

# **SMARTIC**

Stakeholder Distribution Maps

# COMMERCIAL FISHERIES

## Current Activity in the Arctic



Map 5.3 Fishing vessel activity. Source: AMSA

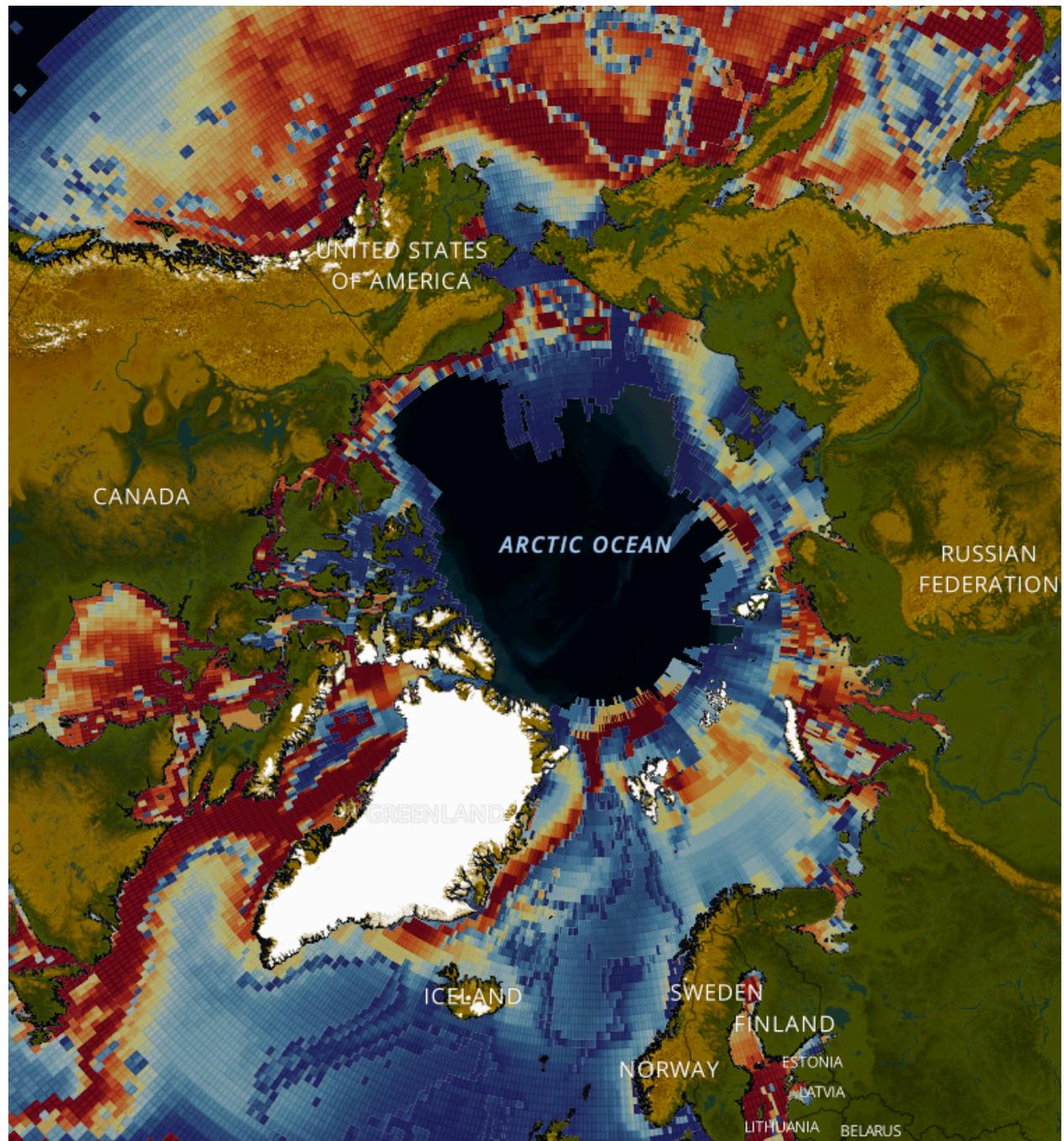
# COMMERCIAL FISHERIES

## Projected Mid-Century Distribution of Fish in the Arctic

Relative probabilities of occurrence



Source: WWF ArkGIS



Arctic SMARTIC

[www.thepolarhub.org](http://www.thepolarhub.org)

