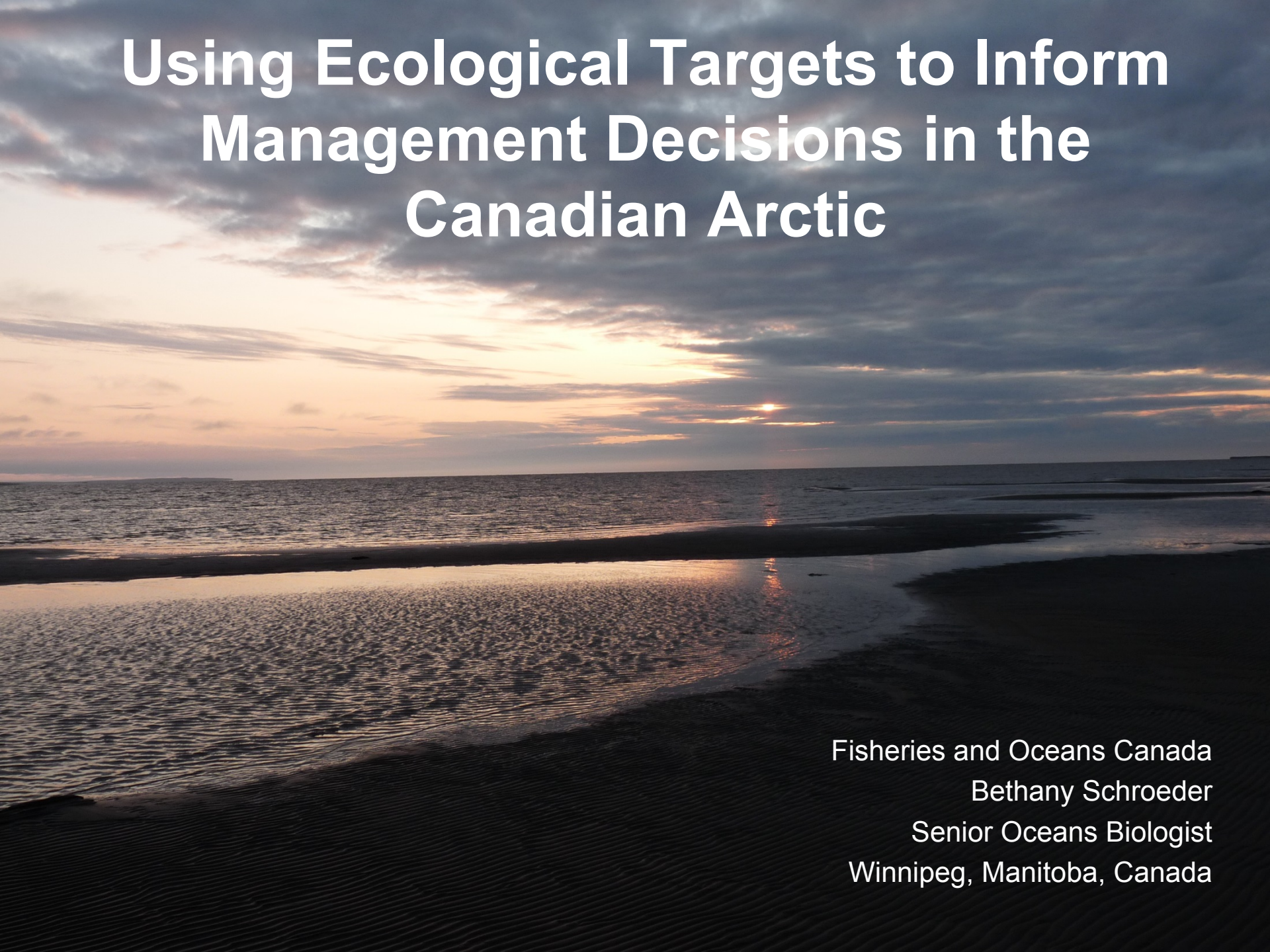
Using Ecological Targets to Inform Management Decisions in the Canadian Arctic



