



## WWF • Global Arctic Program / Global Oceans Practice

Sustainable Blue Economy in the Arctic and  
Conserving Biodiversity by Tom Arnbom WWF



PHOTOS: TOM ARNBOM





# THE ARCTIC BLUE ECONOMY • Definition and Boundaries

## FOCUS:

Shipping, fishing, tourism, extractive industries, subsistence, & new bio-resources

## BUT NOTE:

“Virtually all the Arctic opportunity now being chased by investors is in some way dependent on the Arctic Ocean.”





## 3 FACTORS TRANSFORMING THE ARCTIC

### Global Economic Demand

“... much of the world’s increased demand for fish is expected to be met by Arctic fisheries”

“Tourists find the Arctic increasingly attractive ...”



<https://www.youtube.com/watch?v=HraOljy5pr8&feature=youtu.be>

Sources: FAO and Crystal

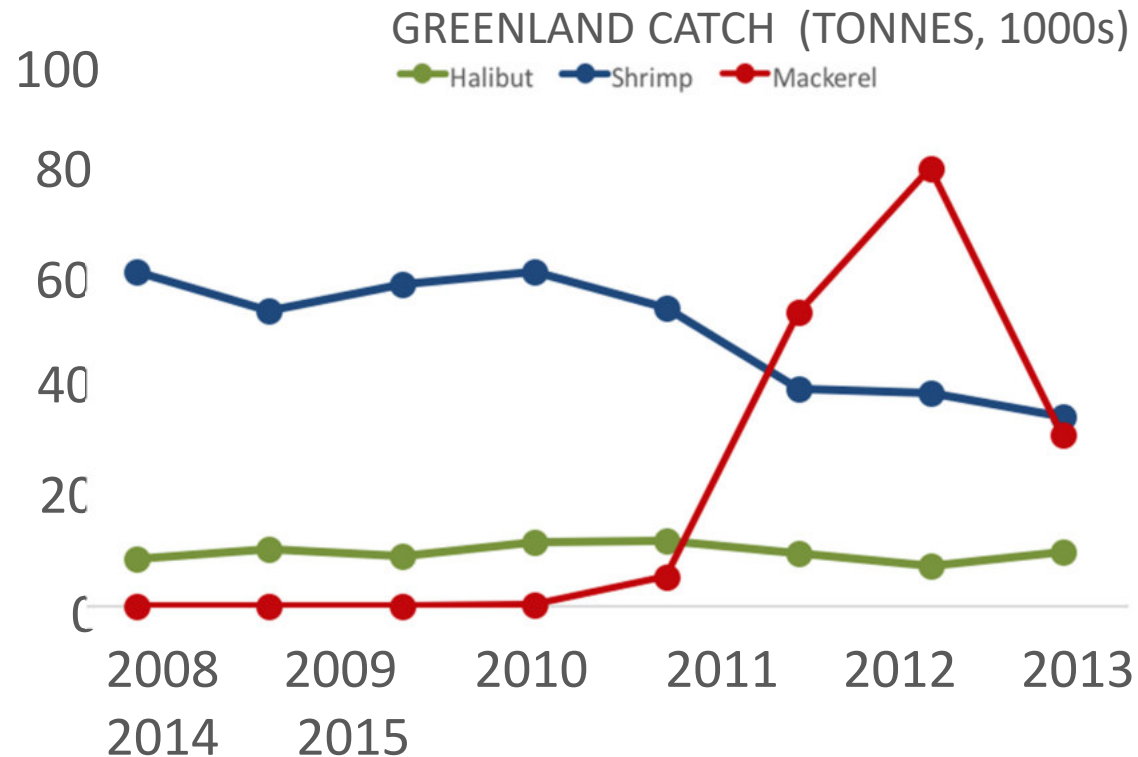
FAO: 7 July 2016,

<http://www.fao.org/news/story/en/item/421871/icode/>





## FISH • Species are moving north



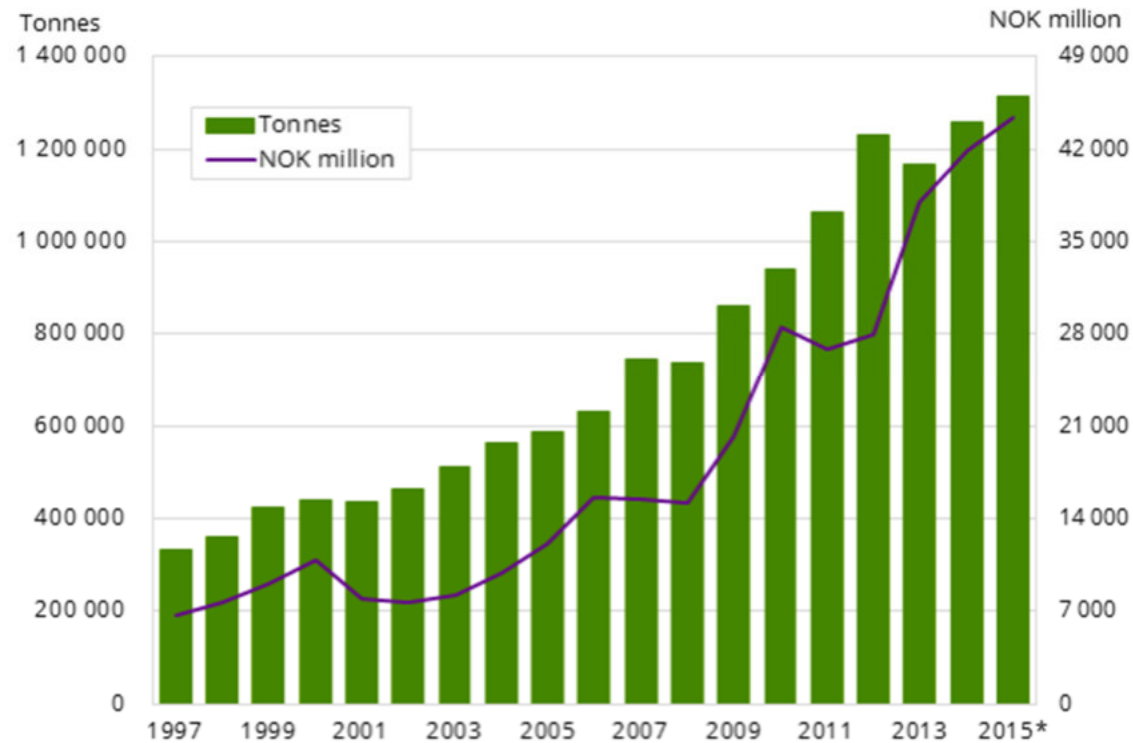
MACKEREL WERE FIRST CAUGHT IN 2011. IN 2014, THEY ACCOUNTED FOR 23% OF GREENLAND'S FISH EXPORT

