

# Conference Program



**June 4-7<sup>th</sup>, 2024**  
St. Andrews New Brunswick



**Tides of Change: Accelerating Conservation and Protection Efforts in Atlantic Canada's Estuaries and Coastal Waters**



Presented by:



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# General Information

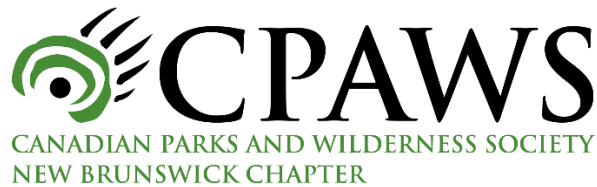
## Sponsors

### Gold Sponsors



**ST. FRANCIS XAVIER**  
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Departments of Biology and Aquatic Resources



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Marine Affairs Program

### **Core Supporters of ACCESS and BoFEP**

Coastal and Estuarine Research Federation; Environment and Climate Change Canada; FORCE (Fundy Ocean Research Centre for Energy); Hoskin Scientific.

## Organizing Committee Members

Many people were involved in the organization and conduct of this conference. They are owed many thanks for their time, expertise, and dedication to estuarine and coastal science in the Bay of Fundy and beyond. In alphabetical order, they include:

Davide Asnicar, Huntsman Marine Science Centre, and ACCESS

Emilie Butler, BoFEP

Michael Butler, International Ocean Institute-Canada, Dalhousie University, and BoFEP

Jeff Clements, Fisheries and Oceans Canada, President of ACCESS

Sandra Currie, FORCE, and BoFEP

Benjamin de Jourdan, Huntsman Marine Science Centre

Matt Penney, Dalhousie University, and ACCESS

Jon Percy, SeaPen Consultants, and BoFEP

Danielle Philibert, Huntsman Marine Science Centre

Brittney Roughan, Saint Mary's University, and ACCESS

Peter Wells, Dalhousie University, Chair of BoFEP

## Message from the Co-Chairs

On behalf of Atlantic Canada Coastal and Estuarine Science Society (ACCESS) and The Bay of Fundy Ecosystem Partnership (BoFEP), we are thrilled to welcome you to this joint conference at the Huntsman Marine Science Centre Fundy Discovery Aquarium in St. Andrews New Brunswick.

This year's theme, "Tides of Change: Accelerating Conservation and Protection Efforts in Atlantic Canada's Estuaries and Coastal Waters" was chosen to reflect the urgent need to protect and conserve our nearshore coastal habitats, and the diversity they support, in the face of immense change. This especially applies to the Bay of Fundy which is undergoing many changes linked to climate change and is a major focus of this conference.

The conference aims to bring together experts, scholars, students, and enthusiasts from various fields to share knowledge, exchange ideas, and foster collaboration surrounding key issues impacting our coastal environments. Our scientific program is diverse, and includes many hallmarks of ACCESS and BoFEP workshops, including ocean literacy, coastal issues, and species biology/ecology. Notably, this year's program comes with a strong avian contingent, underscoring the need to protect and conserve nearshore habitats for species of the air, land, and sea.

This meeting relies on the generous support of sponsors and exhibitors. Conference co-chairs, organizing committee members, session co-chairs, all volunteer our profession time to make it happen.

We invite you to reflect on how the programs and projects we are involved in intersect with our theme.

It is our hope that this meeting is engaging and inspiring and we look forward to interacting with you all!