Fisheries and Oceans Canada
Bethany Schroeder
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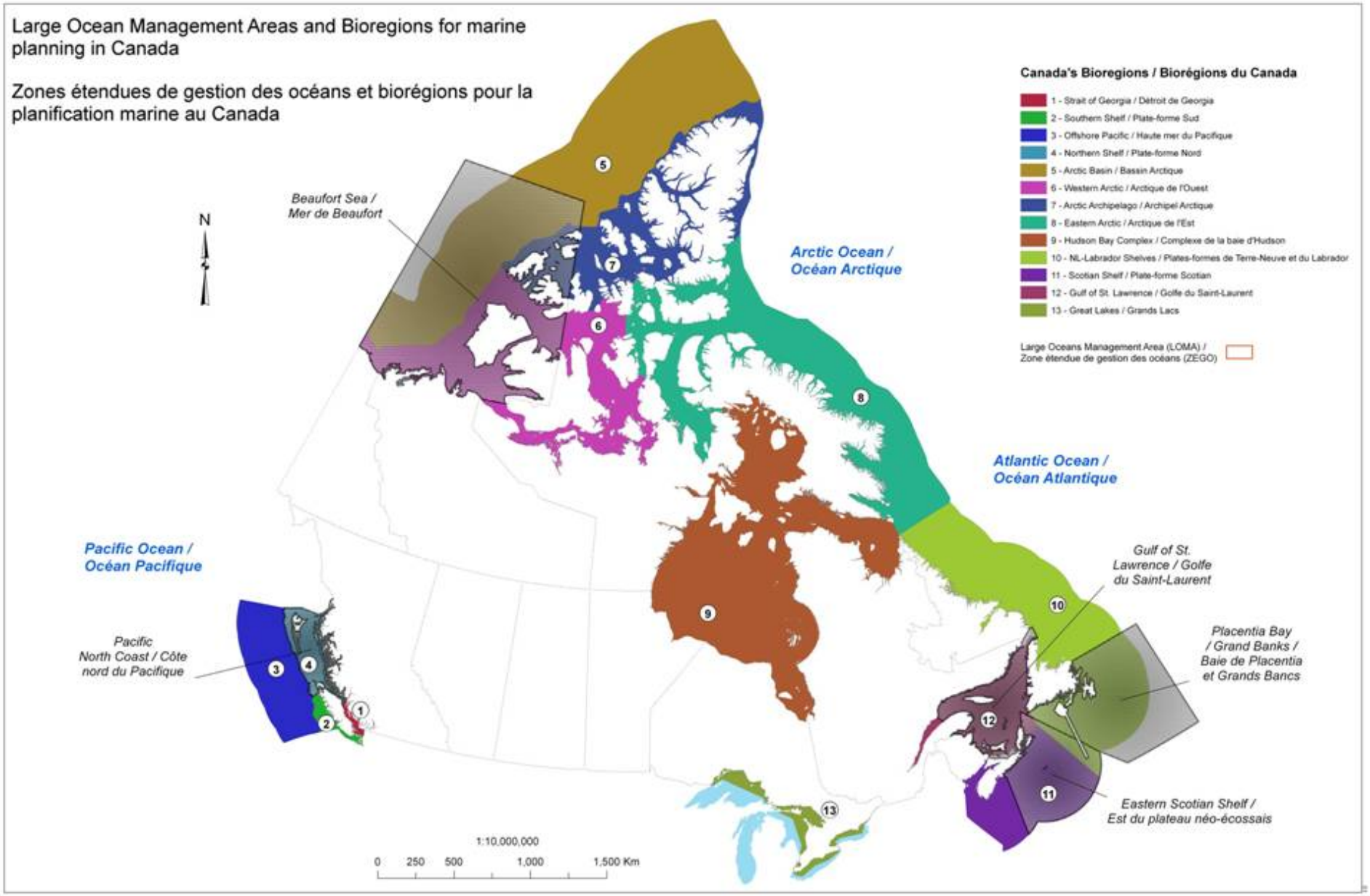
Overview

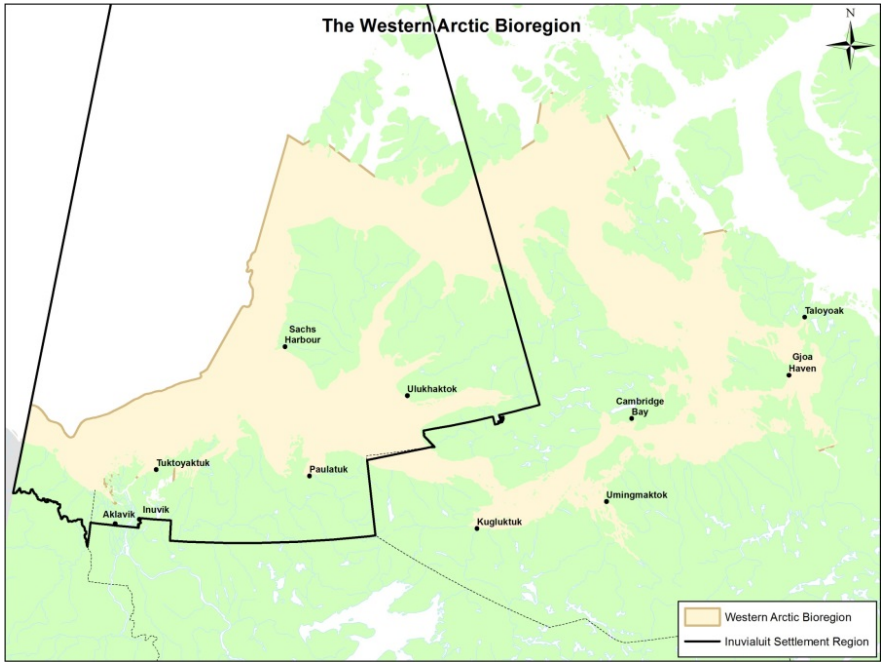
- Canada's Arctic
- Legislation and Policies
- EBM in Canada
- Integrated Oceans Management
- Marine Protected Areas
- MPA Network
- Current activities

