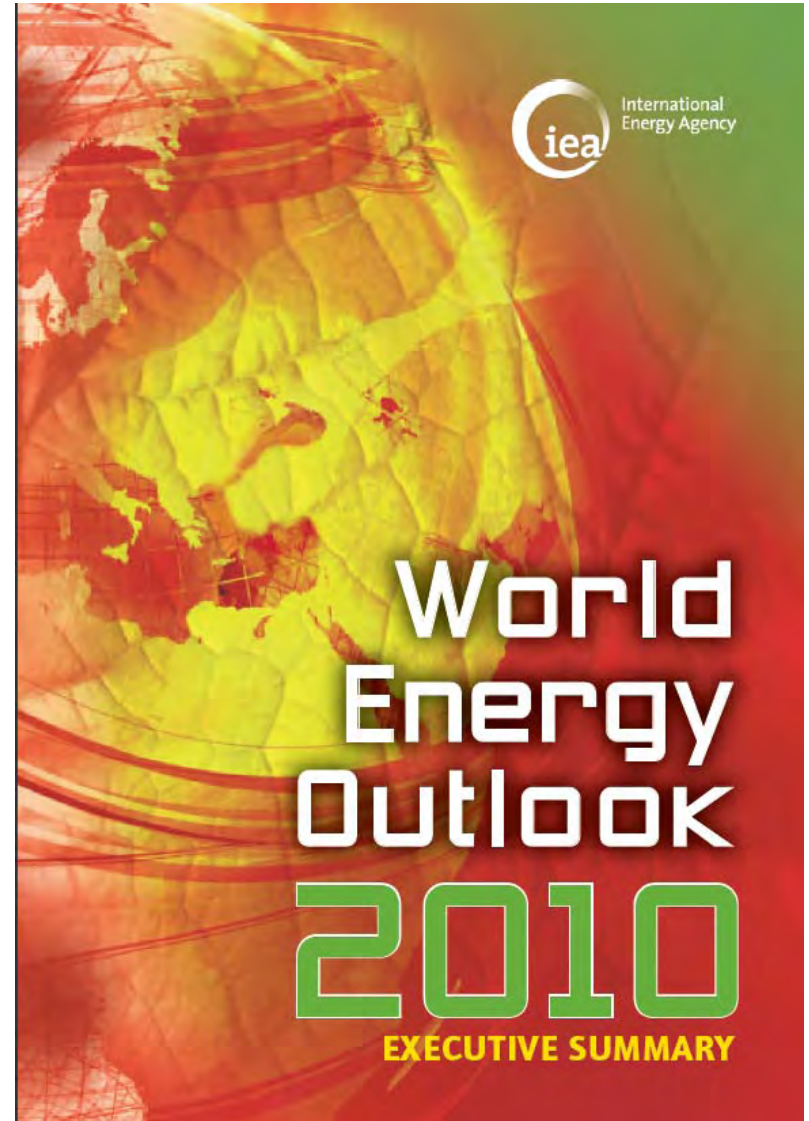


- Maritime offshore
- Transarctic transport
- Arctic destination



36 % increase in global demand for energy between 2008 and 2035

International Energy Agency (IEA)





OIL AND GAS RESSOURCES

- 22% of the world's undiscovered oil and gas are in the Arctic.
 - ✓ 90 billion barrels of oil
 - ✓ 1,670 trillion cubic feet of natural gas
 - ✓ 44 billion barrels of natural gas liquids
- This equates to approximately 13% of the world's undiscovered oil and 30 % of global undiscovered gas.

*U.S. Geological Survey (USGS July 2008) Circum-Arctic Resource Appraisal (CARA)

CUTTING EDGE MARITIME CONCEPTS AND TECHNOLOGIES



ARCTIC DESTINATION TRANSPORT

...NEW INFRASTRUCTURE FOR
ENORMOUS NATURAL RESOURCES



THE NORTHERN SEAROUTE

EXTREME WEATHER – LONG DISTANCES





ARCTIC REGULATORY FRAMEWORK

- Global solutions

- UNCLOS

- MARPOL

- SOLAS

- Polar Code



- Arctic Council

- Search & Rescue



ARCTIC COUNCIL

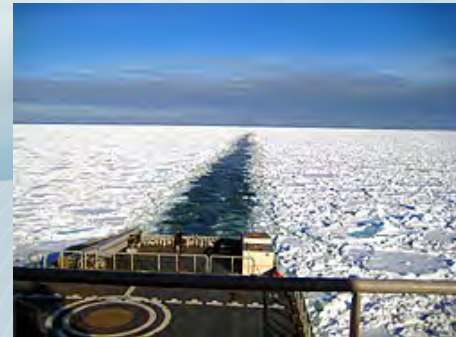


REGIONAL CHALLENGES

- **RUSSIA - NORTH EAST
PASSAGE**
- **CANADA - NORTH WEST
PASSAGE**
- **NORTHERN CANADA VESSEL
TRAFFIC SERVICES ZONE
REGULATION (NORDREG)**



THE NORTHERN SEA ROUTE EXTREME CONDITIONS




- Extreme weather and temperatures
- Ice
- Darkness
- Long distances
- Very sensitive areas
- Environmental challenges
- Safety challenges



- Better infrastructure
- Tailored contingency
- Specialised vessels
- Specialised competence

ROADMAP TO THE HIGH NORTH

- 
- Environmental commitment
 - Climate impacts
 - Centuries of shipping experience
 - Barents
 - Arctic
 - Highest safety standards

THANKS FOR YOUR ATTENTION!