SOURCE: STATISTICS GREENLAND





## FISH • Aquaculture is expanding ... fast



SALMON AQUACULTURE IN NORWAY, 1997-2015 ABOUT  
40% IS FROM ARCTIC WATERS

SOURCE: STATISTICS NORWAY







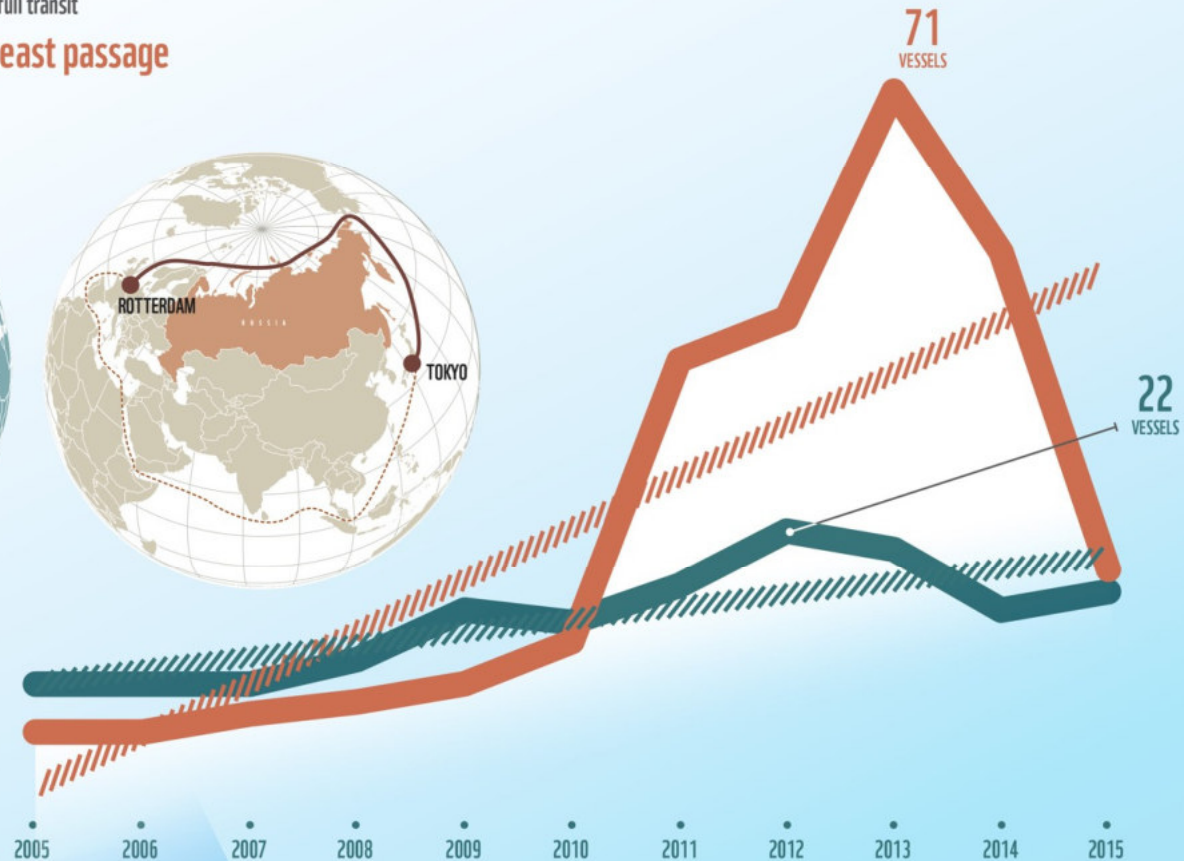
# SHIPPING • Transits through Arctic Sea