Canada's Arctic regions



Western Arctic Bioregion

- 550,000 km^2 of marine area
- Encompasses both the Inuvialuit Settlement Region (ISR – within Northwest Territories) and Nunavut
  - 6 primary communities within ISR
    - Aklavik, Inuvik, Tuktoyaktuk, Paulatuk, Ulukhaktok, Sachs Harbour
  - Nunavut communities: Kugluktuk, Umingmaktok, Cambridge Bay, Gjoa Haven, Taloyoak
- Co-management initiatives under two settled Land Claim Agreements.

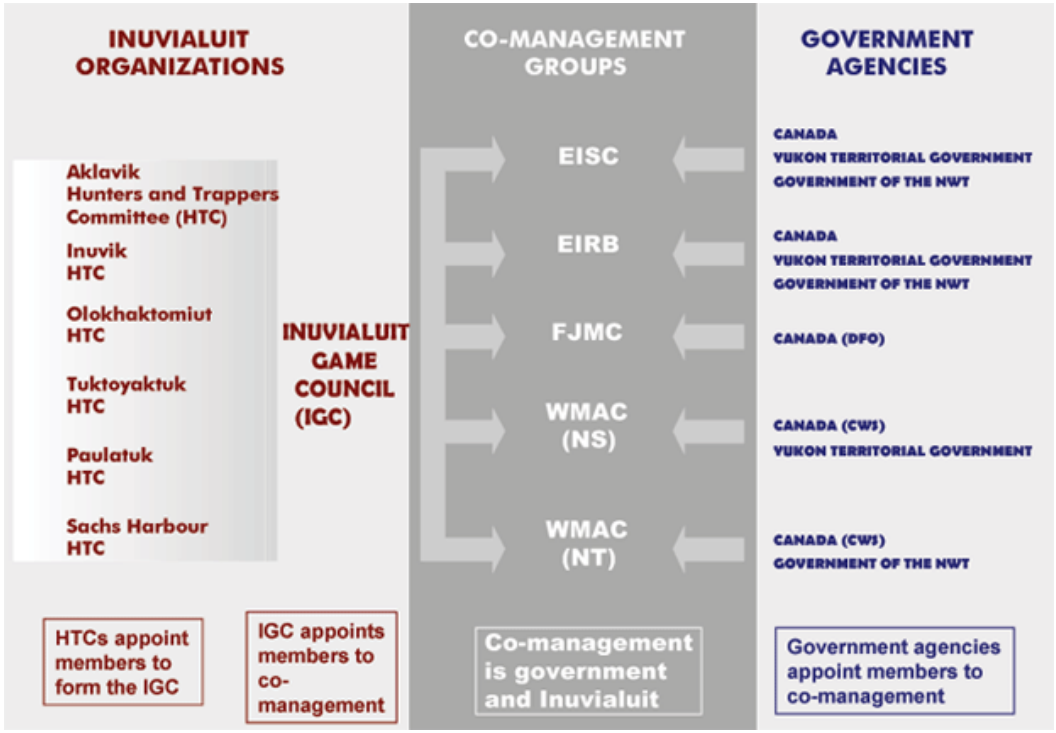


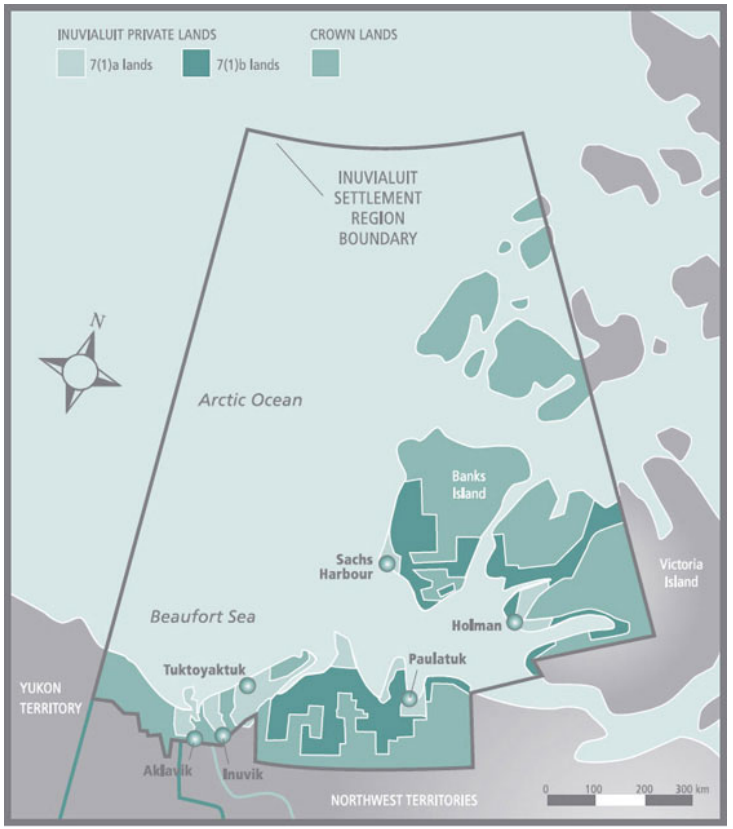
Legislation and Policies

- Oceans Act (1996)
  - Oceans Strategy (2002)
  - Oceans Action Plan (2005)
- Inuit Land Claims
    - Inuvialuit Final Agreement (1984)
    - Nunavut Land Claims Agreement (1993)
    - Co-management and Governance
- National Conservation Plan (2014)
  - $37M to strengthen marine conservation

Co-management in ISR

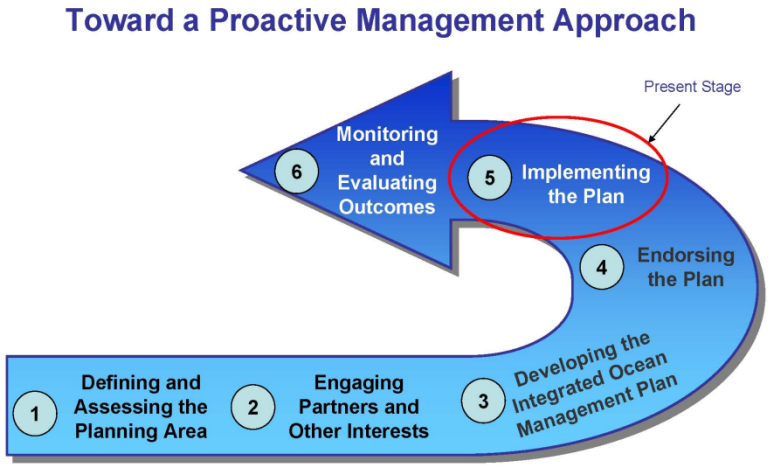
- Inuvialuit Final Agreement (1984)
- Nunavut Land Claims Agreement (1993)





EBM in Canada

- Guiding principle in Canadian Oceans management
- Holistic approach to ecosystem understanding and management
  - Role of Science: identify ecological and conservation objectives
  - Role of Inuit/Co-managers/TLK: incorporate cultural and traditional use information into management decisions
  - Role of Oceans: incorporate these two ways of knowing into comprehensive management plans.
- Combines Ecological, Social, Cultural and Economic data



Activities and Stressors in the Beaufort Sea

1970 Oil and Gas (shallow)

1980 Oil and Gas (deeper)

Contaminants

1990 Climate Change

2000 Renewed Oil and Gas

2010 Shipping

Cumulative Impacts

IOM in the Beaufort Sea

Planning Process

1. Defining and assessing the planning area
2. Engaging partners and other interests
3. Developing the Integrated Management Plan for the Beaufort Sea
4. Endorsing the Plan
5. Implementing the Plan
6. Monitoring and Evaluating Outcomes

Beaufort Sea Integrated Management

Regional Coordination Committee
Inuvialuit, Federal, Territorial, Co-management Organizations

BSP Secretariat
(DFO)

Beaufort Sea Partnership

- Federal, Provincial, Territorial
- Aboriginal organizations
- Co-management boards
- Industry
- NGO's
- Academia

