

# Shipping in the Arctic – Royal Arctic Line

Short introduction to Royal Arctic Line A/S –

Challenges when operating in Arctic waters and areas.

Change and future in Arctic

And of course, a lot of pictures



**Concession on maritime cargo transport to and from Greenland as well as internal in Greenland**

**Passenger transport internal in Greenland**

**Operate 13 harbour terminals in Greenland and one in Denmark**

**Operate 11 vessels, and 5 new buildings in order**

**Close to 750 employees in total**

**We are a transport Company !**



Port of Nuuk

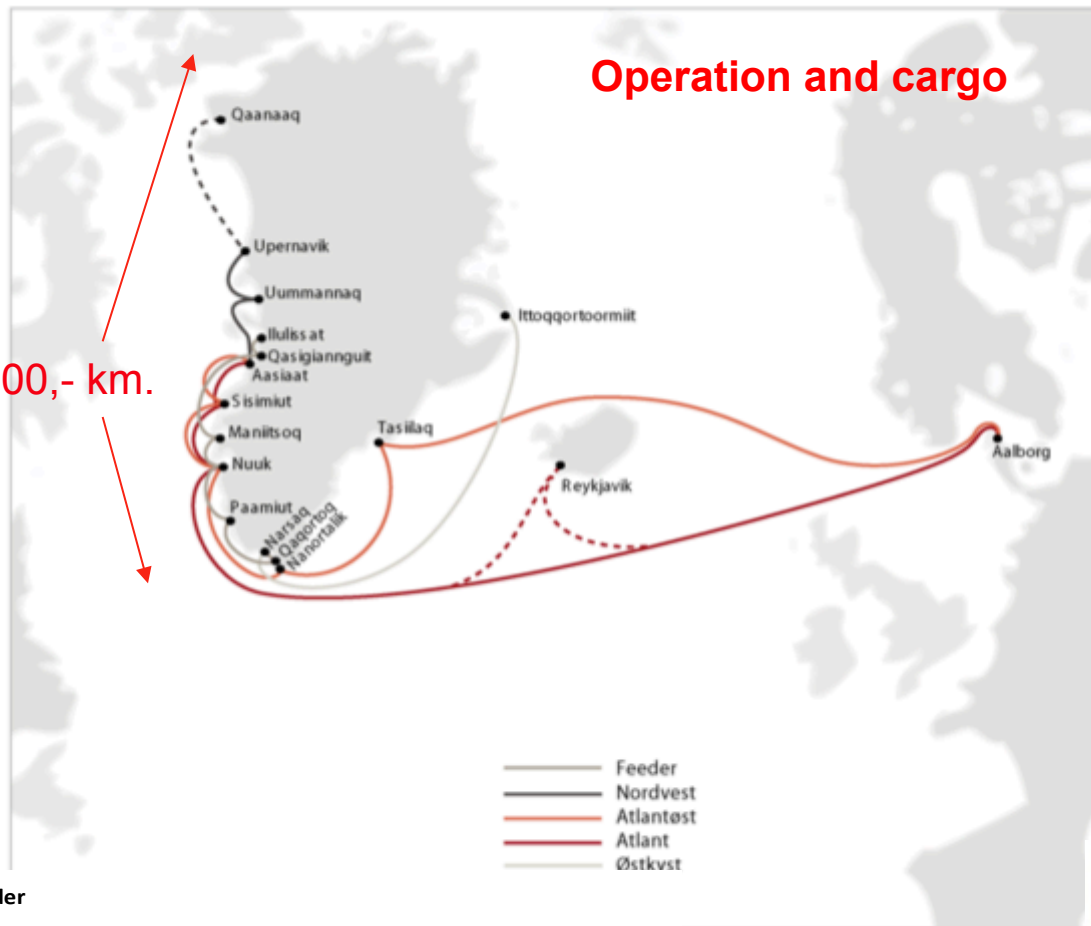
Basic Port - Aalborg

## Operation and cargo

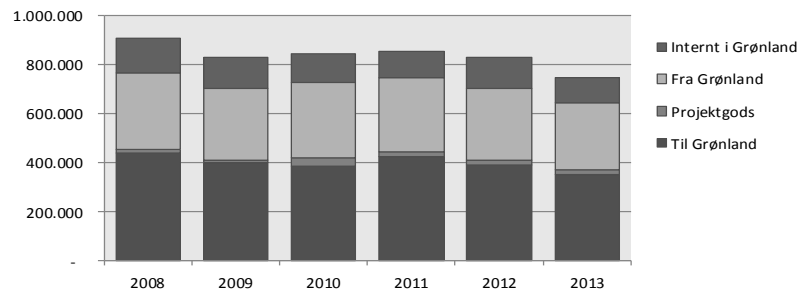
## Greenland:

- App. 57.000 inhabitants.
- App. 44.000 km Coastline
- 13 Towns
- 57 Settlements
- No roads between towns and settlements

App. 2.500,- km.

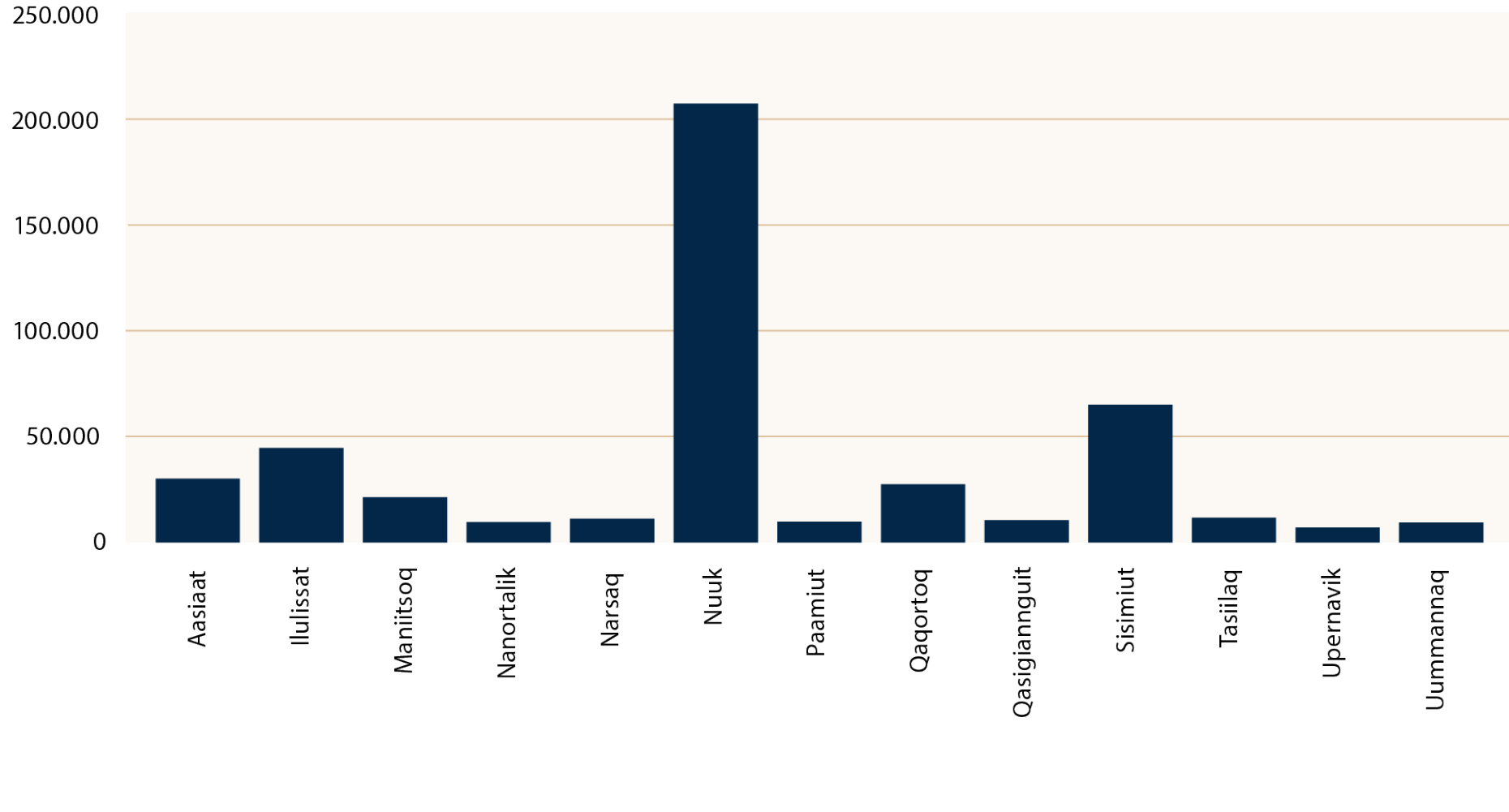


Godsmængder



# The drivers in Greenland

Godsmængder i m<sup>3</sup> til følgende grønlandske byer





New Buildings in order

Delivery in 2/3 Q 2015



# Challenges when operating in the Arctic





# Logistic in Greenland



Port of Nuuk



# Logistic in Greenland



Port of Tasilaq