# SHIPPING INDUSTRY

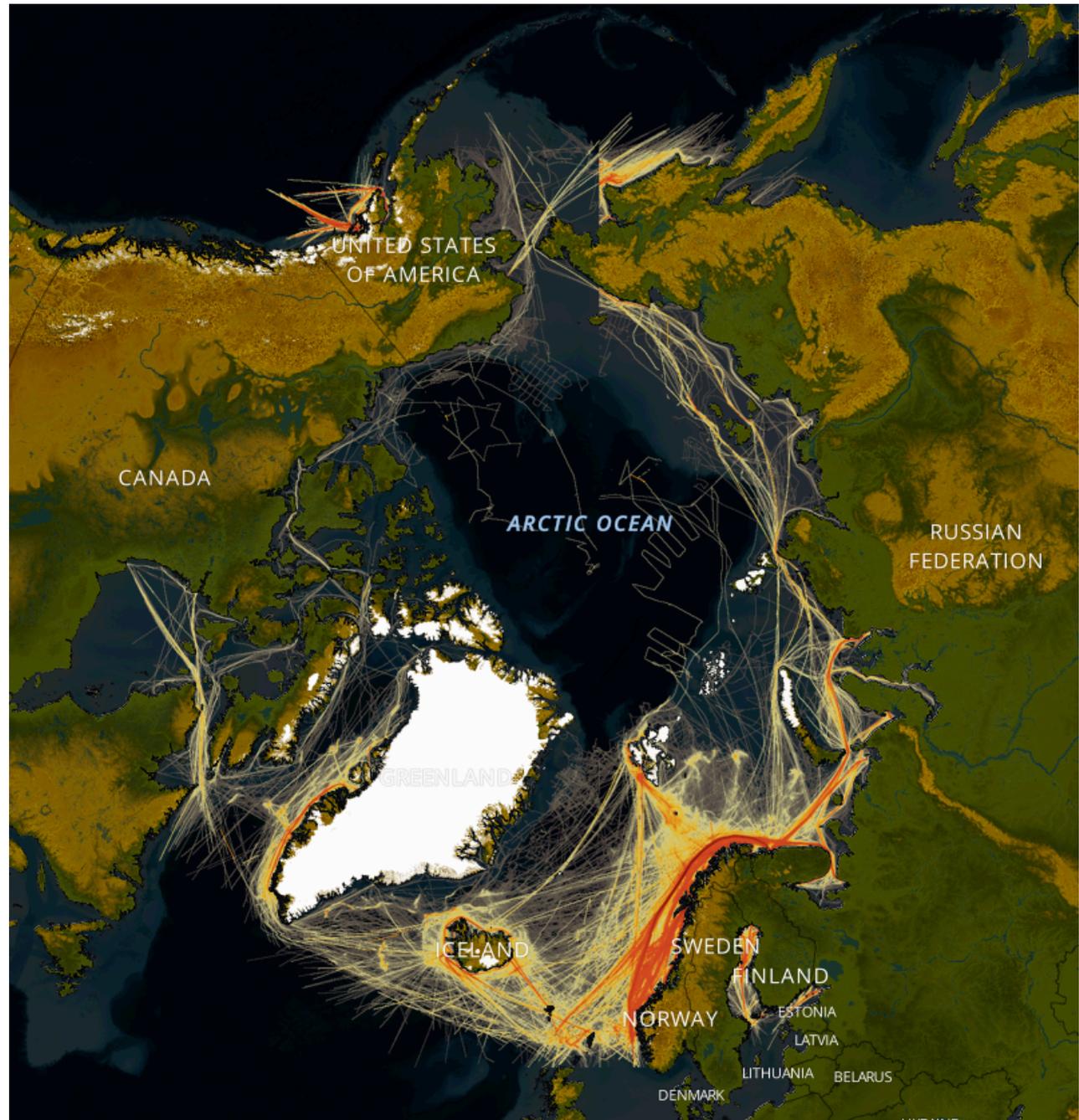
## Current Arctic Traffic

Ship traffic density in 2011



Data source: Automatic System (AIS) data, provided by The Norwegian Coastal Administration / [www.havbase.no](http://www.havbase.no) (2012) and further processed by DNV and WWF

