



Circumpolar Biodiversity Monitoring Program (CBMP) - Monitoring in the Arctic Seas

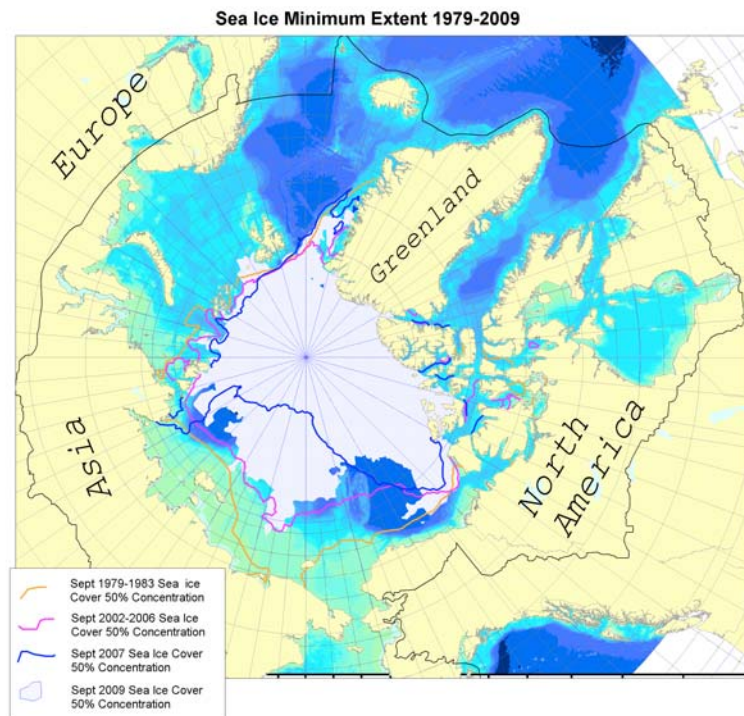
Kathleen Crane, NOAA, USA

Reidar Hindrum, Nature Management, Norway



Expert Monitoring Groups (EMG):

Extreme Sea Ice Loss



- **Marine,**
- Coastal,
- Freshwater,
- Terrestrial Flora, and
- Terrestrial Fauna





Overall Goals and Objectives of the Marine Integrated Monitoring Program

- Respond to profound physical changes in the Arctic Environment by identifying impacts on ecosystems;
- Identify an essential set of indicators for marine ecosystems, suitable for implementation at a Pan-Arctic scale;
- Make use of existing monitoring capacity and information, including scientific, community-based, and Traditional knowledge;
- Identify key abiotic parameters, relevant to marine biodiversity, that need continual monitoring;
- Address current gaps in coverage (elemental, spatial, and temporal);
- Identify a core set of parameters to be implemented across the Arctic, plus regionally specific parameters.



Marine EMG members:

Co-leads:

Dr Kathleen Crane, US
Mr Reidar Hindrum, Norway

US:

Dr Sue E. Moore
Dr Russ Hopcroft
Dr Katrin Iken

Russia:

Dr Igor A. Melnikov
Dr Boris I. Sirenko
Dr Olga S. Liubina
Dr Nina Denisenko

Greenland:

Mr Fernando Ugarte
Ms Aili Labansen

Iceland:

Dr. Gudmundur Gudmundsson

Canada:

Dr Jill Watkins
Dr Jim D. Reist

Norway:

Dr Ingrid Bysveen
Mr Dag Vongraven
Dr Per Arneberg

CBMP Secretariat:

Mr Mike Gill

Aleut International Association:

