

Community-led marine planning and protection for the Gros Morne region of Western Newfoundland

Program Contacts



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About Us

- Founded in 1971
- Atlantic Canada's largest member-based environmental organization.
- Our vision is a society that respects and protects nature and provides environmentally and economically sustainable solutions for its citizens.
- We take leadership on
 - Biodiversity loss, climate change and environmental justice.
 - We use a variety of tools to achieve our mandate including
 - Education
 - Research
 - Policy analysis
 - Advocacy
 - Hands-on projects and
 - Market-based approaches

Why Us, Why Now?

- **Rebecca Brushett**, Lead Marine Planning and Engagement Coordinator
 - Completed her masters work on community-based marine planning in Gros Morne from 2015-2018.
 - Owns and operates a local tourism business in the region
 - Resident of Norris Point and well connected with the 7 communities of Gros Morne
- August 2020, in her role with the EAC, Rebecca secured funding to expand on her master's work





EAC Program Goal and Objectives

Build upon the work already done by Rebecca and many others to help facilitate a communityled marine spatial plan for the Gros Morne region that includes important areas for;

- Sustainable economic development
- Commercial and recreational fisheries
- Continued and future research
- Recreation
- Increased marine conservation or protection

Looking After the Marine Environment in Gros Morne

- Since 2020, Canada has 13.81% of its coastal and marine waters protected. Renewed commitments to protect 25% of its ocean by 2025 and 30% by 2030.
- EAC's holistic approach
 - Focus on the creation of marine spatial plans that look after important marine ecosystems and the coastal communities *together*.
- Why Gros Morne?
 - Rich marine biodiversity and habitat
 - Isolated populations of soft Arctic corals and Acadian redfish
 - Home to endangered wolffish species
 - Ecologically significant seaweeds like Arctic kelp
 - Nesting areas for thousands of migratory birds
- Protecting portions of the marine and coastal waters would represent one of the few 'land and sea' protected sites in Canada.

Rebecca's Thesis

MAPPING SOCIO-ECOLOGICAL VALUES

The use of geospatial tools to make informed decisions on the marine and coastal management areas surrounding Gros Morne National Park, Newfoundland

By © Rebecca D. E. Brushett (Thesis) submitted

to the School of Graduate Studies in partial fulfillment of the

requirements for the degree of

Master of Arts in Environmental Policy Grenfell Campus School of Science and the Environment Memorial University of Newfoundland

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Main Objective

- To create a resource management tool using ArcGIS that,
 - identifies hotspot areas of importance and impact from various 'agents of change'
 - informs the creation of a responsible marine plan for western Newfoundland
 - identifies socio-ecologically justified areas for marine protection

Why

- Knowledge from marine studies at the Bonne Bay Marine Station under Dr. Bob Hooper
- During time when fracking was being discussed
- My home

How

- Hosted community engagement sessions with stakeholders, fish harvesters and scientific experts in the Gros Morne region
- Conducted questionnaires and participatory mapping exercises that focused on
 - Tourism and Community Culture (TCC)
 - Non-Renewable Resource Development (NRRD)
 - Shipping and Sewage (SS)
 - Marine Significant Areas (MSA)
 - Aquatic Invasive Species (AIS)



Community Engagement through Mapping

MSA Question Identify the areas that are most important for the commercial and recreational fishery

Green = High Importance Yellow = Medium Importance Red = Low Importance



Other Sample Questions		
Important areas for current and future marine research	High-use non-motorized marine activities (kayaking)	Important areas for photography
Important areas for marine protection	High-use recreational activities (hiking, camping, swimming, etc.)	Important areas for bird watching
High-use motorized marine activities	Important view sheds	Important areas for moose hunting





Areas of Importance

- Cumulative Importance
- Marine Significant Areas
- Tourism and Community Culture
- Non-Renewable Resource Development

Areas of Impact

- Cumulative Impact
- Aquatic Invasive Species
- Non-Renewable Resource Development
- Shipping and Sewage
- Tourism and Community Culture





Using the rich knowledge of Gros Morne to build a Community-led Marine Plan with EAC

- Gather input from community members, academics, stakeholders and rightsholders to better understand their socio-ecological and economic values for the Gros Morne region
- Establish and work with 3 advisory committees to turn input into a draft marine management plan
 - Regional, Fisheries and Science Advisory Committees
- Put forward community recommendations for increased marine conservation or protection.