Source: WWF ArkGIS

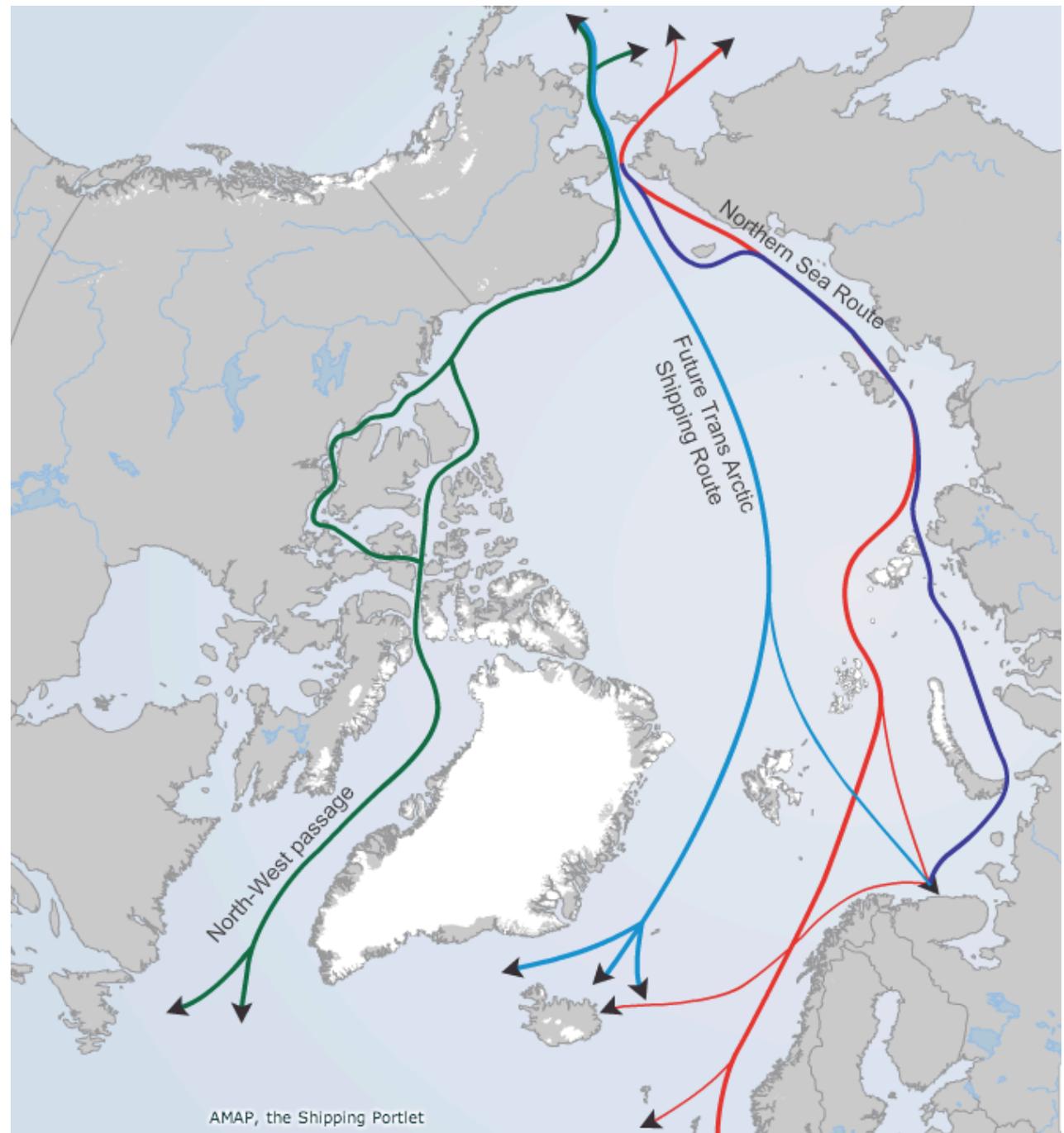


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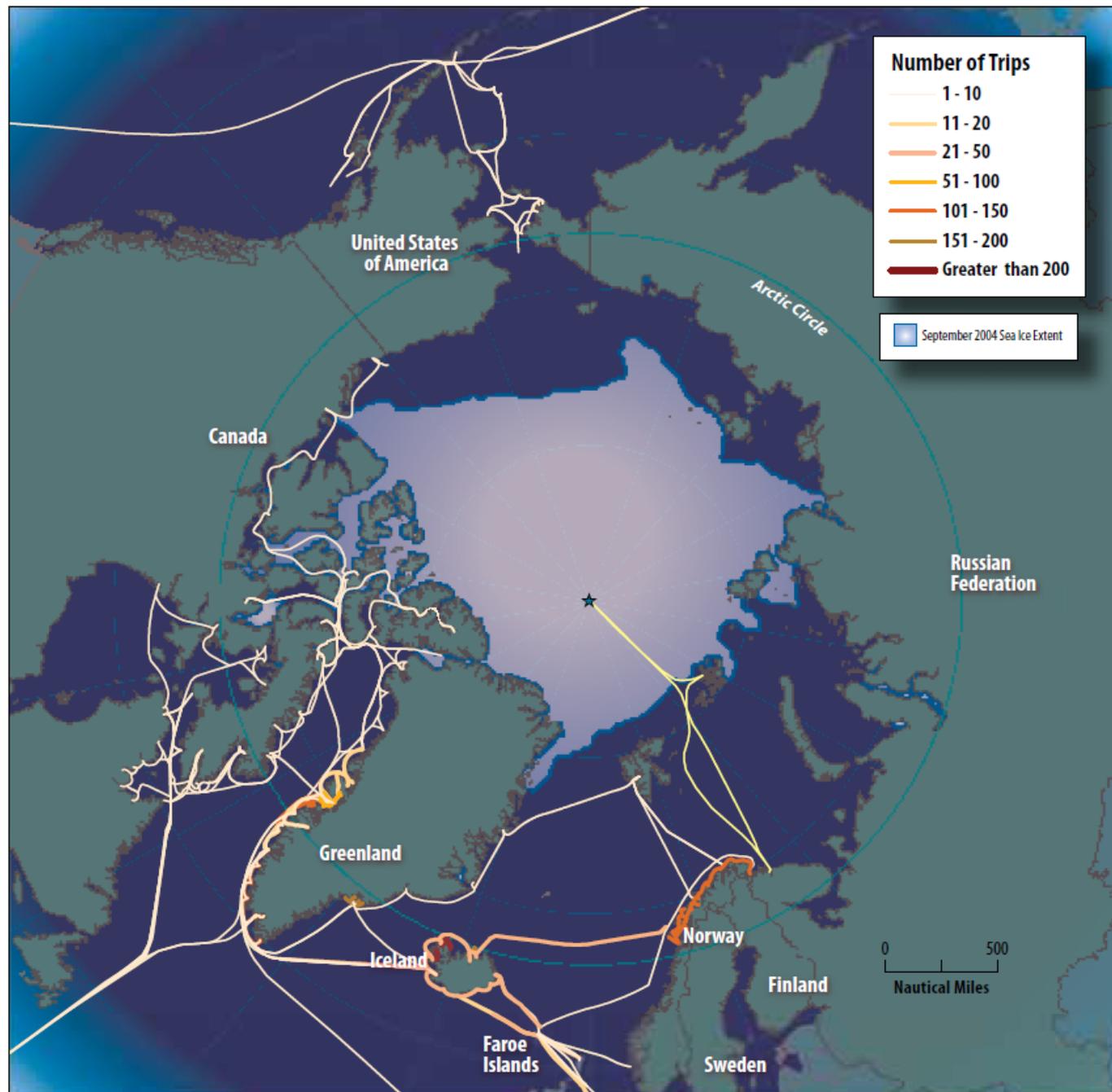
# SHIPPING INDUSTRY