# Logistic in Greenland



Small settlement, West Coast

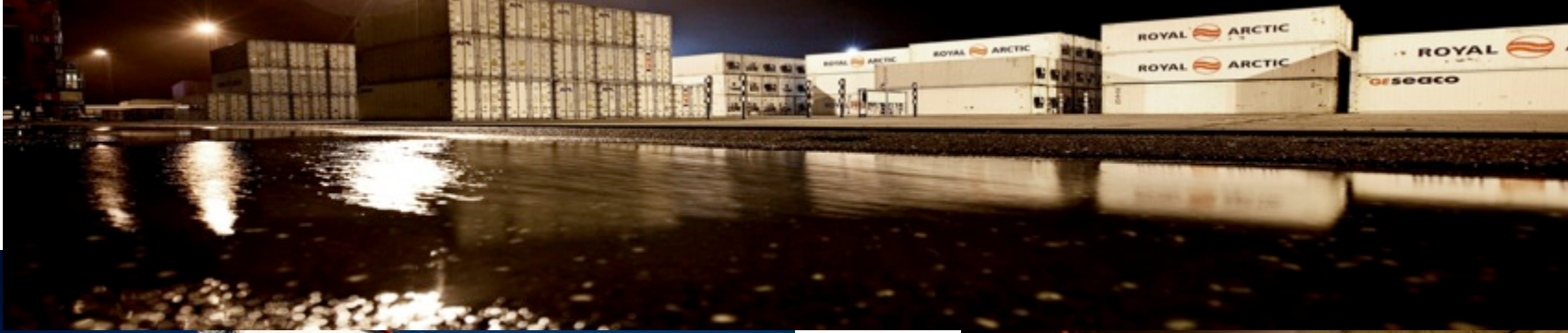


# Logistic in Greenland





# Port operations



# 1. Year Ice - Discobay





## Multi year ice – Polar ice



# Glacier Ice – Freshwater



Discobay –spring 2014



## Different types of ice – possible damage to hull



## Umanag area – ice is local infrastructure

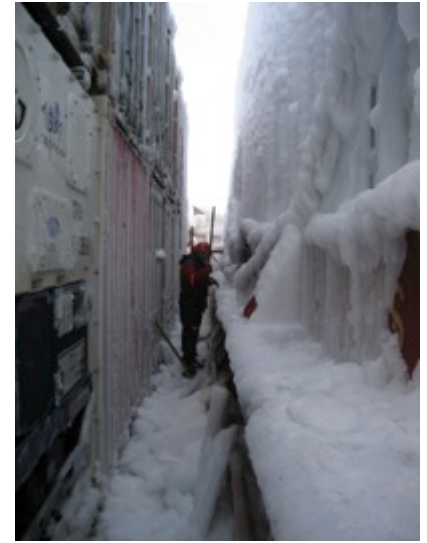
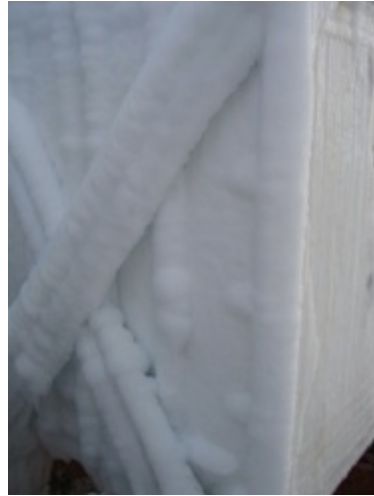