Building from previous mapping work...

- Significant Areas for
 - Commercial and Recreational
 Fishing
 - Fish Spawning
 - Migratory Birds
 - Whale sightings
 - Species at Risk
 - Aquatic Invasive Species

Recreational Areas

- Paddle Boarding and Kayaking
- Hiking, camping and tidepools walks
- Photography
- Bird Watching
- Important view sheds
- Hunting
- Salmon fishing

- Important areas for continued
 and future research
- Areas supported for various levels of marine protection
- Updating sewage outflows with data from participants
- High Traffic Motorized Areas

Next steps in ArcGIS

- Marine Spatial Analysis
 - Finalize the best way to display geospatial layers for next phase of participatory mapping with 3 Advisory Committees.
 - Create tool to build polygons in R during community mapping sessions and step away from paper!

Building off the marine research in Gros Morne since 1962!

- Completed a review of existing research to complement community input in the planning process
- 263 reports have been reviewed, scanned and entered into NVivo Software
 - 22 Peer reviewed papers
 - 9 High level reports by scholars
 - 22 Graduate thesis
 - 32 Honors dissertations
 - 178 field work reports by BBMS
 undergrad and grad students
- Over 2500 important biological attribute points have been generated for GIS
- Next up, social science research and input

Organizing Biological Data through NVivo Software NVivo is qualitative data analysis software that helps researchers organize, analyze and find insights in unstructured data like interviews, open-ended survey responses, journal articles, and even scientific data where deep levels of analysis on large volumes of data are required

Community engagement to date:

- Built upon the work done with the 29 participants in 2015 during Rebecca's thesis
- Met with important stakeholders including fish harvesters, scientific experts, Qalipu First Nations, local business operators, eNGOs, Parks Canada and Fisheries and Oceans Canada
- Developed a positive advisory relationship with representatives from the <u>Marine Plan</u> <u>Partnership (MaPP) program</u> in British Columbia.
- Continued mapping with 39 local in-shore fish harvesters to update local fishing knowledge.

Continued survey work with the region

- Conducted qualitative surveys in 2020/2021 with
 - 13 regional stakeholders
 - 9 scientific experts
 - 39 fish harvesters
- Survey results to date for the Gros Morne region
 - 64% support future shellfish aquaculture opportunities
 - 25% support future **finfish** aquaculture opportunities
 - 92% support increased **eco-tourism** development
 - 82% support potential marine protection in Gros Morne
 - 92% want to be kept in the loop on **marine plan**
 - 48% have signed up to be on one of the three
 Advisory Committees

What's Next?

- Finalize first round of community engagement sessions and present results to stakeholders from phase one
- Continue to gather data from previous research in region and input into marine plan
- Input geospatial layers into a participatory mapping tool to use at Advisory Committee Meetings
- Work with the committees and the public to create recommended zones in marine spatial plan for
 - Sustainable economic development
 - Commercial and recreational fisheries
 - Continued and future research
 - Recreation and
 - Marine protection
- And...

Begin New Project with Bonne Bay Marine Station (BBMS) and Atlantic Healthy Oceans Initiative (AHOI)

Link to video: https://youtu.be/P3ImrjghQVc

Project

- Gathering baseline data to enrich a marine plan for protection and sustainable livelihoods in the Gros Morne region of western, N.L.
- Secured letters of support from six of the seven Gros Morne municipal councils
- Financial support from Environmental Damages Fund-ECCC

Spring of 2022

- Conduct underwater research that will reach a depth of 300 meters.
- Remote operated vehicle (ROV) will map out, film and analyze 15 sites thought to have important marine habitats and species by scientific experts and local fish harvesters.
- Data collected will strengthen marine plan and identify ways to grow a sustainable blue economy that includes conserving areas of the ocean that need it most.

Thank you! Questions?

Participate in <u>Regional Survey</u>!