The Marine Environmental Observation, Prediction and Response Network:

An Interdisciplinary, Networked Approach to Building Canada's Marine Research Capacity

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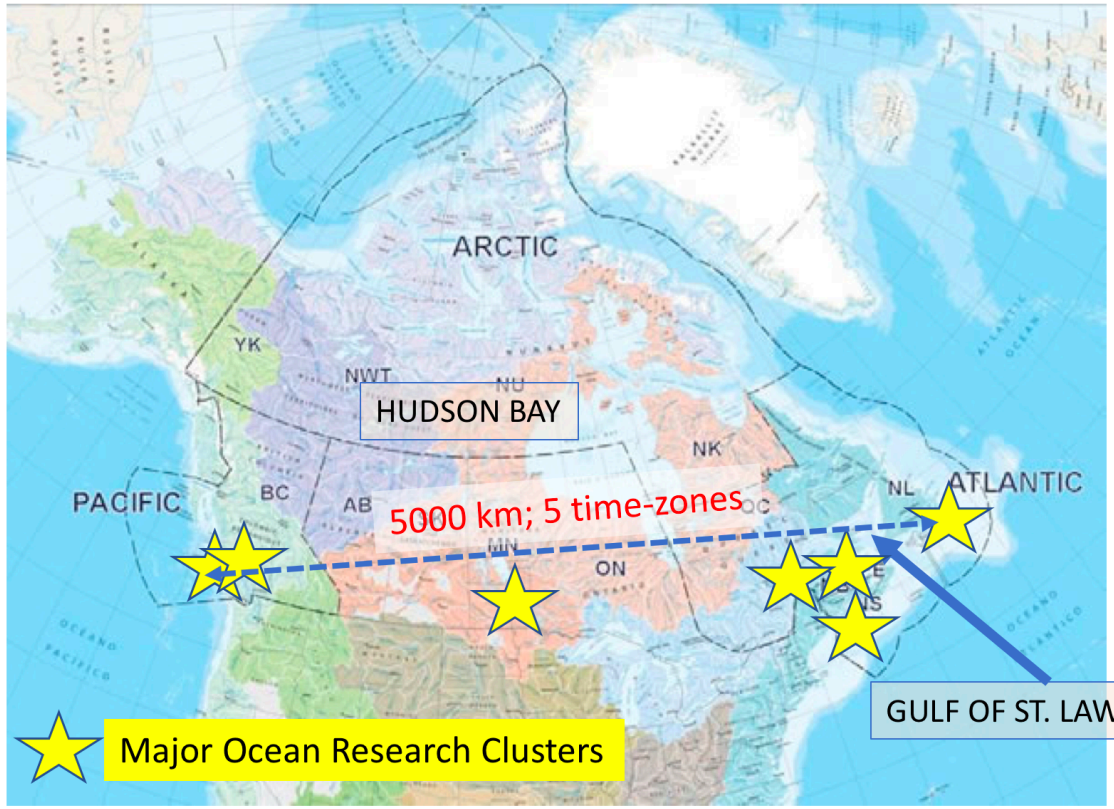
MEOPAR

The Critical Role of Networks in Canadian Ocean Science

- Three ocean basins; several major marginal seas
- Vast, diverse and often remote coastline
- Massive distances; multiple languages and cultures, including Indigenous cultures
- Distributed research capacity: geographically and sectorally (government/academia)



