ARCTIC RESEARCH CENTRE (ARC)
AARHUS UNIVERSITY
http://arctic.au.dk

ARCTIC SCIENCE PARTHERSHIP

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ARCTIC SCIENCE PARTNERSHIP (ASP)

Vision

The Arctic Science Partnership will be a leading consortium on climate, cryosphere, ecosystems, and human interactions through research, monitoring and education.

Mission

To facilitate and integrate active scientific cooperation between the ASP and its members.

Strategies

- **Joint projects, field campaigns, workshops**
- **Sharing facilities (labs, instruments, field stations, logistics, ships)**
- **Joint positions (staff, technicians, students, visiting scientists)**
- **Joint observatories and data sharing**
- **Joint publications and acknowledgements**
- **Education, outreach and capacity building in the Arctic**
- **Collaborative work on industry relevant assessments**
- **Development of new environmental Arctic technologies**
- **Information dissemination**

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Research questions to be answered:

1.What controls change in; i) snow, sea ice area extent and thickness? ii) the glacier-sea ice-ocean interactions? iii) the permafrost thaw and the associated atmosphere-land interactions?

2.What controls the marine and atmospheric transport of pollutants to the Arctic?

3.What are the consequences of these changes for i) biogeochemical cycling and ocean-sea ice-land-snow-atmosphere fluxes, ii) ecosystem ecology, structure and function? iii) chemical contaminants affecting ecosystems and human health?

4.How can proxies of paleoclimate/ecology inform us of changes in ocean current and wind systems and future Arctic climates and their ecological consequences?

5.What will be the combined effects of natural and anthropogenic forcing on ecosystems, their services and industrial development on human living and health?

6.Follow-up studies on the impact of the transition and environmental changes on the Arctic population's lifestyle and changes in disease patterns.

7.What are the feedbacks between the Arctic and Earth climate system?

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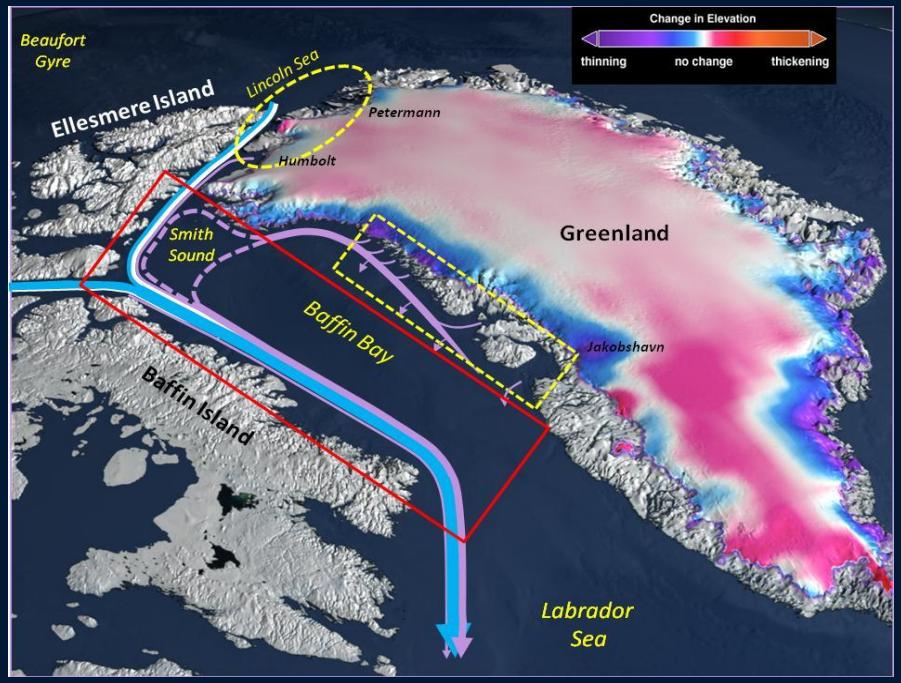
RESEARCH FOCUS 2012-2020