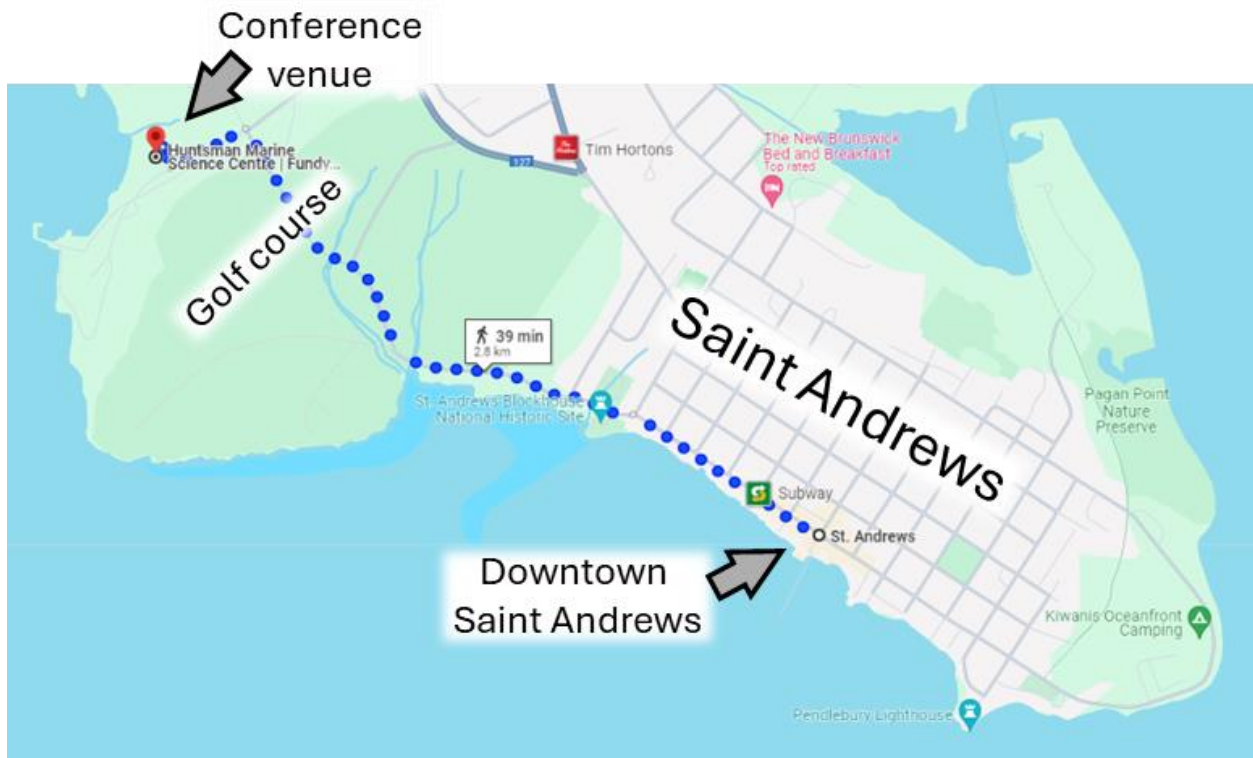
**Peter Wells**  
*Chair of BoFEP*

**Jeff Clements**  
*President of ACCESS*

**Benjamin de Jourdan**  
*Huntsman Marine Science Centre*

## Welcome to St. Andrews

St. Andrews-by-the-Sea is New Brunswick's signature resort community. During your time at this conference, we hope that you take the opportunity to explore the historic sites, take in the stunning coastal views, and savor the local cuisine (see [explorestandrews.ca](http://explorestandrews.ca) for great tips). If you are staying downtown, it is about a 40-minute scenic walk to the Huntsman Marine Science Centre.



## The Huntsman Marine Science Centre & Fundy Discovery Aquarium

Dear Colleagues,

Welcome to The Huntsman Marine Science Centre! We are thrilled to again host the annual meetings of the Atlantic Canada Coastal and Estuarine Science Society (ACCESS) and the Bay of Fundy Ecosystem Partnership (BoFEP) while also celebrating 55 years of Huntsman Marine excellence in 2024.

The theme for your joint conference “Tides of Change: Accelerating Conservation and Protection Efforts in Atlantic Canada's Estuaries and Coastal Waters” resonates deeply with our mission at Huntsman Marine. For over half a century, we have been at the forefront of marine science, conducting world-class aquatic research and fostering a love for our ocean on this remarkable blue planet.

As we explore the tides of change together, we invite you to immerse yourselves in our facilities, engage with our research & education experts, and discover the wonders of the Bay of Fundy. Many of you may have attended field courses here in the past and we extend a warm welcome back. Others may be new to the research community, and we hope for a memorable meeting if this is your first interaction with Huntsman Marine. In all cases, we strive for Huntsman Marine to be your home for ocean exploration.

Thank you for joining us for this important meeting. We look forward to reviewing your presentations and posters, participating in your insightful conversations, and increasing our collective efforts toward a healthier, more resilient coastal environment. Welcome to The Huntsman Marine Science Centre!