A National Network Focused on Marine Risk

Marine Environmental Observation, Prediction and Response Network

MEOPAR

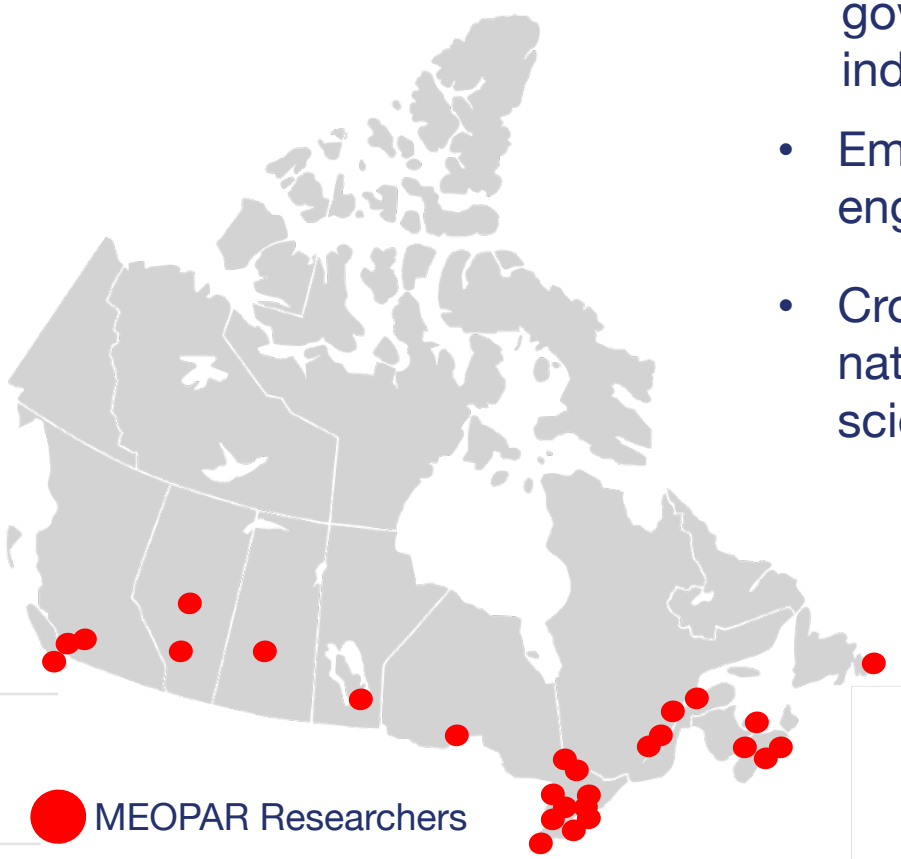
- Connect academia, government, NGOs, industry, communities
- Emphasis on end-user engagement
- Cross-disciplinary: natural and social sciences

64 research projects;

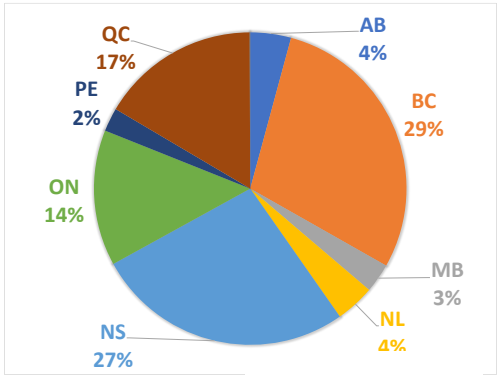
123 researchers at **27** universities

475 Highly Qualified Personnel trained across Canada

7 Network partners and **167** project partners



Where our funds go:



Canada

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DALHOUSIE UNIVERSITY

MEOPAR:

Observation, Prediction and Response to address the interaction between human activity and the marine environment.

Research Program Examples

Environmental Risk

Climate change

Ocean acidification:: impact on shellfish aquaculture;
Ocean deoxygenation;
Impacts of sea-level rise and sea-ice reduction

Marine weather, conditions and hazards

New approaches to improve marine weather forecasting;
Fog prediction; sea-ice dynamics; wave models

Human-derived Risk

Human activity and impacts

Modeling and model validation to improve response to oil spills;
Shipping impact on marine mammals (collisions; noise)
Shipping and Northern communities