Working Groups

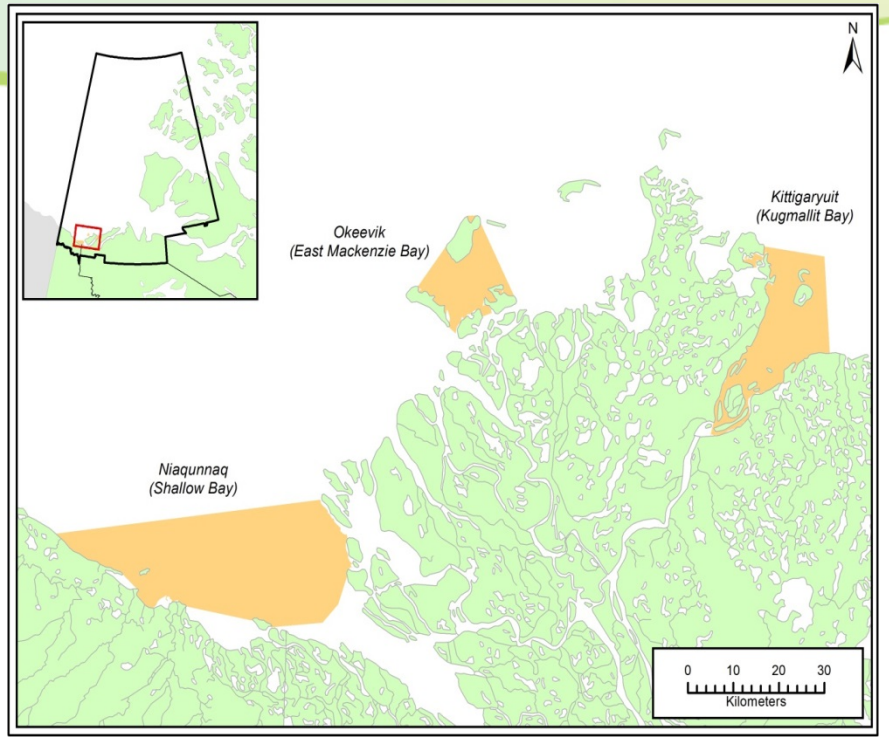
- Governance
  - Geospatial Platform
- SEC
- TLK group
  - ISR TLK Database
- Ecosystem group
  - ERAF Vessel activity
- Network group

Tarium Niryutait MPA (2010)

- *Conserve and protect beluga whales and other marine species (anadromous fish, waterfowl and seabirds), their habitats and their supporting ecosystem.*
- *Ensure long-term, sustainable beluga whale management and habitat conservation.*
- *Preserve and promote traditional activities by the Inuvialuit people in the ISR*
- *Prohibit activities with potential to negatively impact beluga or their habitat*

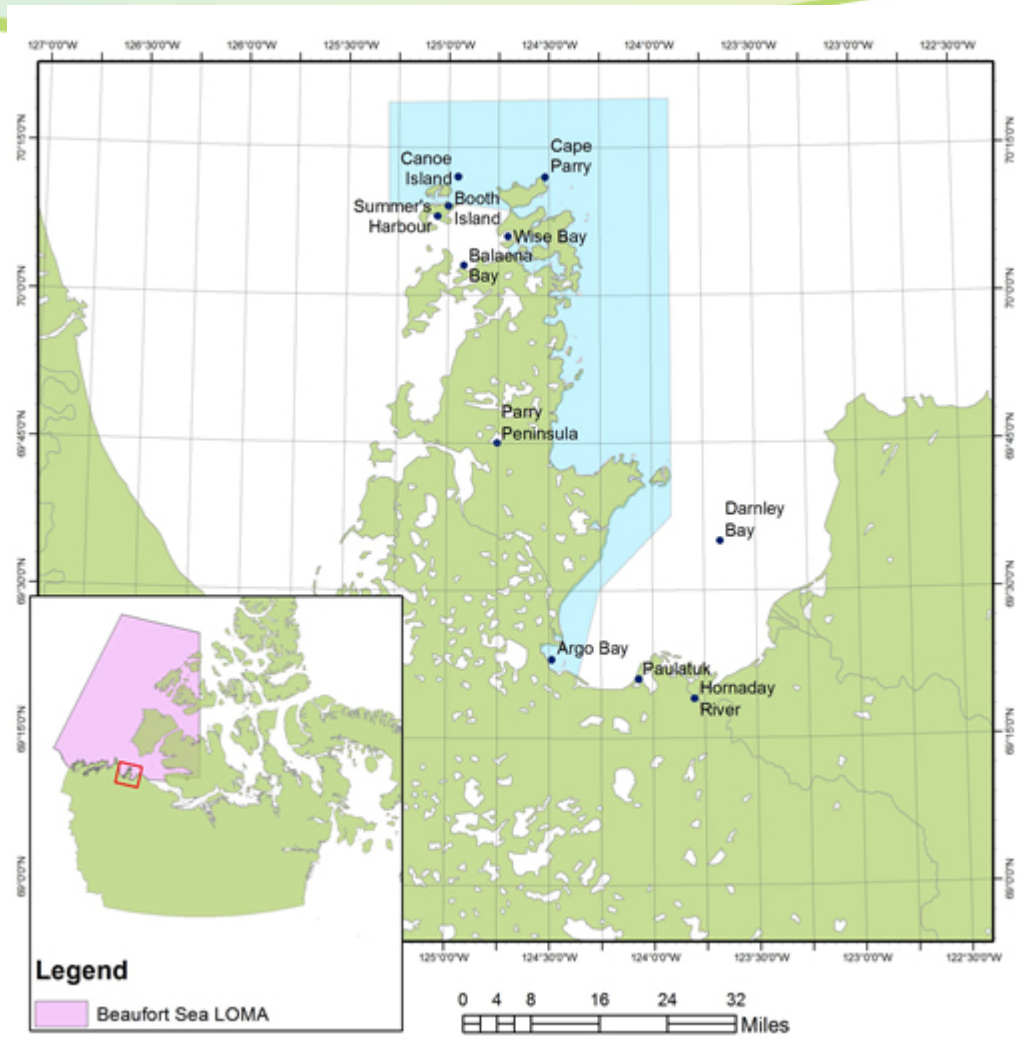
- Science conducts research to inform monitoring targets/indicators for ecosystem and species health and inform management decisions
  - Beluga Whale Monitoring studies