Sincerely,

Chris Bridger  
Executive Director, Huntsman Marine Science Centre



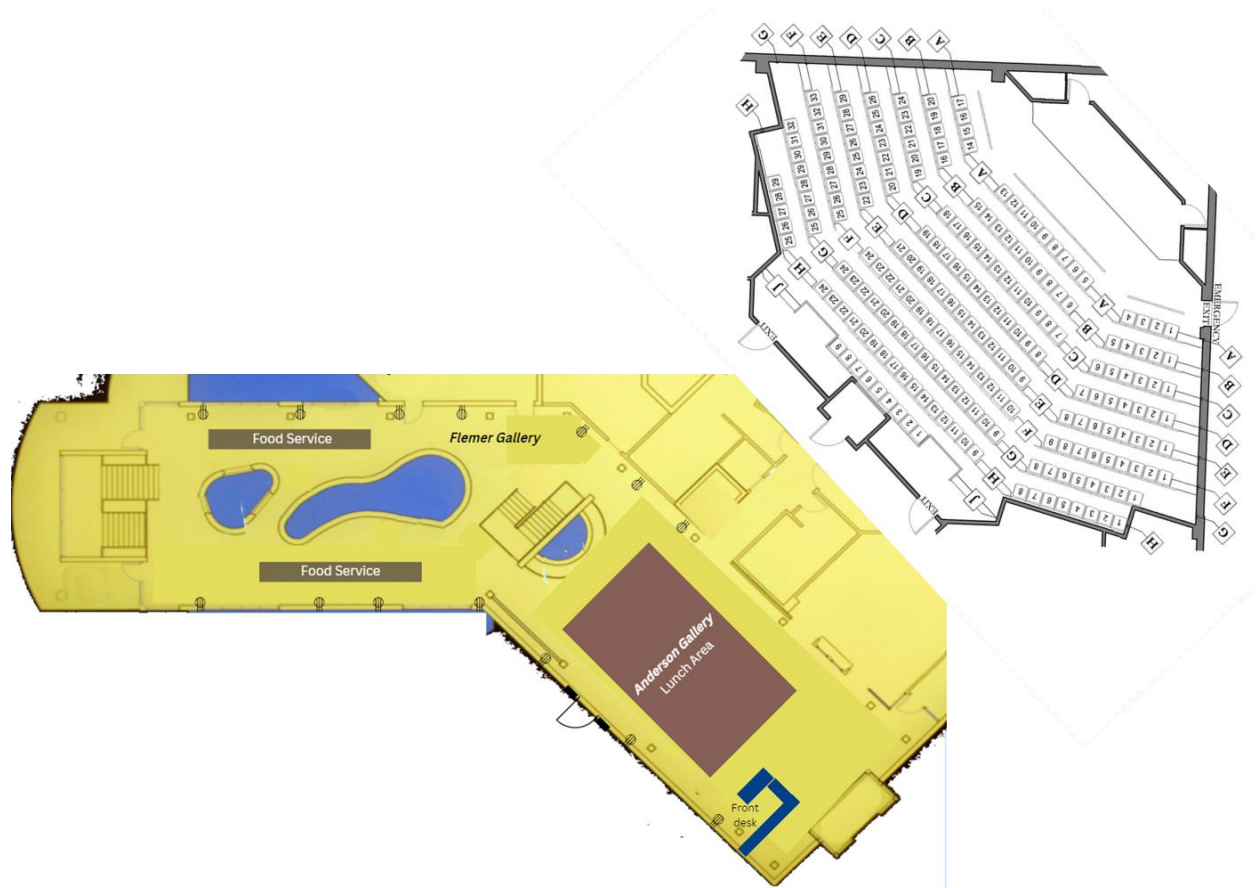
Presentations will be held in the main lecture theatre of the Fundy Discovery Aquarium (A in figure below), located at 1 Lower Campus Road, St. Andrews. Turn off Highway 127 (St. Andrews – Fredericton) onto Marine Science Drive, drive straight until part way down the hill, and then turn right onto Lower Campus Road (just prior to the entry gates for the DFO St. Andrews Biological Station). Student and guest accommodations are at Upper Campus (B in figure below).



WiFi: Huntsman Guest  
Password: Hunstmanguest



### Main Level of Fundy Discovery Aquarium and Dunn Theatre



### Lower Level of Fundy Discovery Aquarium



# Program

## Short Course

### Creating high-quality graphics using PowerPoint

June 4<sup>th</sup> 13:30- 16:00 in the Fundy Discovery Aquarium, Dunn Theatre

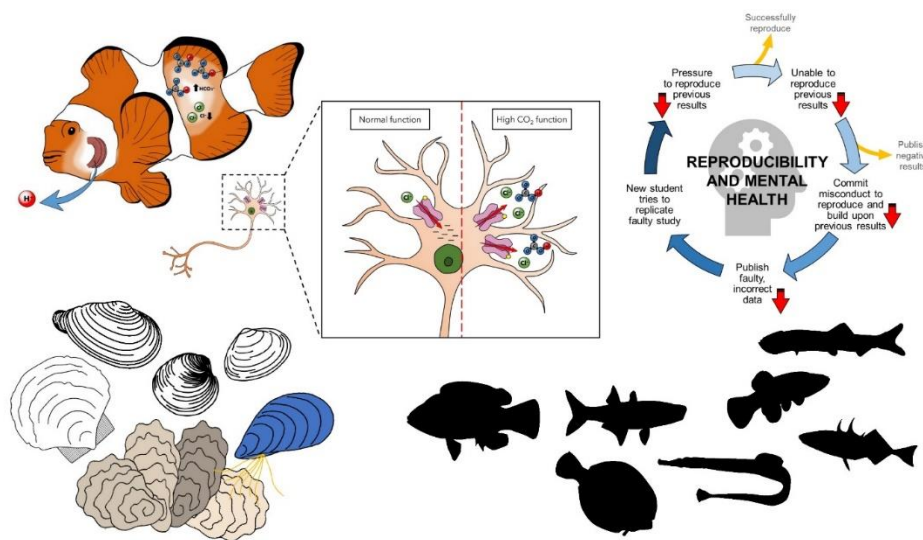
Workshop leader: Dr. Jeff Clements, Department of Fisheries and Oceans Canada

#### Jeff Clements

[jeffery.clements@dfo-mpo.gc.ca](mailto:jeffery.clements@dfo-mpo.gc.ca)

Have you ever wanted to jazz up your figures with a nice illustration of your study species but weren't sure how to make one? Or perhaps you're writing a review paper and would like to include a nice conceptual figure, but don't know where to start. In this skills workshop, attendees will learn how to generate their own creative scientific graphics using Microsoft PowerPoint. I will first walk through my own process for creating such graphics using PowerPoint and show attendees how to export the graphics as high-resolution images. Attendees will then use these skills to generate their own scientific graphic that can be used in presentations, papers, and for other science communication purposes. By the end of this workshop, attendees will be able to apply these newly-learned skills to create scientific graphics for any project.