## Change of wind – port of Qaqortoq 2 hours difference



## Icing, affect stability and cargo operation

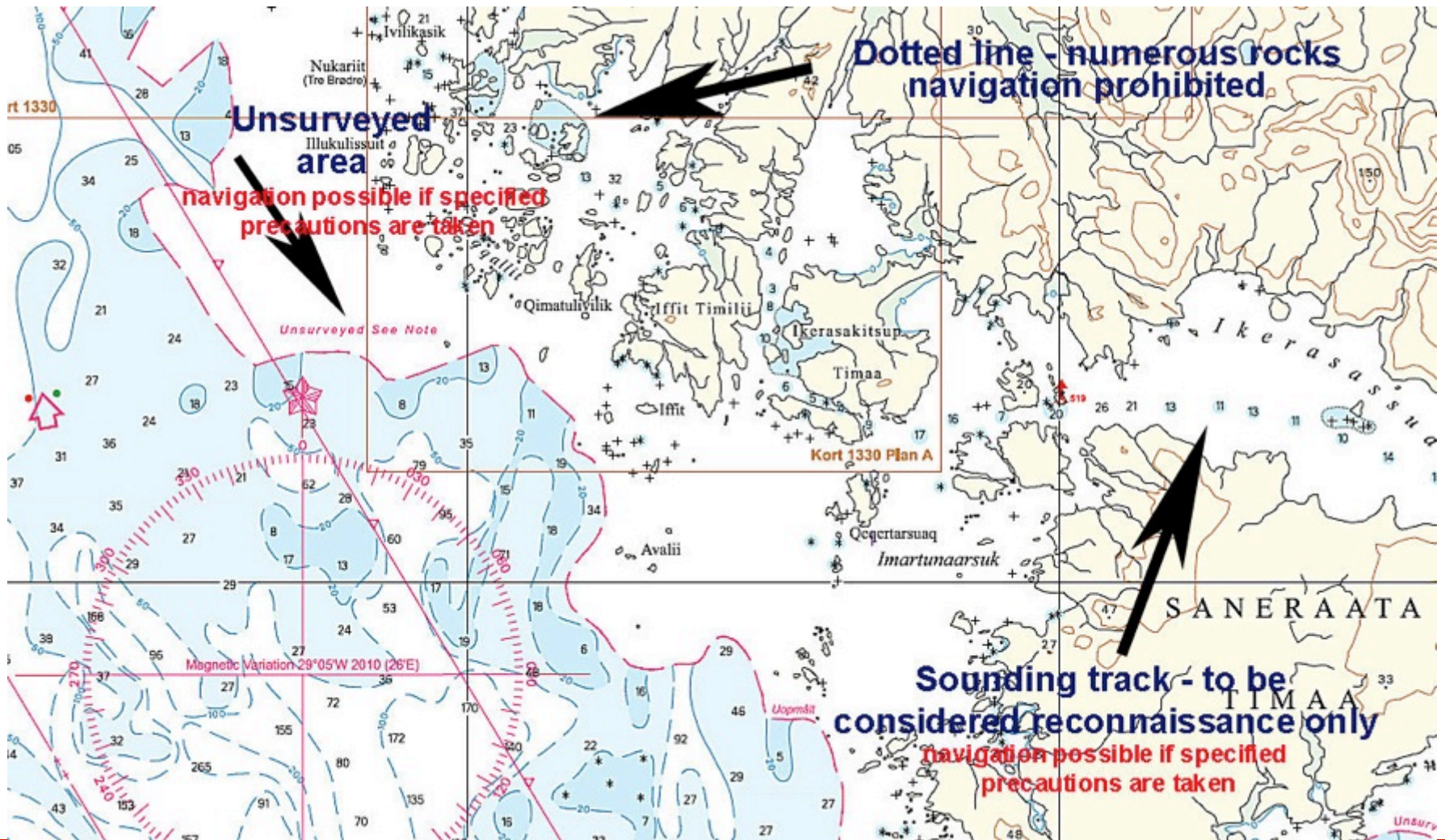