## Passages

Number of commercial cargo vessels completing a full transit

■ Northwest passage ■ Northeast passage

/// trend



PREDICTIONS OF RAPID EXPANSION HAVE YET TO MATERIALIZE

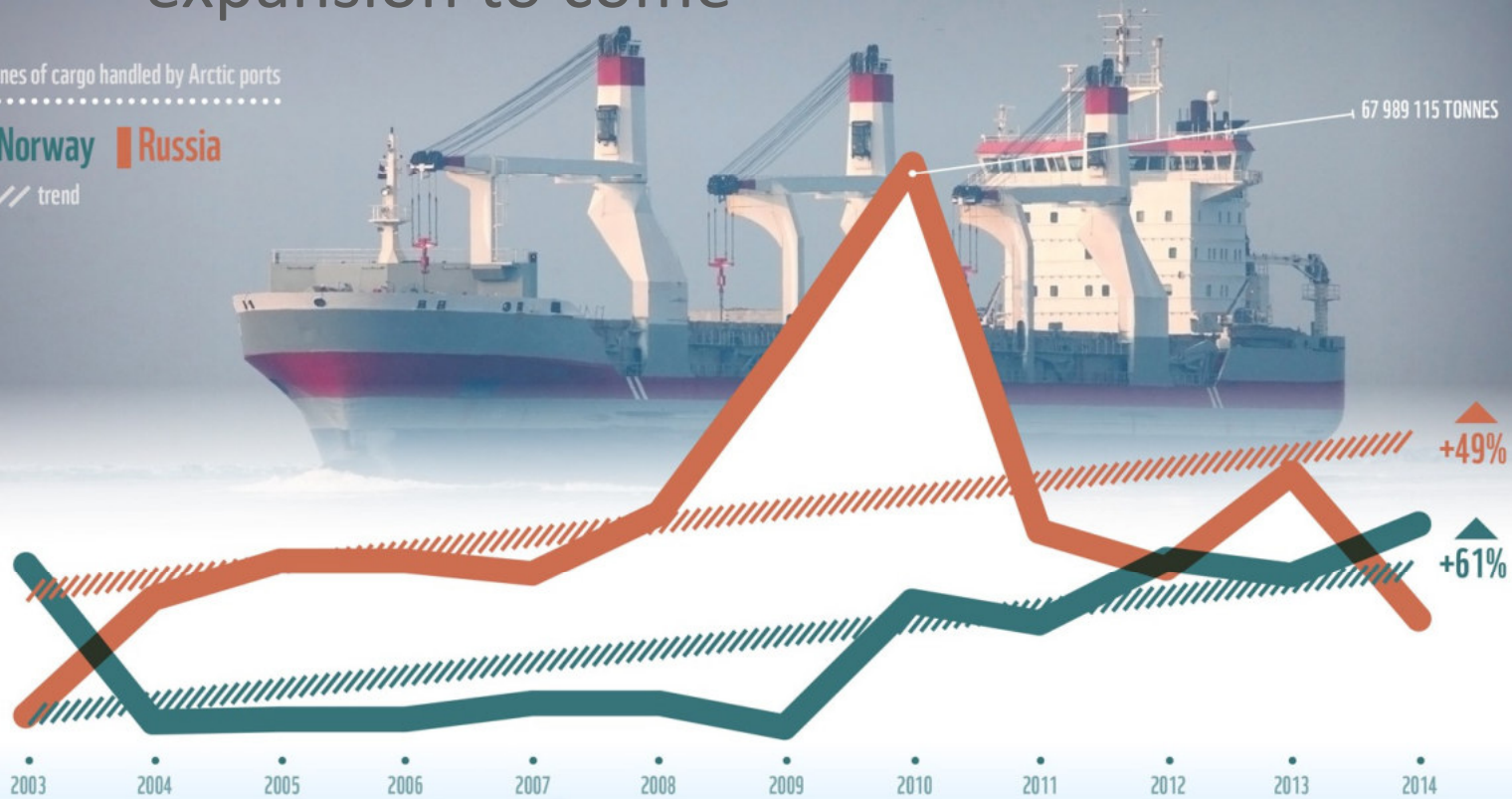
SOURCE: NORTHERN SEA ROUTE INFORMATION OFFICE