Projected Mid-  
Century  
Arctic Routes



# TOURISM

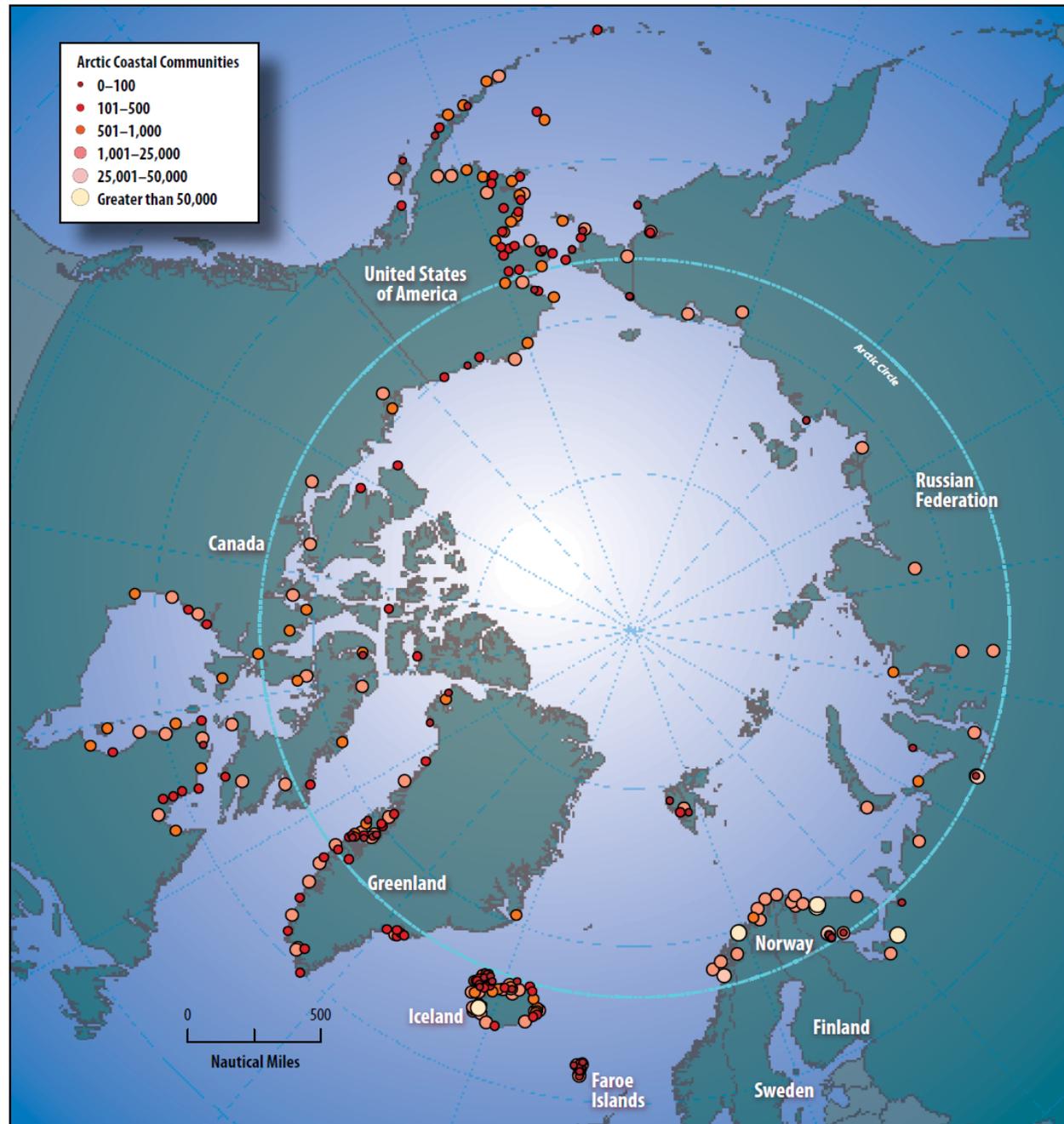
## Current Arctic Cruise Traffic



# COASTAL COMMUNITIES

## Current Population Centers in the Arctic

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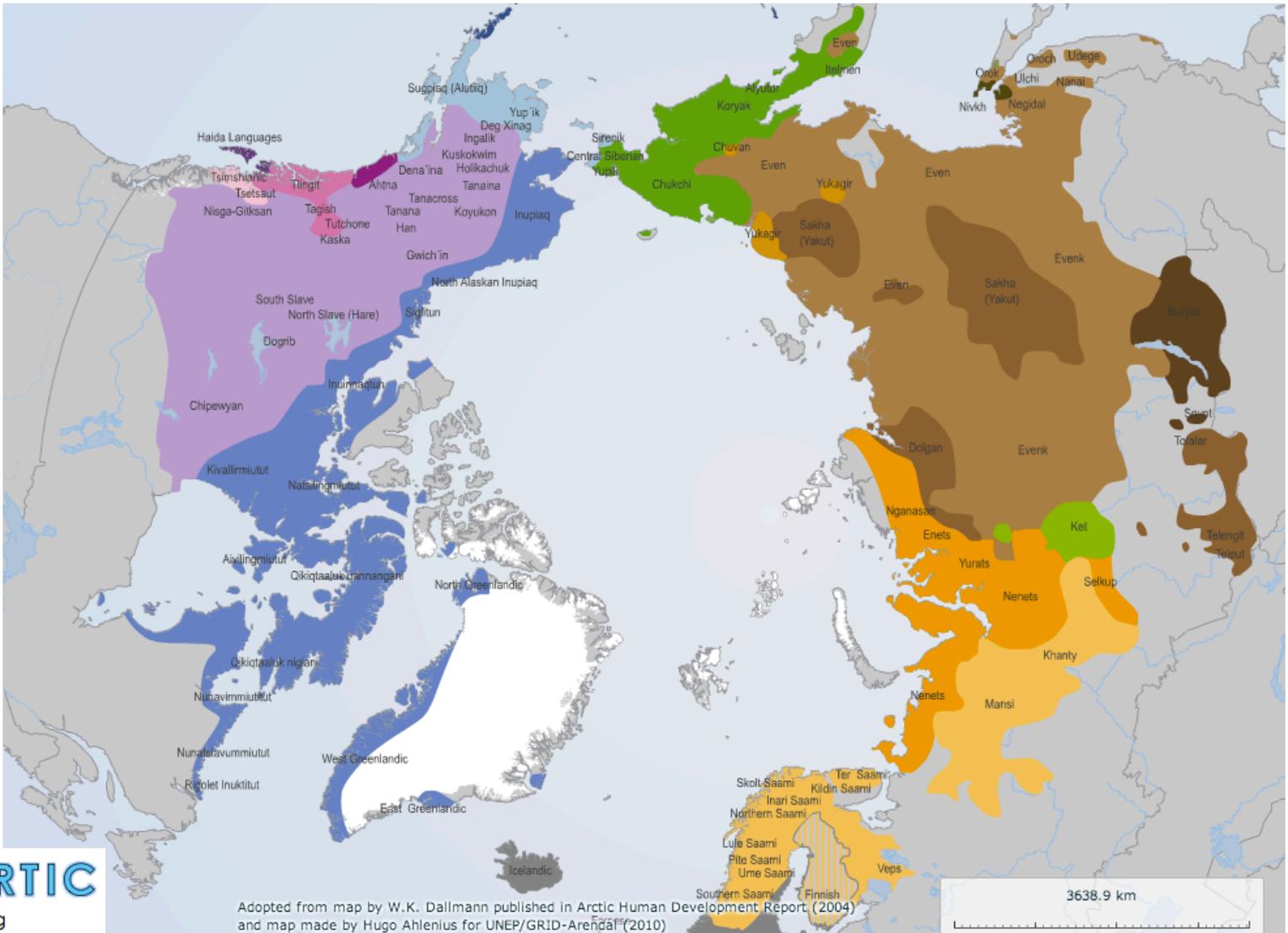


Map 7.1 Circumpolar coastal human population distribution. Source: AMSA

# INDIGENOUS COMMUNITIES

## Arctic Distribution

- Na'Dene family**
  - Athabaskan branch
  - Eyak branch
  - Tlingit branch
  - Haida branch
- Penutan family**
  -
- Eskimo- Aleut family**
  - Inuit group of Eskimo branch
  - Yupik group of Eskimo branch
  - Aleut group
- Uralic -Yukagiran family**
  - Fino -Ugric branch
  - Samodic branch
  - Yukagiran branch
- Altaic family**
  - Turkic branch
  - Mongolic branch
  - Tunguso-Manchurian branch
- Chukotko - Kamchatkan family**
  - Ket (isolated language)
  - Nivkh (isolated language)
  - Ainu (isolated language)



# OIL & GAS Current Arctic Activity

## Oil and gas

■ Current licences **Data source: Wellbore database [Internet]. Norway: The Norwegian Petroleum Directorate; 1966 - 2013.**