# Severe Icing – The crew and vessel must be “Winterised”



# Navigation is difficult

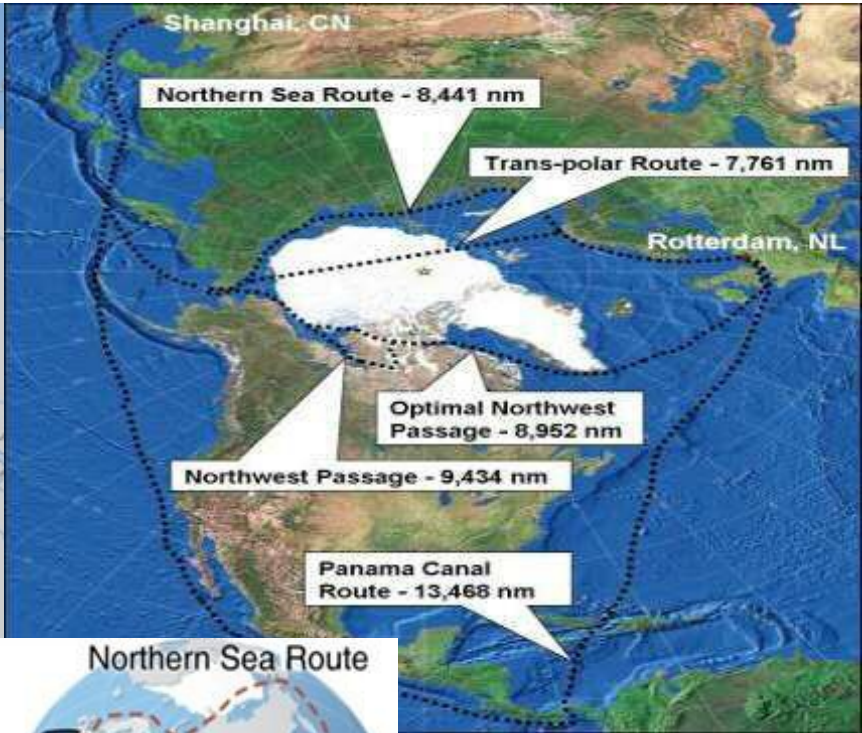
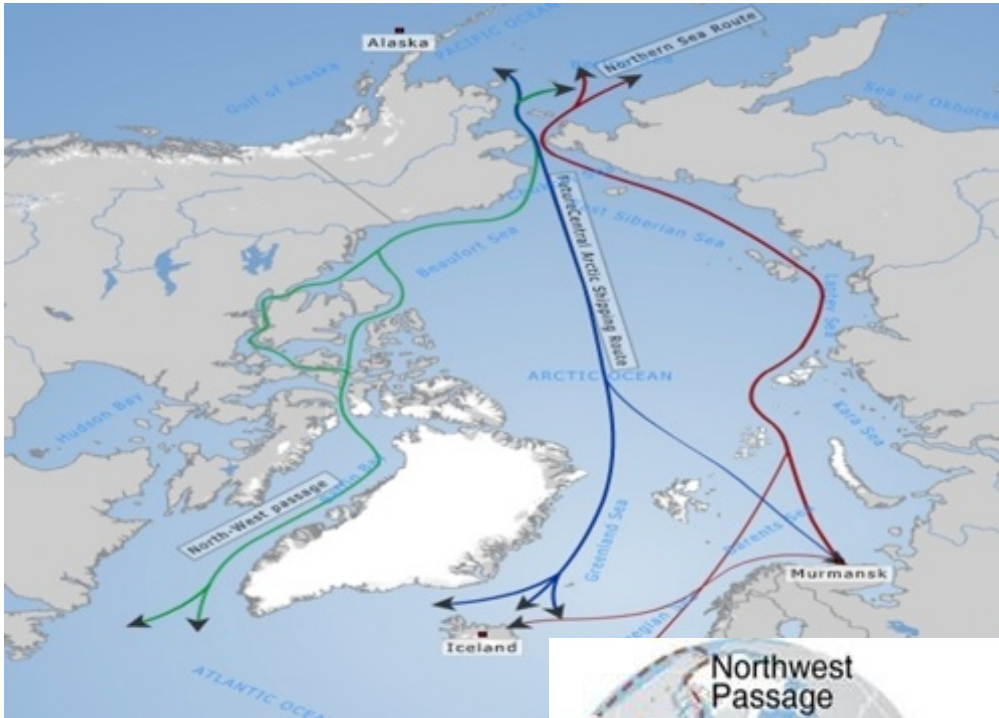