*Note: Attendees should bring a laptop with Microsoft PowerPoint installed. A mouse is also highly suggested. Conference registration required for admission*



# Opening Reception and Bay of Fundy Event

## CELEBRATING THE BAY OF FUNDY



All photos by Nick Hawkins

**Join us for mingles and nibbles!**

**TUESDAY, JUNE 4TH, 4-6PM**

Huntsman Marine Science Centre  
1 Lower Campus Rd  
St. Andrews, New Brunswick

This event is free and open to the public.



## Plenary Speakers

**June 5<sup>th</sup> 2024:** Diz Glithero, Director, Canadian Ocean Literacy Coalition

### **The rapid growth, relevance, and impact of the ocean literacy movement in Canada and globally**

The field of ocean literacy has shifted significantly over recent years from its initial focus on ocean science knowledge in formal education, to its positioning as an outcome – a society that better understands, values, and cares for the ocean. Current ‘threats’ to the ocean are an outcome of human behaviour. Although critically important, knowledge generation and data alone will not galvanize the scale of societal transformation needed to ensure a healthy ocean and its interdependency with human health and well-being. Bridging science and policy with society is crucial, through creating pathways for meaningful engagement and the upscaling of action across generations, geographies, and scales. This presentation will highlight the key drivers of ocean literacy as outlined in the recently published Ocean Decade Vision 2030, specifically in the Challenge 10 white paper (restoring society’s relationship with the ocean). Current and collaborative research efforts will be shared, including the launch of a global ocean literacy survey. The presentation will also discuss key insights on the progress and impact of implementing the Canadian Ocean Literacy Strategy to date and explore how efforts in Canada are informing and contributing to key global initiatives.

#### **Bio**



Diz is the Founding Director of the [Canadian Ocean Literacy Coalition](#) – a centre for ocean literacy collaboration, research, and innovation that is administratively based at Dalhousie University (Ocean Frontier Institute). Diz led the co-development [Land, Water, Ocean, Us: A Canadian Ocean Literacy Strategy](#) (March 2021), and co-founded [Ocean Week Canada](#). Internationally, Diz serves as the co-chair and co-author of the Ocean Decade Vision 2030 Challenge 10 Working Group and white paper. She co-leads the [Ocean Literacy Research Community \(OLRC\) initiative](#), as well as serves on the Advisory Board of the Ocean Decade Coordination Office, *Connecting People and the Ocean*, the Steering Committee of the IOC-UNESCO-led [Ocean Literacy With All](#) Program, and the [All-Atlantic Ocean Research and Innovation Alliance’s](#) Ocean Citizen Awareness Working Group.

**June 6<sup>th</sup> 2024:** Kristina Boerder, Dalhousie University/Community Eelgrass Restoration Initiative

### **Community-Led, Climate-Smart Eelgrass Restoration and Research in Nova Scotia**



Eelgrass (*Zostera marina*) is a common marine plant along Nova Scotia's shorelines, yet it is not widely known that eelgrass is a powerhouse for marine biodiversity, shoreline protection, water quality enhancement, fisheries and the sequestration and storage of blue carbon. In this talk I will present a new research collaboration between the Future of Marine Ecosystems lab at Dalhousie University and the Confederacy of Mainland Mi'kmaq, the Community Eelgrass Restoration Initiative (CERI, [www.eelgrass.ca](http://www.eelgrass.ca)). CERI aims to map, measure, research and restore eelgrass meadows to support community-led eelgrass restoration projects across the province. Based on climate-smart research on eelgrass health characteristics, associated biodiversity and blue carbon sequestration and storage, I will illustrate how scientifically guided, community-led efforts in eelgrass restoration have the potential to become a catalyst for education, stakeholder engagement and empowerment in Nova Scotia's coastal landscapes.

#### **Bio**

Kristina Boerder, originally from Germany, is a Senior Research Scientist at Dalhousie University, Halifax/Canada, working in the Future of Marine Ecosystems lab with Dr Derek Tittensor on marine conservation, fisheries, and the impacts of climate change on marine biodiversity protection. She is currently spearheading the new Community Eelgrass Restoration Initiative (CERI), working to restore eelgrass meadows across Nova Scotia and to assess their role for biodiversity and blue carbon storage. When she is not sticking her head into eelgrass meadows she likes to sail, talk about science and watch squirrels with her cat.