- Co-governance to monitor and implement management strategies



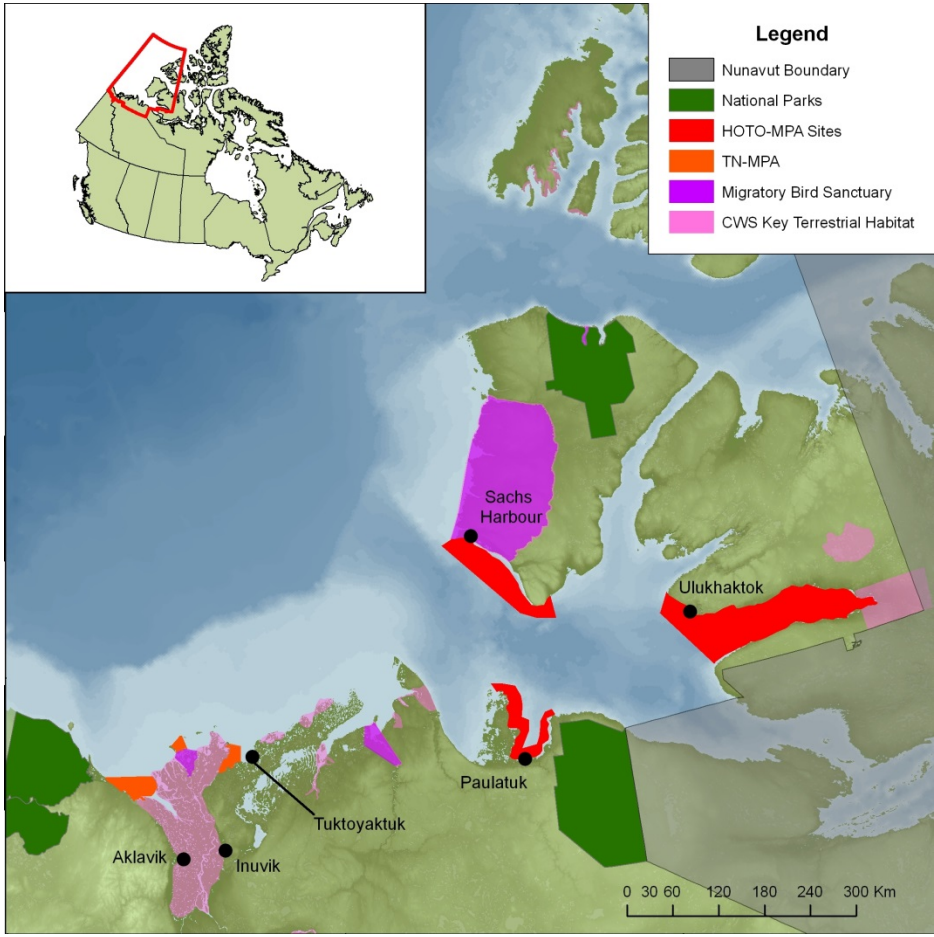
Anguniaqvia Niqiqyuam AOI (2012)

- Darnley Bay, NWT
- Beluga whales, also Arctic Char, seabirds
  - Science and TLK used to identify ecological and management objectives for different regions of AOI
- Balance between resources and capacity to do research vs manage/ monitor
  - Co-management FJMC, DFO, ISR