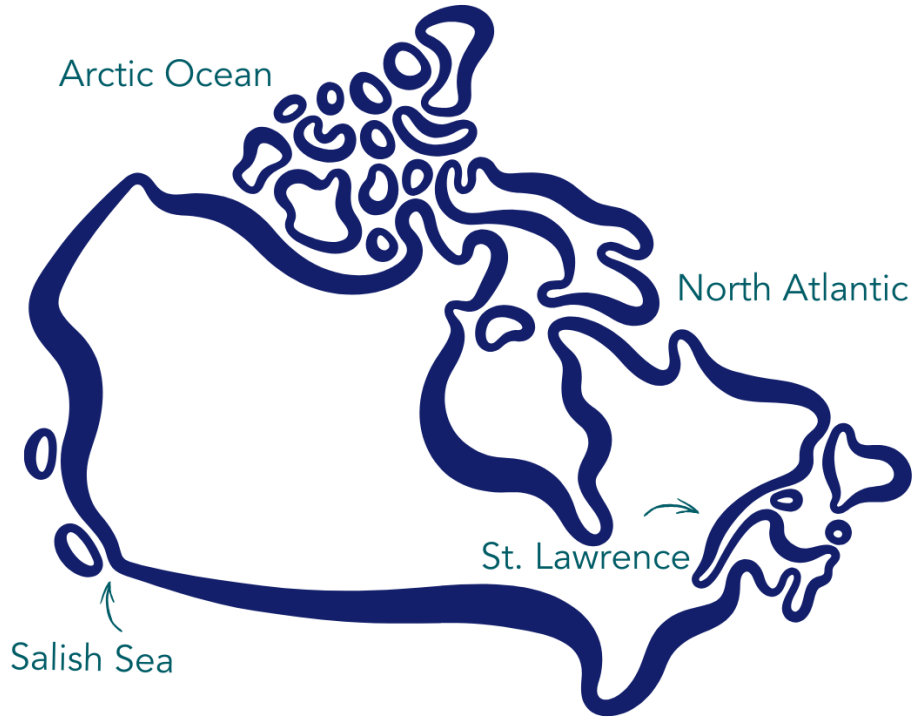
MEOPAR's Purpose

The MEOPAR network:

- Funds research
- Trains Highly-Qualified Personnel (MEOPeers)
- Develops strategic partnerships
- Supports knowledge mobilization (KM) in marine challenges and opportunities for the benefit of the Canadian economy and society

Training by the Numbers

- Over 700 MEOPeers trained since 2012
- One in three MEOPeers are international students or early-career researchers working in Canada
- Gender breakdown:
  - 58% female, 41% male, 1% non-binary
- Four key geographic regions



Training Based on Core Content Areas

- MEOPAR's four outcome areas – Ocean Observation; Forecasting and Prediction; Coastal Resilience; and Marine Operations and Transportation;
- Knowledge Translation and Science Communication;
- Interdisciplinary Research; and
- Career Development

Investing in Students and Early-Career Researchers in Canada:

- MEOPAR Postdoctoral Fellowship Awards:
  - $680,000 CAD awarded to 17 postdocs (2018-2020)
  - 2020-21 call for applications now open
- Early Career Faculty grants
  - $2,853,971 CAD awarded to 29 early career faculty; 12 awards in 2014 and 17 awards in 2018
- Travel and Training awards:
  - Cost-shared awards allow trainees to pursue self-identified, specialized training
  - Over 75 trainees received training and travel funding from 2017-2020

Training and Capacity Building for the Future of Marine Research

MEOPAR's training program builds capacity in interdisciplinary research and 21st-century skills related to marine environmental risk and the required response and policy strategies.

- Work-integrated learning through interdisciplinary research projects
- International Research Internships and Visiting Scholarships

Training & Capacity Building for the Future of Marine Research

MEOPAR's training program:

- Is recognized for strong connections to marine sector partners
- Emphasizes interdisciplinary networking and collaboration

MEOPeers and alumni point to the focus on cross-Canada networking, unique opportunities for stakeholder and community engagement, and leadership and career-building opportunities as key benefits they experience as MEOPeers.

Value-Added Experiential Learning

- An Annual Training Meeting and workshops on Science Communication, Marine Planning, Women in STEM, and High-Performance Computing
- Emerging partnerships with other national and international networks

Thank You!

For more information on MEOPAR and the Training Program, please visit www.meopar.ca