Ms Victoria Gofman

AMAP

Mr Jason Stow

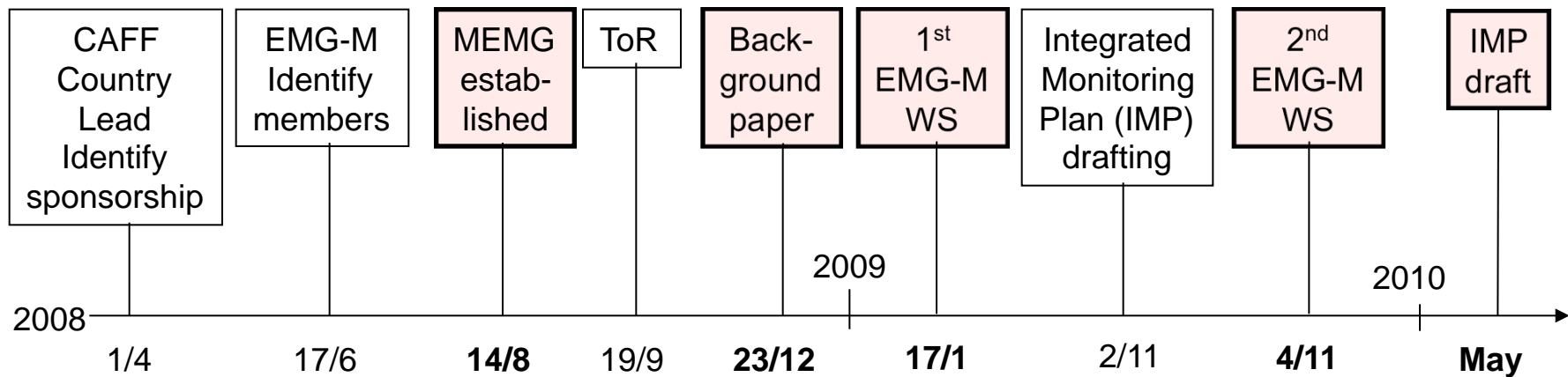
PAME:

Ms Soffia Gudmundsdottir

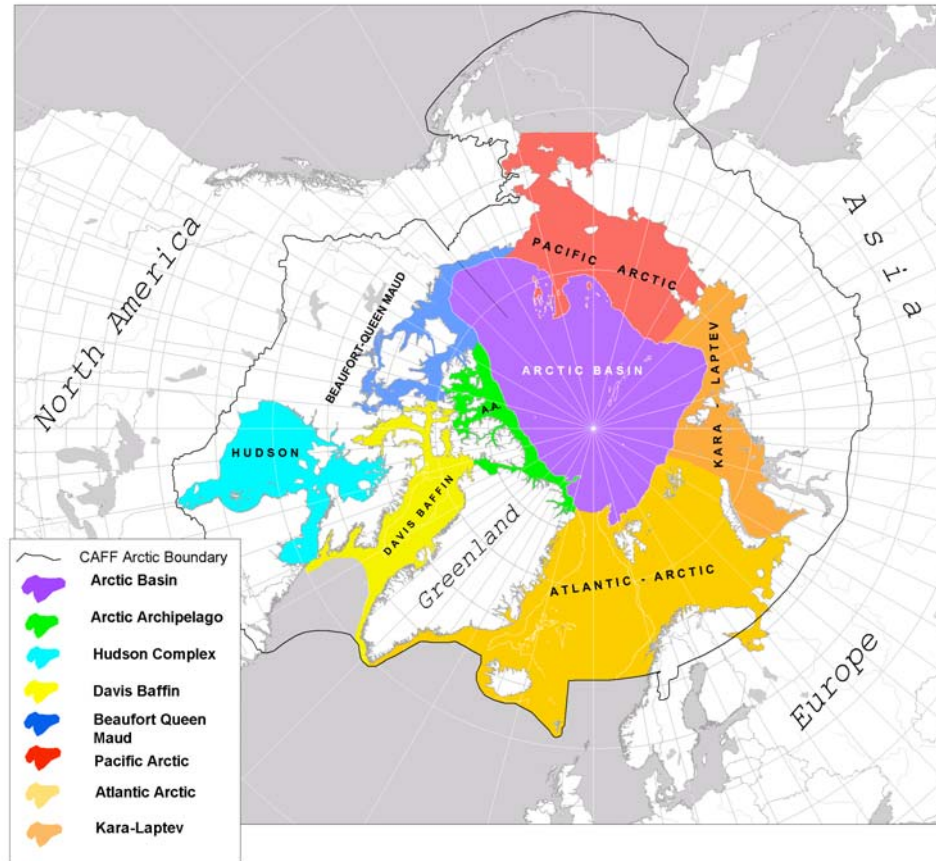




CBMP Marine EMG progress schedule:



FOCAL MARINE AREAS



Kara and Laptev seas, and Arctic Archipelago will be included later





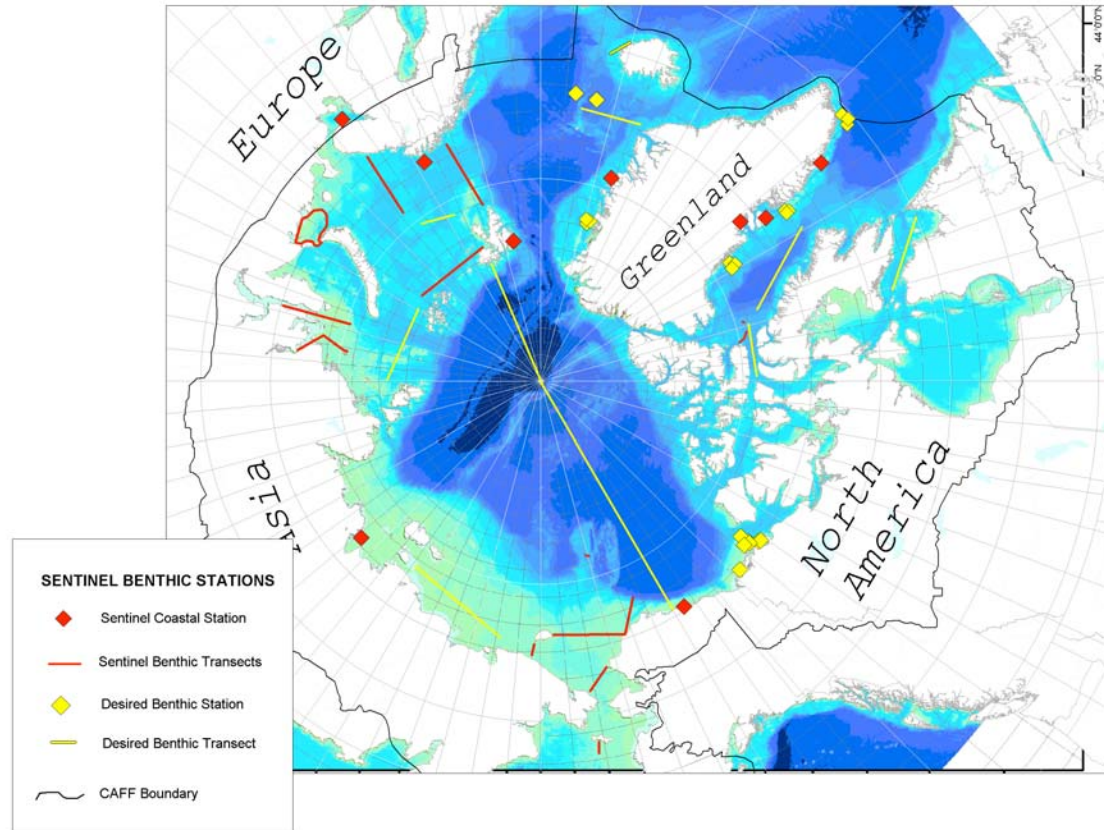
First workshop in Tromsø, Norway January 17-18, 2009:

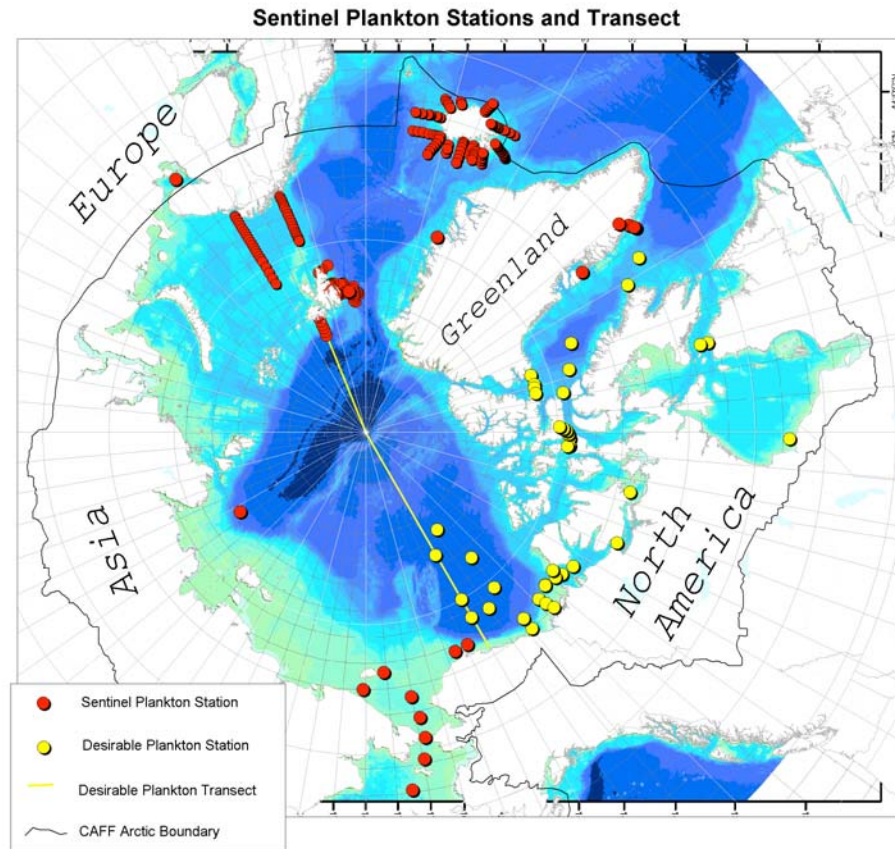
- Identify main ecosystem components in the Arctic and the drivers of change to these;
- Identify existing, relevant monitoring programs in the CBMP Arctic marine regions (eco-regions):
 1. Atlantic Arctic Gateway
 2. Pacific Arctic Gateway
 3. Baffin Bay, Davis Strait and Lancaster Sound
 4. Hudson Bay Complex
 5. Beaufort Sea, Amundsen Gulf, Viscount Melville, Queen Maud
 6. The High Arctic Basin
 7. Kara-Laptev Seas*
 8. The Arctic Archipelago*