Siberia
Kara Sea
Laptev Sea
Amundsen Basin
East Siberian Sea
Makarov Basin
Nansen Basin
Atlantic Inflow
Fram Strait
Pacific Inflow
Chukchi Sea
Canada Basin
Greenland
Alaska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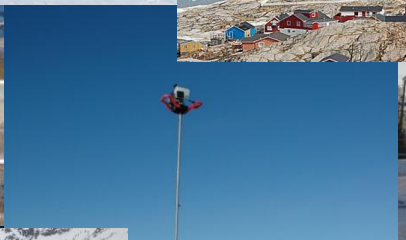
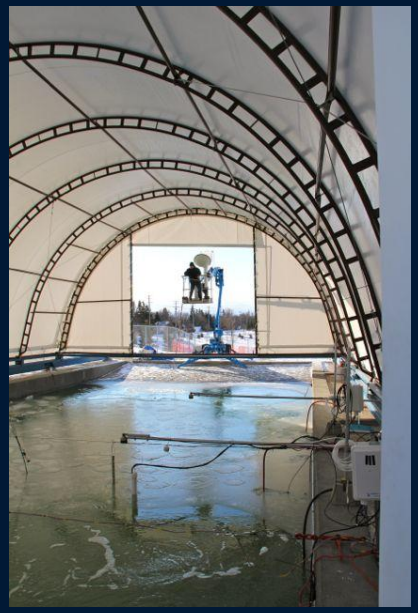
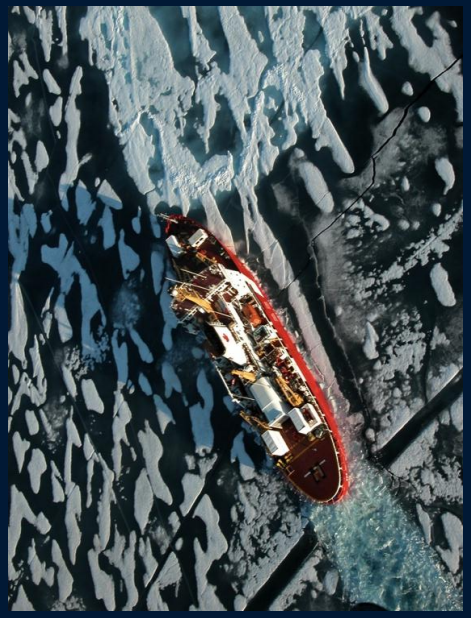