## SHIPPING • Indications of greater expansion to come

Tonnes of cargo handled by Arctic ports

**Norway** **Russia**  
/// trend

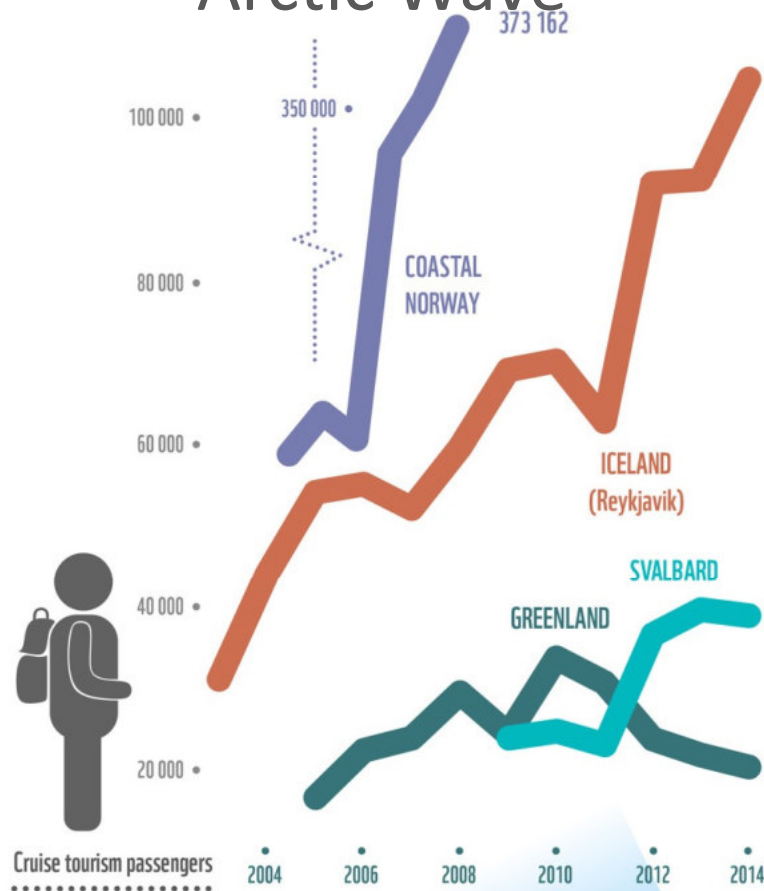


ARCTIC CARGO HANDLING IS GROWING STEADILY

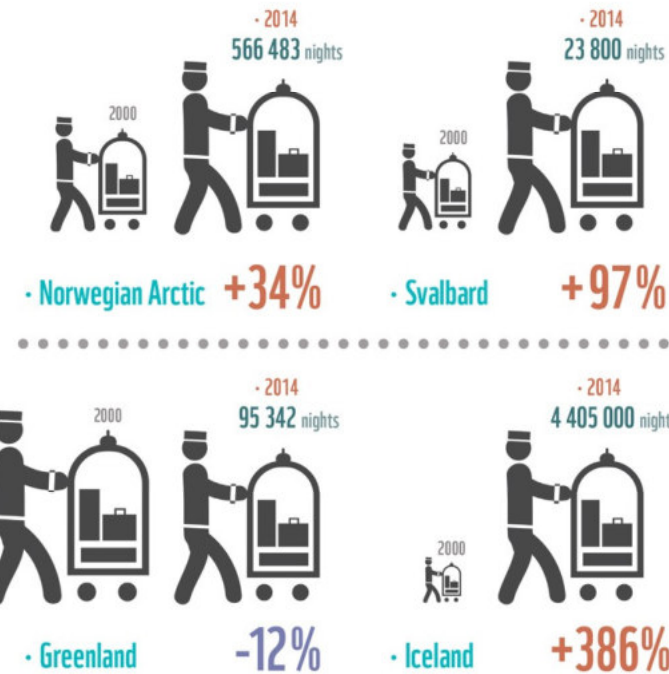
SOURCES: STATISTICS NORWAY, PATCHWORK BARENTS.ORG



# MARINE BASED TOURISM • A Growing Arctic Wave



Overnight stays by foreigners



"THE CRYSTAL SERENITY ... MARKS THE FIRST CASE OF MEGA-SCALE TOURISM IN ONE OF LAST VIRTUALLY UNTOUCHED LANDSCAPES LEFT IN THE WORLD."

SOURCE: THE WASHINGTON POST, 16 AUG 2016

DATA SOURCES: STATISTICS NORWAY, STATISTICS GREENLAND, ICELANDIC TOURISM BOARD





## GUIDANCE • Principles for a Sustainable Blue Economy

DEVELOPED BY WWF A GLOBAL CONSULTATION PROCESS

A SUSTAINABLE BLUE ECONOMY is one that ...

- Provides social and economic benefits for current and future generations
- Restores, protects and maintains diverse, productive and resilient marine ecosystems
- Is based on clean technologies, renewable energy and circular material flows



SEE: <http://wwf.panda.org/?247477/Principles-for-a-Sustainable-Blue-Economy>



## **RECOMMENDATIONS • For a Sustainable Blue Arctic Economy**

- 1. Prioritize the risks associated with climate change when investing**
- 2. Apply ecosystem-based management in the Arctic marine environment**
- 3. Improve Arctic governance to ensure Sustainable Development**
- 4. Preserve biodiversity as we adapt to the realities of a warmer Arctic**



SOURCES: NORWEGIAN DIRECTORATE OF FISHERIES, GREENPEACE



## Why we need a Sustainable Blue Economy for the Arctic



PHOTO: TOM ARNBOM





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