## Navigation hazard – Lack of local knowledge



# Future in the Arctic

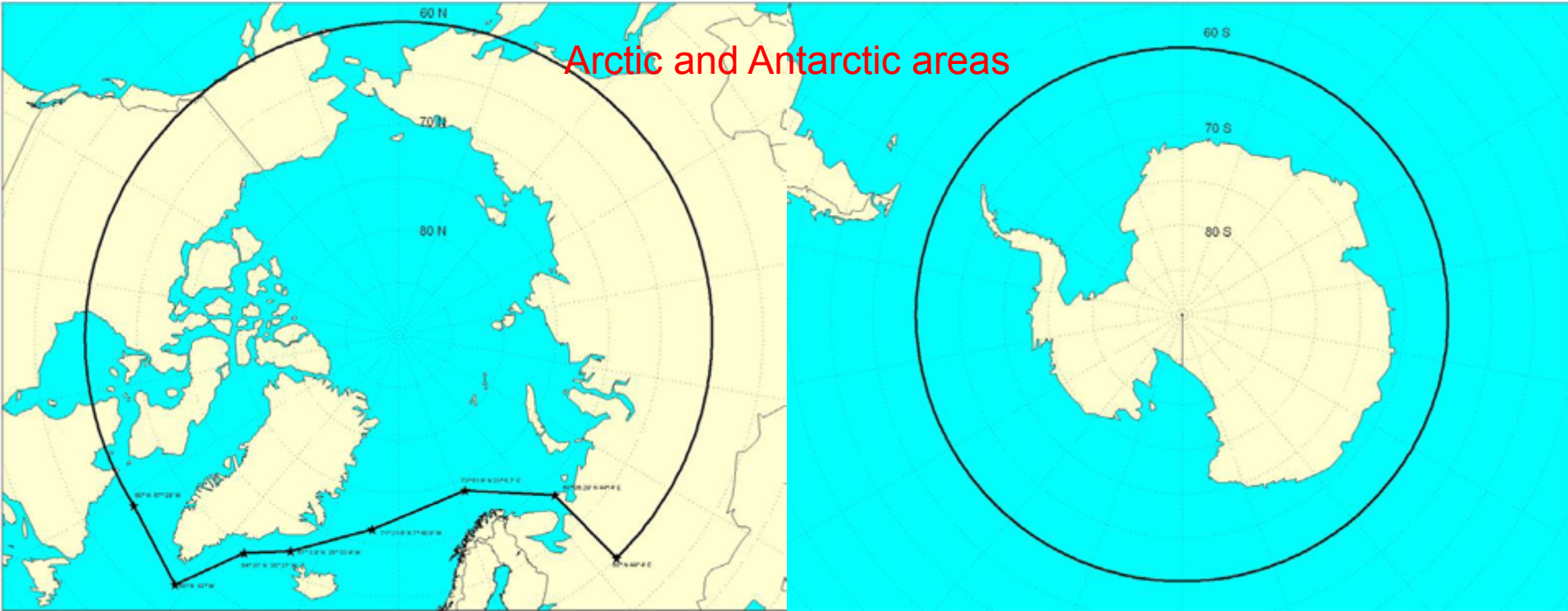


Savings in distance app. ca 4000 nm. in both cases



# Polar Code

Arctic and Antarctic areas



IMO !



# Future in the Arctic

- We need the *Polar Code* – regulating the marine industry operating in Arctic and Antarctic waters
- We need focus on Hydrographical operations and focus on SAR capability

## We already do see;

- Enhanced traffic do to Mineral and Oil exploration
- Enhanced Cruise, and tourism in larger scale – *no limit traffic*

## We expect very soon;

- Increase in shipping passages due to Arctic becomes a destination (shorter transit routes)
- Demands for shipping out of Greenland and other Arctic areas of environmental and ordinary waste



# What if...?



# SAR facilities – off shore





## Facilities on shore



Foto: Bent Petersen  
[www.ice-berg.dk](http://www.ice-berg.dk)

We also operate south



December 2012

Flutningar á Íslandi til 2030 - Íslenski sjávarklasinn

ROYAL  ARCTIC