Town Hall

## ACCESS-BoFEP 2024 Town Hall

# Fins and Flukes: A conversation about Whales and Sharks in the Bay of Fundy


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Open to the public – Cash bar


Fundy Discovery Aquarium, Dunn Theatre

Thursday, June 6<sup>th</sup>, 2024, at 19:00–20:30




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### Panelists




**Genny Simard**  
Education and Outreach  
at Quoddy Link Marine  
and Huntsman Marine  
Science Centre



**Dr. Marc Trudel**  
Research scientist,  
Fisheries and Oceans  
Canada, St. Andrews  
Biological Station



**Delphine Durette-Morin**  
Associate Scientist,  
Canadian Whale  
Institute



**Darlene Norman-Brown**  
Assistant Director &  
Prime on Ghost Gear  
Retrieval for the Fundy  
North Fishermen's  
Association

## Program at a Glance

	Tuesday, June 4th	Wednesday, June 5th	Thursday, June 6th	Friday, June 7th
8:00		Registration (0730)	Registration	Registration
8:20		Welcoming Remarks		
8:40				
9:00		Diz Glithero: The rapid growth, relevance, and impact of the ocean literacy movement in Canada and globally	Kristina Boerder: Community-Led, Climate-Smart Eelgrass Restoration and Research in Nova Scotia	<b>Session 7:</b> Echoes in the Deep: Improving our understanding of Marine mammals in our oceans
9:20				
9:40				
10:00		Morning break	Morning break	Morning break
10:20		<b>Session 1:</b> Deep Dive into Ocean Literacy: Navigating the Waters of Understanding	<b>Session 4:</b> Tides of Changes: Unraveling the Dynamics of Salt Marshes and Coastal Physical Processes	<b>Session 8:</b> Investigating Invertebrates: Enhancing Understanding and Addressing Challenges in Atlantic Canada's Marine Ecosystems
10:40				
11:00				
11:20				
11:40		<b>Panel:</b> Ocean Literacy in the Bay of Fundy Region		
12:00				
12:20	Registration	Lunch (ACCESS AGM)	Lunch	Lunch
12:40	Short Course: Creating high-quality graphics using PowerPoint	<b>Session 1:</b> Deep Dive into Ocean Literacy: Navigating the Waters of Understanding	<b>Session 5:</b> Assessing the impact of environmental stressors on freshwater and marine habitats	<b>Session 9:</b> Advancing Species Monitoring through Novel Sensing Technologies
13:00				
13:20		<b>Session 2:</b> Taking Flight: Exploring the Role of Seabirds in Ocean Ecosystems		
13:40				
14:00		Afternoon break	Afternoon break	Awards and Closing
14:20		<b>Session 2:</b> Taking Flight: Exploring the Role of Seabirds in Ocean Ecosystems	<b>Session 6:</b> Innovations in marine habitat monitoring and conservation strategies	
14:40				
15:00		<b>Session 3:</b> Collaborative Community led Solutions to Anthropogenic Stressors	Hosting an environmental movie festival in St. Andrews	Poster Social
15:20				
15:40				
16:00				
16:20				
16:40				
17:00				
17:20	Poster Social			
17:40				
18:00				
18:20				
18:40				
19:00				
19:20				
19:40				
20:00				
20:20				
20:40				
21:00				

Tuesday June 4th, 2024

**12:00**

**Registration**

Fundy Discovery Aquarium

**13:30- 16:00**

**Workshop: Creating high-quality graphics using PowerPoint**

Fundy Discovery Aquarium, Dunn Theatre

Conference registration required for admission

Workshop leader: Dr. Jeff Clements, Department of Fisheries and Oceans  
Canada

**16:00 – 18:00**

**Opening Social – Presented by Oceans North and Canadian Parks and  
Wilderness Society (CPAWS)**

Fundy Discovery Aquarium

Cash Bar



Wednesday, June 5th, 2024

**07:30**

**Registration**

Fundy Discovery Aquarium

Poster presenters are encouraged to put up their posters in the Lower Level

**08:20**

**Opening Remarks**

Fundy Discovery Aquarium, Dunn Theatre  
Chief Hugh Akagi, Peskotomuhkati Nation

**09:00**

**Plenary**

*THE RAPID GROWTH, RELEVANCE, AND IMPACT OF THE OCEAN LITERACY  
MOVEMENT IN CANADA AND GLOBALLY*

Dr. Diz Glithero (Canadian Ocean Literacy Coalition)

**10:00**

**Break and Poster Viewing**

Fundy Discovery Aquarium, Flemer Gallery and Lower Level

**Session 1: Deep Dive into Ocean Literacy: Navigating the Waters of  
Understanding  
Chair: Peter Wells**

**10:20 Michael Butler** (International Ocean Institute – Canada)  
THE OCEAN AND US IN AN ERA OF CLIMATE CHANGE

**10:40 Maxine Westhead** (Dalhousie University)  
SAILING THROUGH TIME: A VOYAGE INTO THE LEGACY AND FUTURE OF  
DALHOUSIE'S MARINE AFFAIRS PROGRAM

**11:00 Sondra Eger**  
**Panel Discussion:** OPPORTUNITIES AND ACTION: OCEAN LITERACY IN THE  
BAY OF FUNDY REGION

**12:00**

**Catered Lunch  
ACCESS AGM**

Fundy Discovery Aquarium, Anderson Gallery

**13:00 Katie Schleit and Sara Vanderkaden** (Oceans North)  
CHARTING CONSERVATION PATHWAYS: INSIGHTS FROM AN OPINION SURVEY AND LITERATURE REVIEW ON RESEARCH AND CONSERVATION IN THE INNER BAY OF FUNDY

**13:25 Jumanah Khan** (Dalhousie University) **(MSc student)**  
DO YOU SEA WHAT I SEE: EXPLORING THE REPRESENTATION OF PLACE-BASED KNOWLEDGE IN SPATIAL PLANNING IN COASTAL NOVA SCOTIA, CANADA