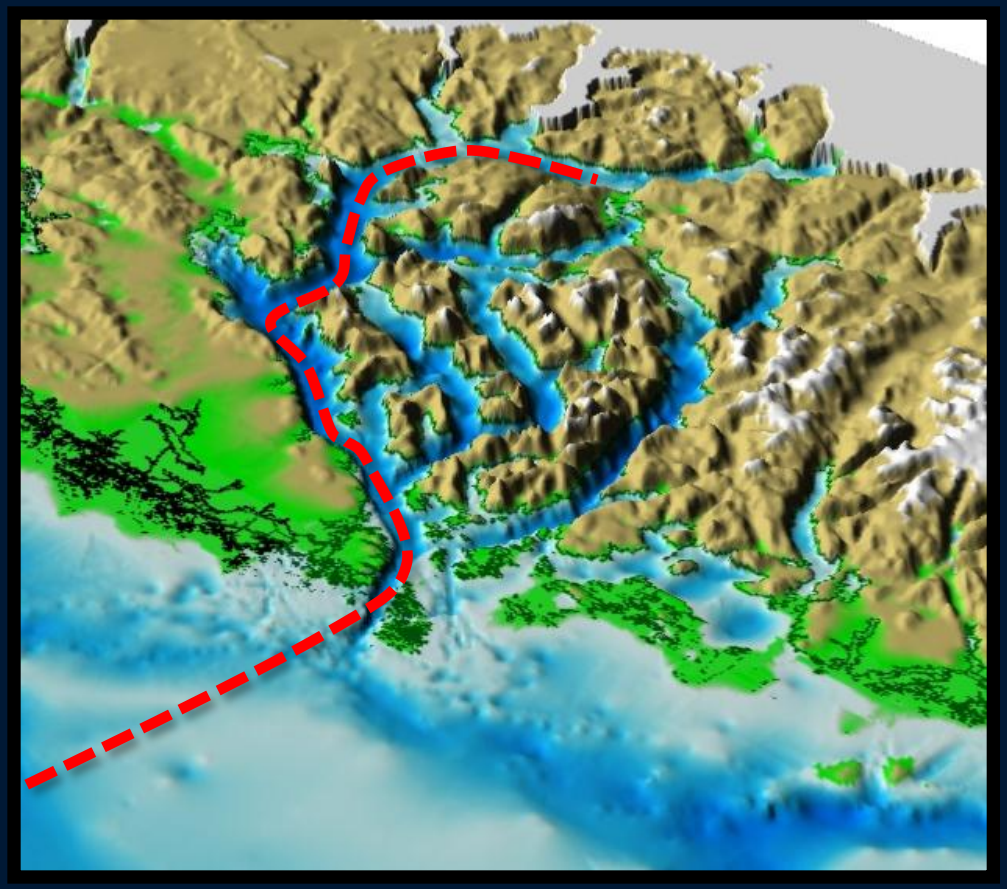
SMALL TO LARGE SCALES

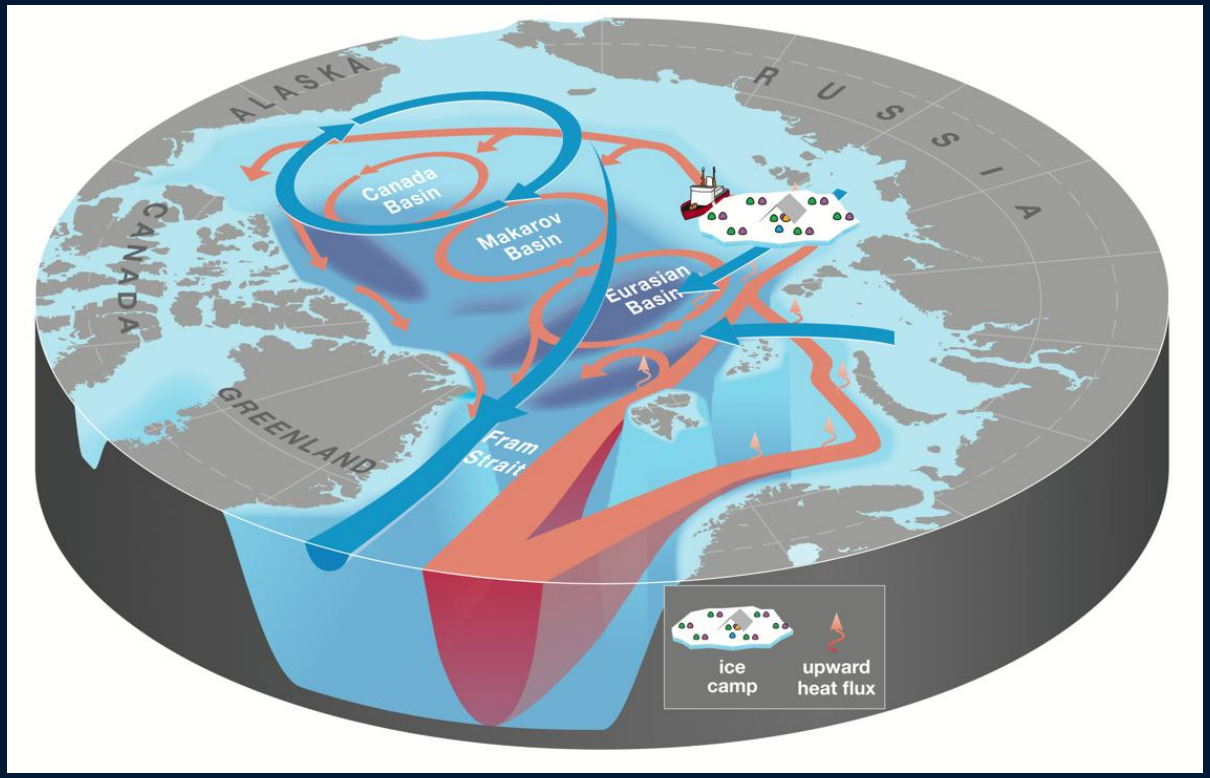


godthåbsfjorden

- Climate gradients
- Ice bergs
- Melt water
- Contaminants
- Food chains
- Health
- Mega industries



ARCTIC OCEAN DRIFT STUDY



EDUCATION

› Build new natural science and medicine educations in the Arctic

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Canada continues the IPY generated momentum:!

New Polar Class Icebreaker(s)!

Canadian High Arctic Research Station!