**AOGCC Online Public Databases [Internet]. Alaska: Alaska Oil and Gas Conservation Commission; 2012.**

**BASIN Database [Internet]. Natural Resources Canada, Geological Survey of Canada, Geoscience Data Repository.**

**Current Licences in Greenland [Internet]. Greenland: Bureau of Minerals and Petroleum, Government of Greenland; 2013.**

**Current Licences in the Icelandic Continental Shelf [Internet]. Iceland: The National Energy Authority of Iceland (NEA); 2013.**

**27th Round of Offshore Licensing Position. United Kingdom: Department of Energy & Climate Change; 2013.**

## Oil and gas

▼ Production wells **Data source: Wellbore database [Internet]. Norway: The Norwegian Petroleum Directorate; 1966 - 2013.**

**AOGCC Online Public Databases [Internet]. Alaska: Alaska Oil and Gas Conservation Commission; 2012.**

**BASIN Database [Internet]. Natural Resources Canada, Geological Survey of Canada, Geoscience Data Repository.**

## Oil and gas

■ Future developments **Data source: Wellbore database [Internet]. Norway: The Norwegian Petroleum Directorate; 1966 - 2013.**

**AOGCC Online Public Databases [Internet]. Alaska: Alaska Oil and Gas Conservation Commission; 2012.**

## Oil and gas

▼ Other activities **Data source: Wellbore database [Internet]. Norway: The Norwegian Petroleum Directorate; 1966 - 2013.**