**Session 2: Taking Flight: Exploring the Role of Seabirds in Ocean Ecosystems**  
**Chair: Tony Diamond**

**13:40 Gianco Angelozzi** (Mount Allison University) **(MSc student)**  
EFFECTS OF EXTREME WEATHER ON STAGING SHOREBIRDS AND THEIR HABITAT IN ATLANTIC CANADA

**14:00 Allie Hjort Toms** (Mount Allison University) **(MSc student)**  
APPLICATION OF REMOTE SENSING AND IN SITU SAMPLING TO EVALUATE HABITAT SUITABILITY FOR SHOREBIRDS IN ATLANTIC CANADA

**14:20 Guy Melville**  
DO SEABIRDS SING ... – FORECASTING THE STATUS OF FISH-BASED FORAGE PROVISIONING PELAGICS OFF GRAND MANAN

**14:40**

**Break and Poster Viewing**

Fundy Discovery Aquarium, Flemer Gallery and Lower Level

**15:00 Mackenzie Warman** (Mount Allison University) **(Undergrad student)**  
STAGING ECOLOGY OF ADULT AND JUVENILE SHORT-BILLED DOWITCHER (LIMNODROMUS GRISEUS) IN SOUTHERN NOVA SCOTIA

**15:20 Tony Diamond** (University of New Brunswick)  
THE INCREDIBLE SHRINKING PUFFIN: DECREASING BODY SIZE, AND INCREASING SIZE OF BILL RELATIVE TO BODY, IN ATLANTIC PUFFINS NESTING AT MACHIAS SEAL ISLAND.

**Session 3: Collaborative Community led Solutions to Anthropogenic Stressors**  
**Chair: Myriam Barbeau**

- 15:40 David Garbary** (St. Francis Xavier University)  
WIND STILLING AND ITS RECOVERY IN NOVA SCOTIA OVER THE LAST 60 YEARS: CLIMATE CHANGE INDEPENDENT OF REGIONAL WARMING
- 16:00 Keahna Margeson** (Dalhousie University) (**PhD Student**)  
SOCIAL IMPACTS OF MODIFYING TIDAL RIVER CAUSEWAYS AND RIVER RESTORATION
- 16:20 Roxanne MacKinnon** (ACAP Saint John)  
COMMUNITY BASED MONITORING IN THE SAINT JOHN HARBOUR: A BASELINE APPROACH TO UNDERSTANDING FISH COMMUNITY, WATER QUALITY, AND SEDIMENT POLYCYCLIC AROMATIC HYDROCARBONS CONTAMINATION IN AN INDUSTRIALIZED HARBOUR.
- 16:40 Heather Hunt** (University of New Brunswick Saint John)  
INTEGRATION AND DATA SHARING TO EXAMINE THE FATE AND TRANSPORT OF MICROPLASTICS IN THE WOLASTOQ WATERSHED AND SAINT JOHN HARBOUR.

***Special Session***

- 17:00 Ernest Edwards** (LivingLaboratory.org)  
HOSTING AN ENVIRONMENTAL MOVIE FESTIVAL IN ST. ANDREWS.

**17:30 – 18:30**

**Poster session**

Fundy Discovery Aquarium, Flemer Gallery and Lower Level  
Food & Cash Bar

Thursday, June 6th, 2024

**08:00**

**Registration**

Fundy Discovery Aquarium

Poster presenters are encouraged to put up their posters in the Lower Level

**09:00**

**Plenary**

*COMMUNITY-LED, CLIMATE-SMART EELGRASS RESTORATION AND RESEARCH IN NOVA SCOTIA*

Dr. Kristina Boerder (Dalhousie University)

**10:00**

**Break and Poster Viewing**

Fundy Discovery Aquarium, Flemer Gallery and Lower Level

**Session 4: Tides of Changes: Unraveling the Dynamics of Salt Marshes and Coastal Physical Processes**

**Chair: Brittney Roughan**

**10:20 Macy Giles** (Saint Mary's University) **(Undergrad student)**

EXAMINING DRIVERS OF ECOMORPHODYNAMIC CHANGE IN THE AVON RIVER ESTUARY

**10:40 Tri Nguyen-Quang** (Dalhousie University)

HYDRODYNAMIC MODELLING OF WATER RENEWAL TIME AND POTENTIAL DISSOLVED MATTERS IN SHEDIAC BAY (NEW BRUNSWICK, CANADA)

**11:00 Alexa Stack Mills** (University of New Brunswick) **(PhD student)**

BURIED CARBON DYNAMICS IN A NORTHUMBERLAND STRAIT SALT MARSH

**11:20 Johnathan Linihan** (University of New Brunswick) **(MSc student)**

HYDROPERIOD OF THE SALT MARSH PLATFORM IN MICROTIDAL AND MEGATIDAL REGIMES IN MARITIME CANADA

**11:40 Kayla Williams** (CB Wetlands and Environmental Specialists) **(MSc student)**

UNDERSTANDING PARAMETERS FOR SITE CHARACTERIZATION AND THEIR INFLUENCE ON RESTORATION IN TIDAL MARSHES IN NOVA SCOTIA, CANADA