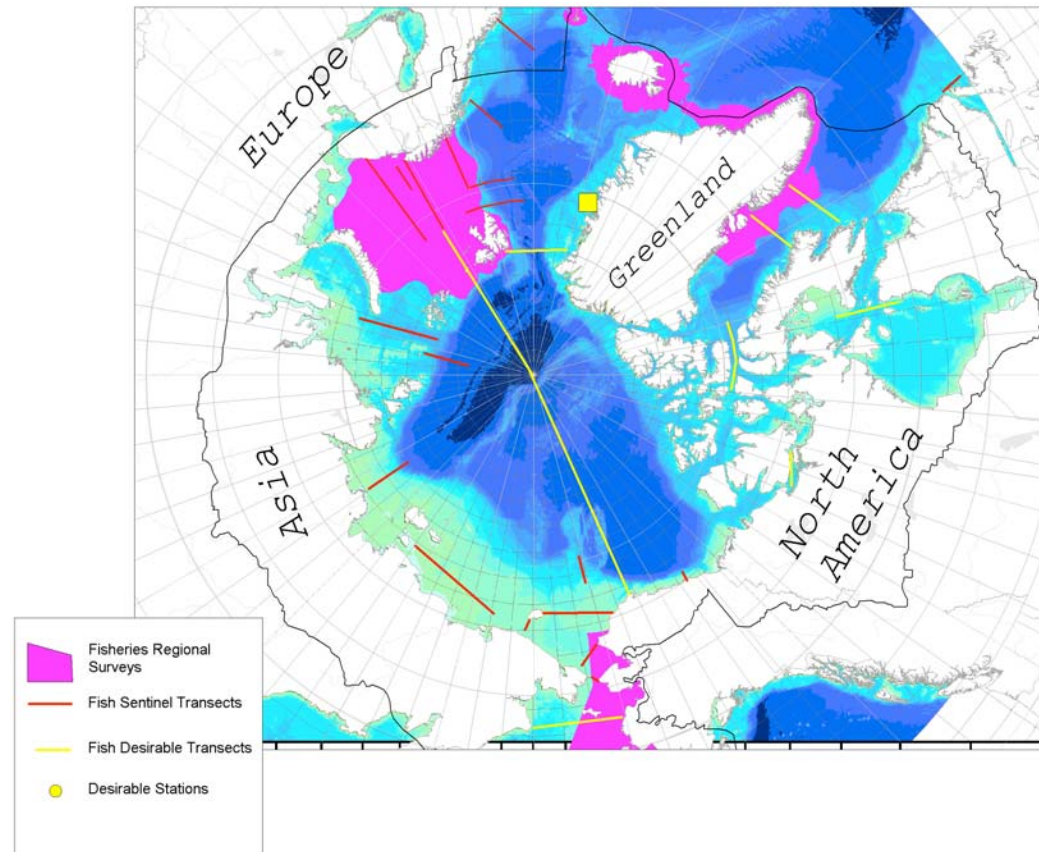
BENTHIC SENTINEL STATIONS AND TRANSECTS





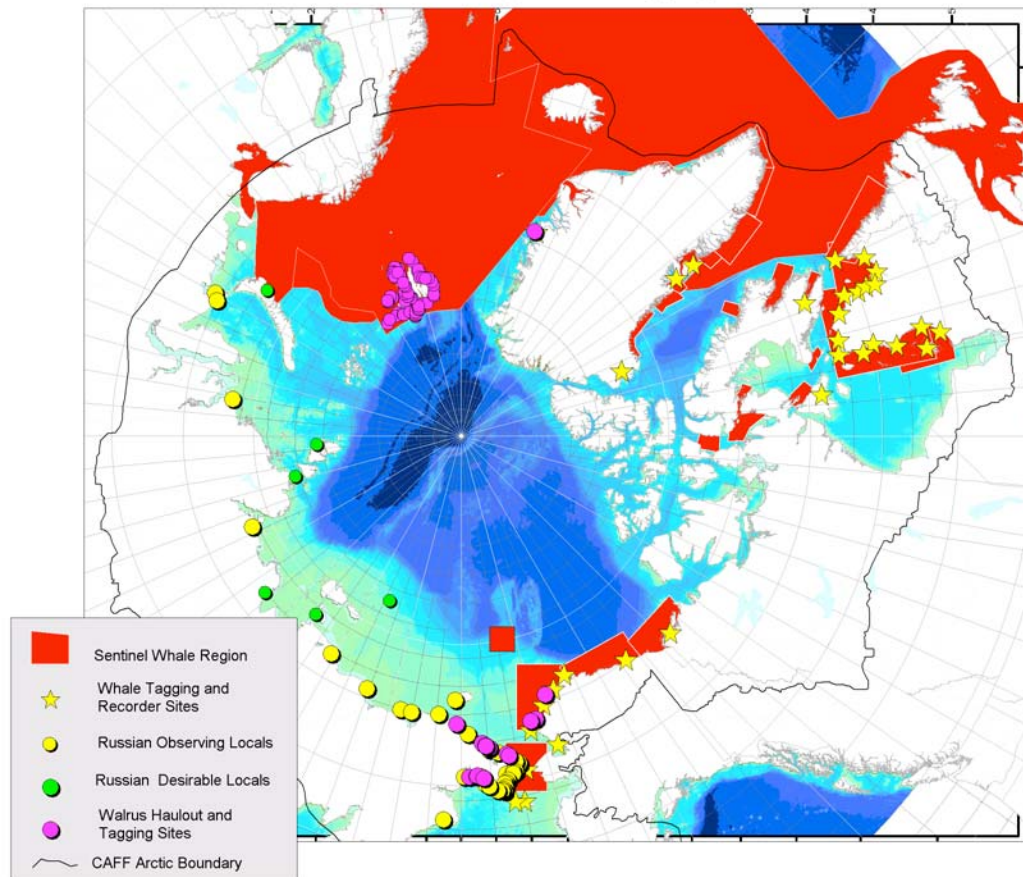
CIRCUMPOLAR BIODIVERSITY MONITORING PROGRAM

FISH SENTINEL REGIONS, TRANSECTS, AND STATIONS





Sentinel Marine Mammal Regions and Tagging Sites





BUDGET TOTALS: for the CBMP Secretariat for the MEMG

2010: 115K

2011: 125K

2012: 140K

2013: 95K

2014: 65K

2015: 170K

2016+: 65K/year, except 170K/five years (2020, 2025, etc.)