**AOGCC Online Public Databases [Internet]. Alaska: Alaska Oil and Gas Conservation Commission; 2012.**

## Oil and gas

▼ Exploration wells **Data source: Wellbore database [Internet]. Norway: The Norwegian Petroleum Directorate; 1966 - 2013.**

**AOGCC Online Public Databases [Internet]. Alaska: Alaska Oil and Gas Conservation Commission; 2012.**

**Exploration Wells in Greenland [Internet]. Greenland: Bureau of Minerals and Petroleum, Government of Greenland; n.d.**

**BASIN Database [Internet]. Natural Resources Canada, Geological Survey of Canada, Geoscience Data Repository.**

Source: WWF ArkGIS

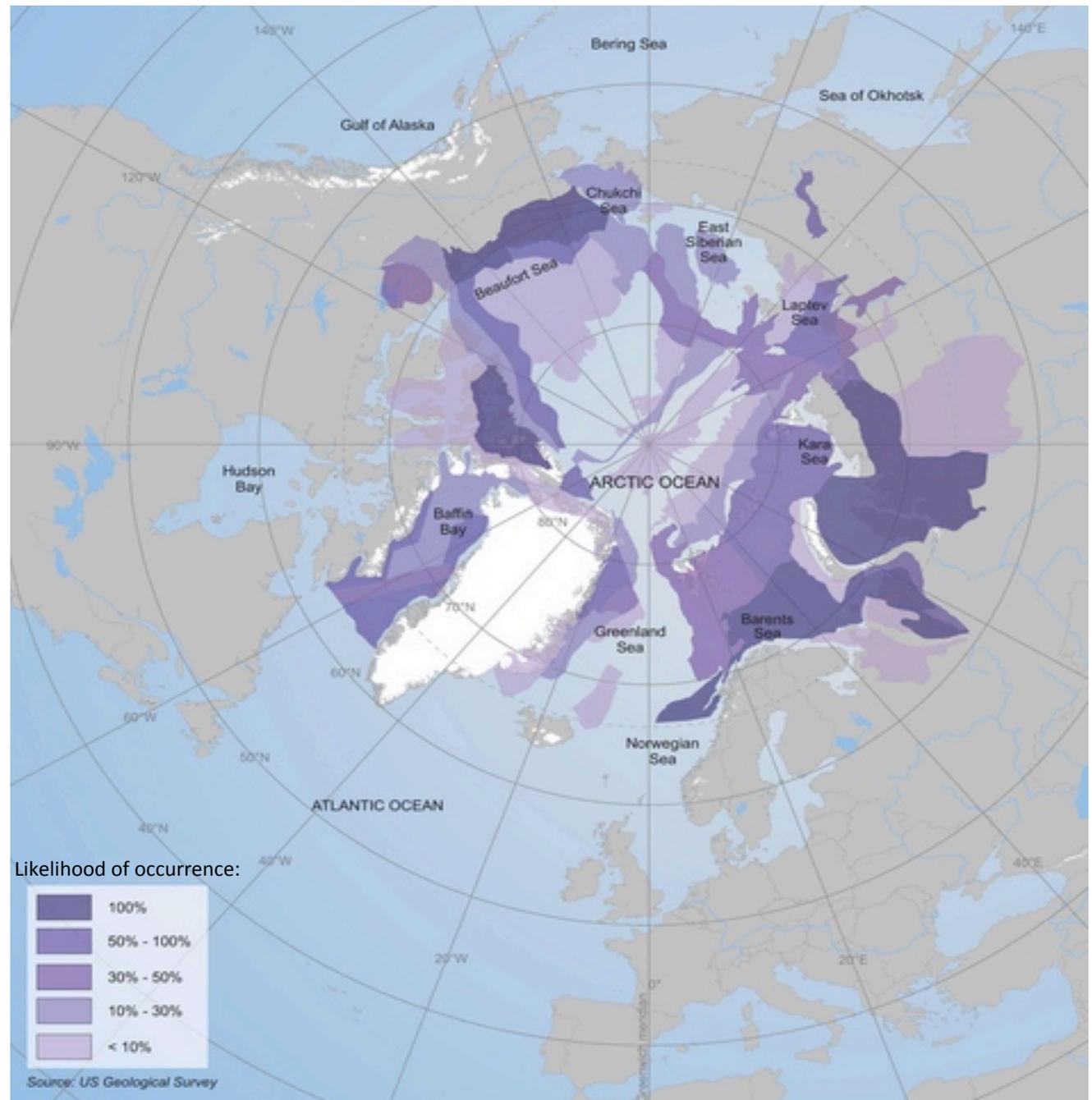


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# OIL & GAS

## Projected Arctic Reserves



# ENVIRONMENTAL ADVOCATES

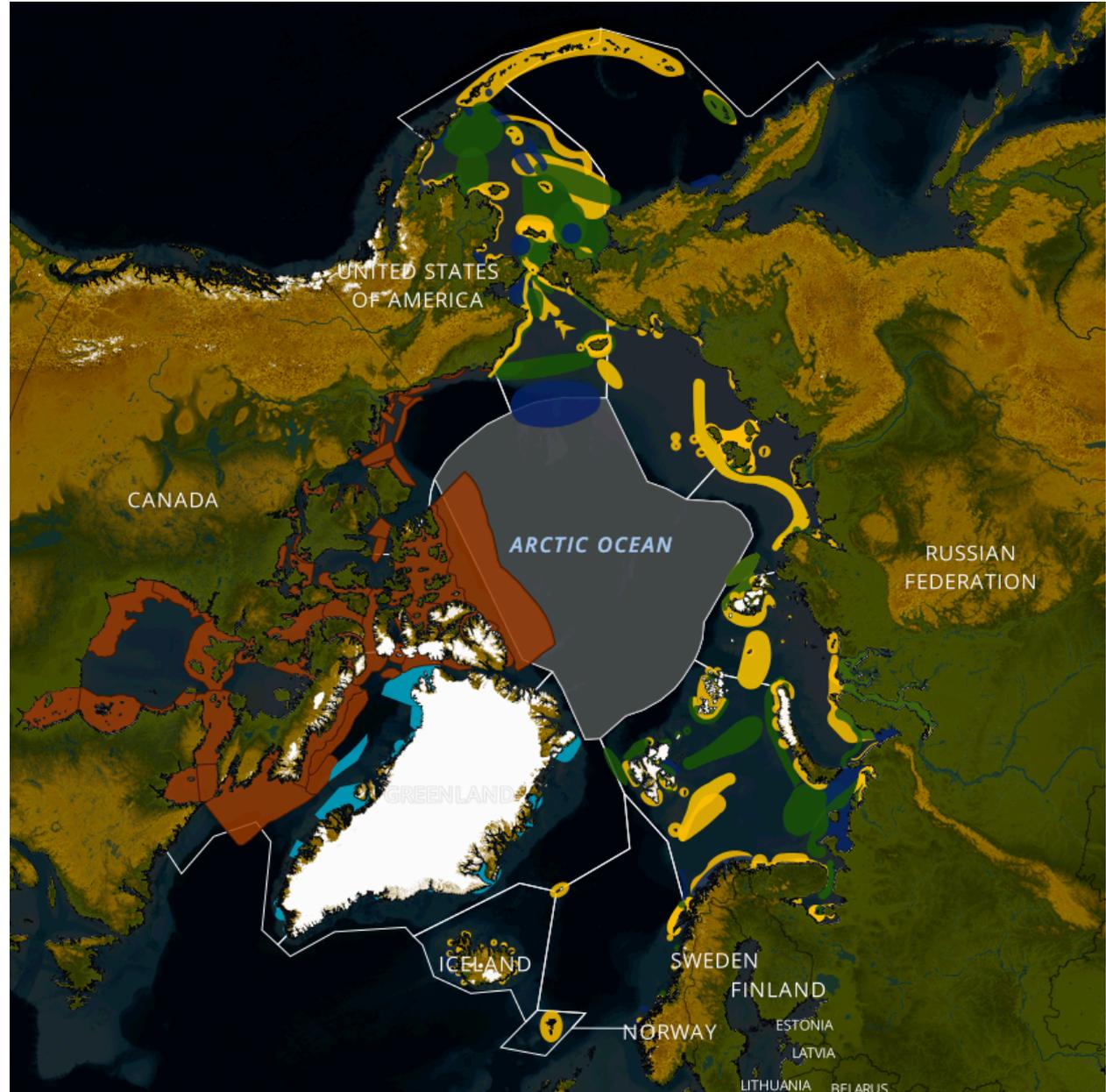
## Important Ecological Areas in the Arctic

### Important ecological areas in the Arctic Ocean

- Seabirds
- Marine mammals
- Fish
- Core areas (Naturally protected are for mixed species)
- Mixed areas

Data source: AMAP/CAFF/SDWG (2013). Institute of Marine Research (IMR), Bergen, Norway.