12:00

**Catered Lunch**

Fundy Discovery Aquarium, Anderson Gallery

**Session 5: Assessing the impact of environmental stressors on freshwater and marine habitats**

**Chair: Danielle Philibert**

**13:00 Guillaume Durand** (National Research Council Canada - Atlantic Science Enterprise Centre)

LEARNING THE CHAOTIC SIGNATURE OF DISSOLVED OXYGEN TIME SERIES TO ANTICIPATE ANOXIC EVENTS

**13:20 Ernest Edwards** ([www.LivingLaboratory.org](http://www.LivingLaboratory.org))

NON-HUMAN SPECIES ADAPTATION IN THE ANTHROPOCENE EPOCH WITHIN THE BAY OF FUNDY ECOSYSTEM

**13:40 Lauren Mahon-Hodgins** (Huntsman Marine Science Centre)

THE USE OF MESOCOSMS TO ASSESS IMPACTS FROM ANTHROPOGENIC STRESSORS

**14:00 Krista Beardy** (University of New Brunswick) **(MSc student)**

THE IDENTIFICATION OF MICROPLASTICS AND OTHER MICROPARTICLES IN THE SAINT JOHN RIVER WATERSHED – Preliminary Analysis

**14:20 Spencer Richard** (Acadia University) **(MSc student)**

ATLANTIC SALMON SMOLT MIGRATION IN THE GASPEREAU RIVER, PREDATION HOTSPOTS AND ANTHROPOGENIC BARRIERS

14:40

**Break and Poster Viewing**

Fundy Discovery Aquarium, Flemer Gallery and Lower Level

**Session 6: Innovations in marine habitat monitoring and conservation strategies**

**Chair: Claire Goodwin**

**15:00 Jeff C. Clements** (Fisheries and Oceans Canada)

CONCRETE BLOCKS AS AN ALTERNATIVE HABITAT RESTORATION APPROACH IN A FRAGMENTING EELGRASS LANDSCAPE: A CASE STUDY IN PRINCE EDWARD ISLAND, CANADA

**15:20 Brandon Vriens** (University of Prince Edward Island)  
AIDING CONSERVATION IN AN ESTUARINE SYSTEM: DOES THE GIANT IRISH MOSS PLAY A ROLE BEHAVIOURALLY MEDIATED INDIRECT INTERACTIONS?

**15:40 Kaleb Zelman** (Fisheries and Oceans Canada)  
STAYING CONNECTED – A PLACE BASED CONSERVATION APPROACH TO MANAGING THE MUSQUASH ESTUARY MPA

**16:00 Laura Teed** (Fisheries and Oceans Canada)  
VULNERABLE MARINE ECOSYSTEM SPECIES PRESENCE AND SPATIAL DISTRIBUTION IN THE WESTERN LOWER BAY OF FUNDY, CANADA

**16:20 Claire Goodwin** (Huntsman Marine Science Centre)  
MULTIPLE PERSPECTIVES ON THE EMERGENCE OF THE INVASIVE COLONIAL TUNICATE DIDEMNUM VEXILLUM KOTT, 2002 IN THE WESTERN BAY OF FUNDY, ATLANTIC CANADA

**16:40 – 17:40**

**Poster session**

Fundy Discovery Aquarium, Flemer Gallery and Lower Level  
Food & Cash Bar

**19:00 – 20:30**

**Town Hall**

**Fins and Flukes: A conversation about Whales and Sharks in the Bay of Fundy**  
Fundy Discovery Aquarium, Dunn Theatre

Panelists: Genny Simard (Huntsman Marine Science Centre, Quoddy Link)  
Marc Trudel (Fisheries and Oceans Canada)  
Delphine Durette-Morin (Canadian Whale Institute)  
Darlene Norman-Brown (Fundy North Fishermen's Association)

Friday, June 7th, 2024

**08:30**

**Registration**

Fundy Discovery Aquarium

**Session 7: Echoes in the Deep: Improving our understanding of Marine mammals in our oceans**

**Chair: Jessica Wingfield**

**09:00 Delphine Durette-Morin** (Canadian Whale Institute)

HAVE RIGHT WHALES REALLY ABANDONED THE BAY OF FUNDY? OVERVIEW OF SIGHTINGS AND RESEARCH SINCE 2015 AND IMPLICATIONS FOR VESSEL TRAFFIC REGULATIONS

**09:20 Aiden Isbill** (ACAP Saint John)

MONITORING SEALS IN THE SAINT JOHN HARBOUR

**09:40 Jessica Wingfield** (Fisheries and Oceans Canada)

CHARACTERIZING NOVA SCOTIA'S UNDERWATER SOUNDSCAPES: THE COASTAL ACOUSTIC MONITORING PROJECT

**10:00**

**Break**

Fundy Discovery Aquarium, Flemer Gallery

**Session 8: Investigating Invertebrates: Enhancing Understanding and Addressing Challenges in Atlantic Canada's Marine Ecosystems**

**Chair: Davide Asnicar**

**10:20 Jeff C. Clements** (Fisheries and Oceans Canada)

CAN SIPHON HOLE MORPHOMETRICS BE USED FOR POPULATION ASSESSMENTS OF INTERTIDAL SOFT-SHELL CLAMS, MYA ARENARIA?