MPA Network in Canada

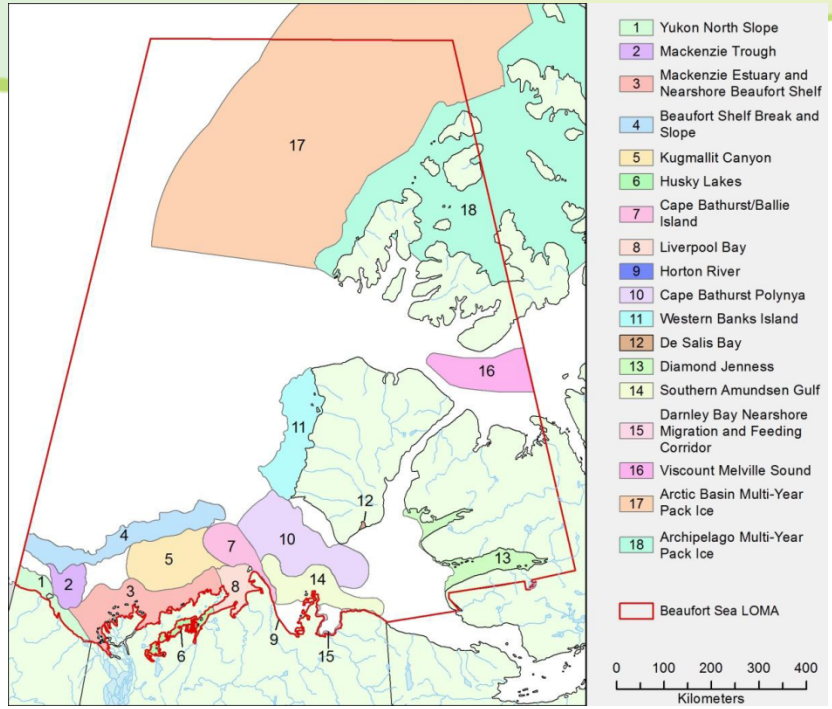
- CBD (2010) – Biodiversity Strategic Plan 2011-2020 and the Aichi Biodiversity Targets
  - *Target 11: By 2020, 10 per cent of coastal and marine areas are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas*
- Canada's Federal MPA Strategy (2005)
- Arctic Council Pan-Arctic MPA Network Framework
- National Framework for MPA Network development in Canada (2011)
- NCP funding $37M over 5 years (2014)
  - Western Arctic Bioregion Network
    - Responsibilities in Nunavut (Kitikmeot region)

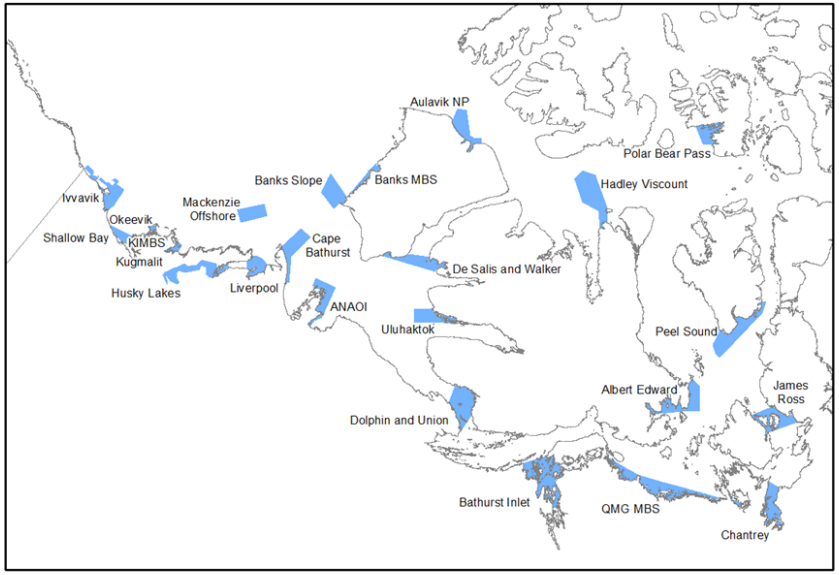


Nelson, R.J. 2013. Development of Indicators for Arctic Marine Biodiversity Monitoring in Canada. DFO Can. Sci. Advis. Sec. Res. Doc. 2013/123. iv+35 p

EBSA's CBD set criteria

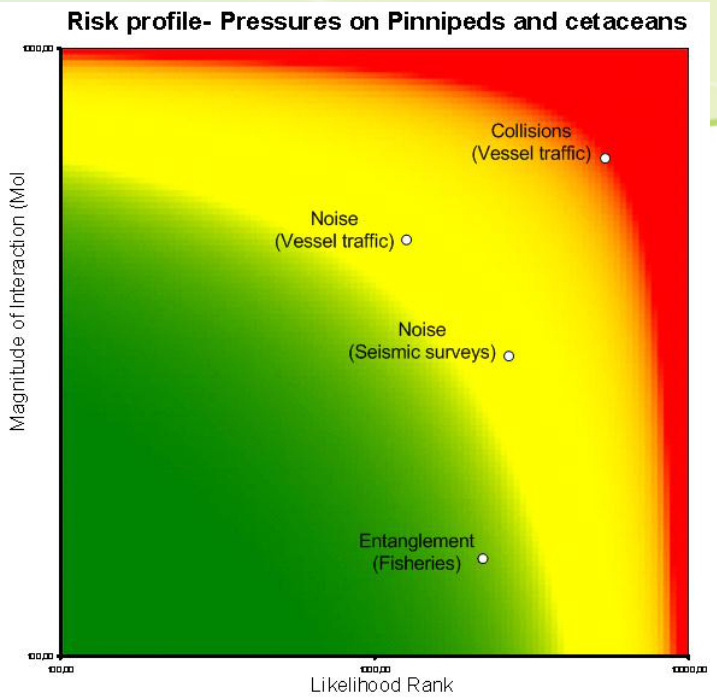
- Vast area for management actions and decisions
  - Balance between subsistence and non-renewable resource use
  - Limited people, capacity, resources
- **EBSA's to prioritize areas of interest**
  - **Eco-Units/PCA**