Source: WWF ArkGIS



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# ENVIRONMENTAL ADVOCATES

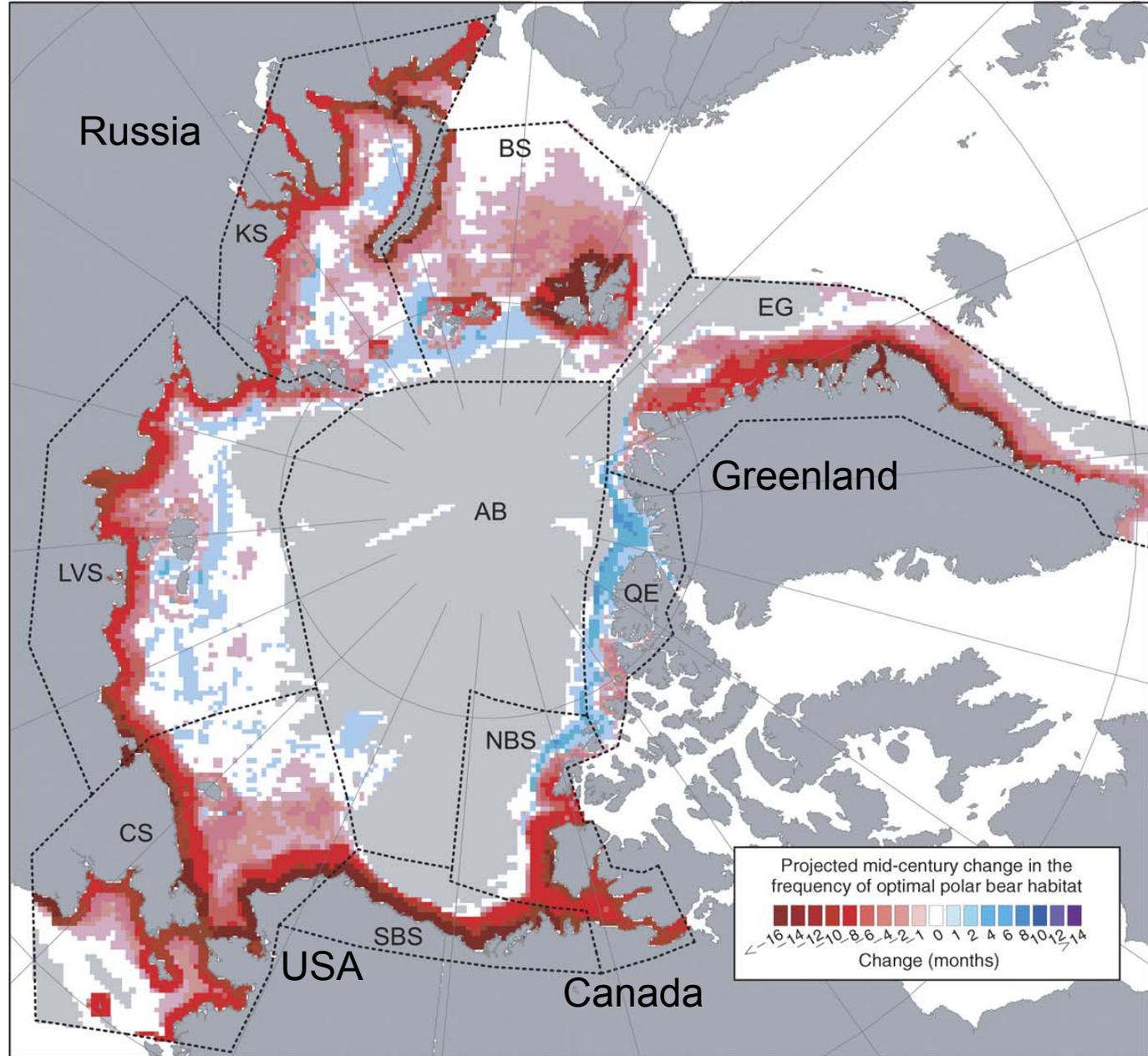
## Projected Mid-Century Changes in Polar Bear Habitat

Ecological Monographs,  
79(1), 2009, pp. 25–58

2009 by the Ecological  
Society of America

GEORGE M. DURNER,<sup>1,15</sup> DAVID C.  
DOUGLAS,<sup>2</sup> RYAN M. NIELSON,<sup>3</sup>  
STEVEN C. AMSTRUP,<sup>1</sup> TRENT L.  
MCDONALD,<sup>3</sup>

IAN STIRLING,<sup>4</sup> METTE MAURITZEN,<sup>5</sup>  
ERIK W. BORN,<sup>6</sup> ØYSTEIN WIIG,<sup>7</sup> ERIC  
DEWEAVER,<sup>8</sup> MARK C. SERREZE,<sup>9</sup>  
STANISLAV E. BELIKOV,<sup>10</sup> MARIKA M.  
HOLLAND,<sup>11</sup> JAMES MASLANIK,<sup>12</sup>  
JON AARS,<sup>13</sup> DAVID A. BAILEY,<sup>11</sup>  
AND ANDREW E. DEROCHE,<sup>14</sup>



General Stakeholder Reference:

# ARCTIC PORTS Current Locations

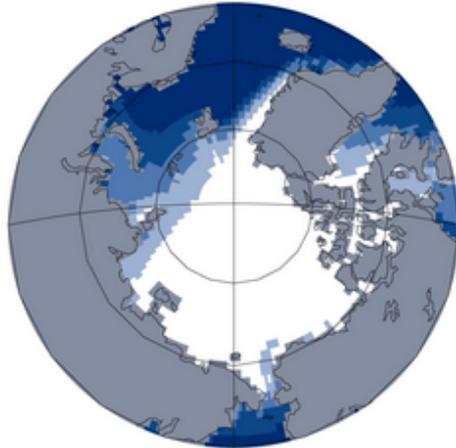


General Stakeholder Reference:  
**ARCTIC SEA ICE EXTENT**

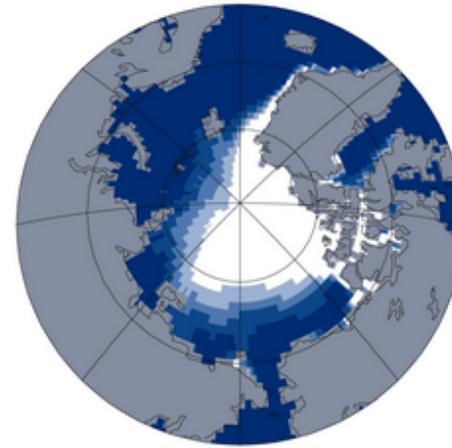
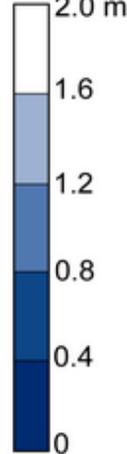
End of Winter

End of Summer

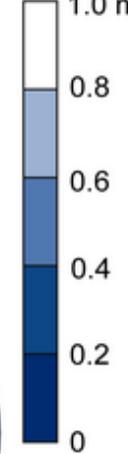
**Current**



Thickness  
2.0 m



Thickness  
1.0 m



**Projected  
Mid-  
Century**