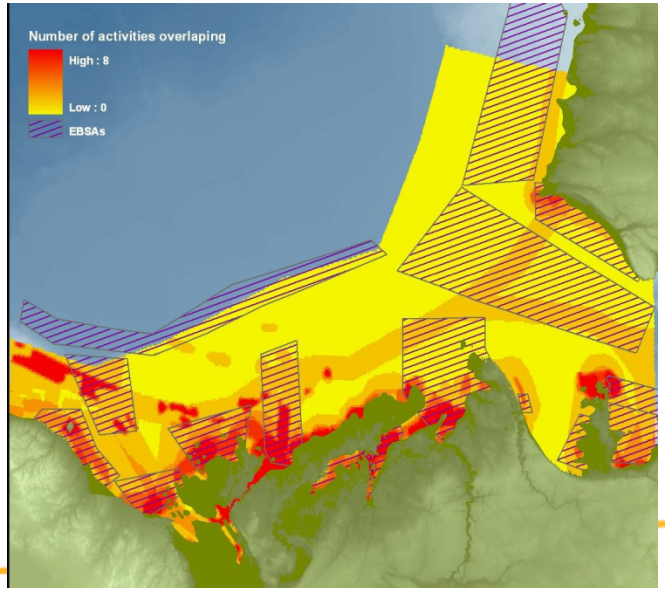




Risk Assessments

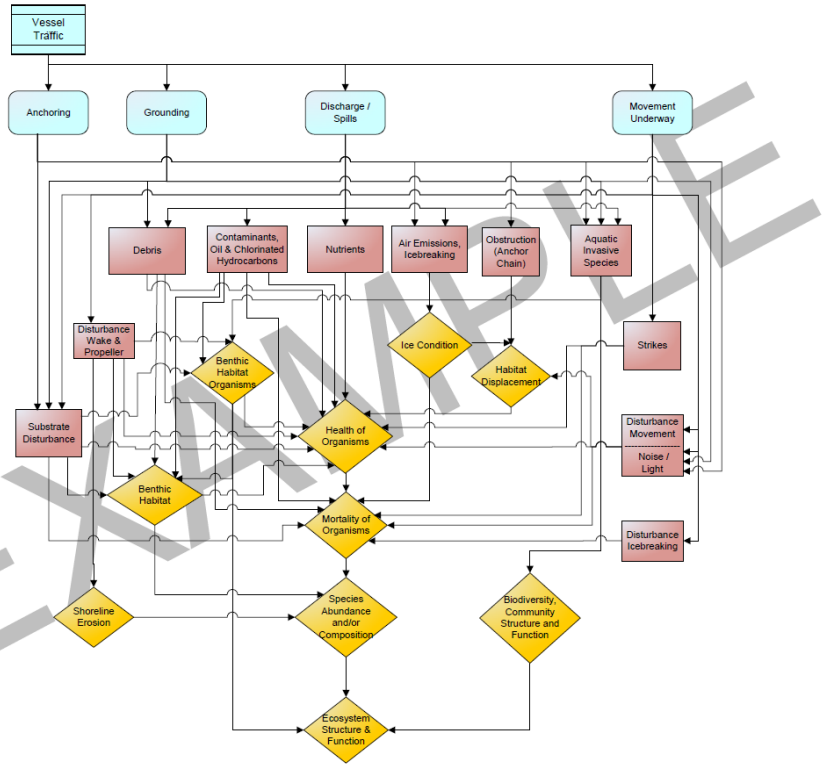
- Vast area for management actions and decisions
  - Balance between subsistence and non-renewable resource use
  - Limited people, capacity, resources
- EBSA's to prioritize areas of interest
  - Eco-Units/PCA
- **Risk assessments to identify and focus**
  - National Risk Framework (in dev.)
  - Regional approach to risk
    - ERAF for Vessel activity – case study





Pathways of Effects

- Vast area for management actions and decisions
  - Balance between subsistence and non-renewable resource use
  - Limited people, capacity, resources
- EBSA's to prioritize areas
- Risk assessments to identify and focus
  - National Risk Framework (in dev.)
  - Regional approach to risk
    - ERAF for Vessel activity
- **Pathways of effects development**



Thank you

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