**10:40 Tanya O'Reilly** (St. Francis-Xavier University) **(MSc student)**

POPULATION STRUCTURE AND DISTRIBUTION OF THE RIBBED MUSSEL (GUEKENIA DEMISSA) IN SALT MARSHES ON THE GULF OF ST. LAWRENCE OF NOVA SCOTIA

**11:00 Thoryn Madill** (Huntsman Marine Science Centre)

ASSESSING THE EFFECTS OF PHOTOOXIDATION ON THE TOXICITY OF OIL TO AMERICAN LOBSTER LARVAE (HOMARUS AMERICANUS)

**11:20 Emily Blacklock** (University of New Brunswick) **(PhD student)**  
CONTRIBUTION OF SEASONAL MIGRATIONS TO CONNECTIVITY OF ADULT AMERICAN LOBSTER (*HOMARUS AMERICANUS*) IN THE BAY OF FUNDY

**11:40 Megan Mattsson** (Huntsman Marine Science Centre)  
EXPOSURE OF FEMALE LOBSTERS TO SEDIMENTS SPIKED WITH EMAMECTIN BENZOATE: EFFECTS ON EGGS AND LARVAE EARLY DEVELOPMENT

**12:00**

**Catered Lunch**

Fundy Discovery Aquarium, Anderson Gallery

**Session 9: Advancing Species Monitoring through Novel Sensing Technologies**  
**Chair: Heather Hunt**

**13:00 Bethany Reinhart** (Fisheries and Oceans Canada)  
GENERATING GLOBALLY STANDARDIZED BIODIVERSITY DATA FOR INTERTIDAL ROCKY SHORES AND SANDY BEACHES UNDER THE COASTAL ENVIRONMENTAL BASELINE PROGRAM

**13:20 Tim Webster** (Applied Geomatics Research Group - Nova Scotia Community College)  
ADVANCING THE WETLAND INVENTORY IN NOVA SCOTIA: A NOVEL METHODOLOGY FOR ACCURATE MAPPING AND CLASSIFICATION USING REMOTE SENSING TECHNOLOGY

**13:40 Karl P. Phillips** (Canadian Rivers Institute, University of New Brunswick)  
A NEW ACOUSTIC TELEMETRY TAG THAT IDENTIFIES AND REPORTS CARRIER MORTALITY BY MONITORING CARRIER ACTIVITY

**14:00 Christina Carr** (Huntsman Marine Science Centre)  
ESTABLISHING A FOUNDATION FOR MOLECULAR MONITORING OF MARINE PROTECTED AREAS IN THE CANADIAN ATLANTIC

**14:20 Timothy Rawlings** (Cape Breton University)  
USING EDNA METABARCODING TO ASSESS INVERTEBRATE BIODIVERSITY OF EELGRASS (*ZOSTERA MARINA*) BEDS ACROSS NOVA SCOTIA

**14:40**

**Awards & Closing Remarks**



## Poster Presentations

Wednesday June 5th

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**Allie Scovil** (Fisheries and Oceans Canada) ACCESSING ARCHIVED MUSSEL SAMPLES FROM THE GULFWATCH CONTAMINANTS MONITORING PROGRAM

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**Jumanah Khan** (Dalhousie University) SOCIETAL ENGAGEMENT AS A METHOD FOR BENTHIC ECOSYSTEM MAPPING: AN OVERVIEW OF WORK PACKAGE 1.1  
**(MSc)**

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**Alexandre Legault** (Dalhousie University) RURAL APARTMENT RESIDENTS ARE IMPORTANT COASTAL ECOSYSTEM SERVICE BENEFICIARIES AND STAKEHOLDERS IN CLIMATE ADAPTATION DECISIONS **(MSc)**

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**Alexandre Legault** (Dalhousie University) OPTIMIZING EVIDENCE UPTAKE IN CLIMATE POLICY: THE CASE OF COASTAL URBAN MUNICIPALITIES **(MSc)**

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**Katie Schleit** (Oceans North) ENABLING EFFECTIVE CONSERVATION IN THE INNER BAY OF FUNDY, CANADA

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**Peter Wells** (Dalhousie University) ENHANCING OCEAN LITERACY IN THE FUNDY COMMUNITY: CONTINUED ACTIVITIES OF BOFEP'S OL WORKING GROUP

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**Daniel Martinez Calderon** (Dalhousie University) DISRUPTING TOKENISTIC PARTICIPATION: A PARADIGM SHIFT IN MARINE SPATIAL PLANNING FOR THE COASTAL COMMUNITIES OF NOVA SCOTIA **(PhD)**

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**Brittney Roughan** (Saint Mary's University) INCREASING CANADA'S ABILITY TO QUANTIFY THE CARBON STORAGE CO-BENEFITS OF COASTAL WETLAND RESTORATION AS A NATURE-BASED SOLUTION FOR NATIONAL GHG INVENTORY REPORTING **(PhD)**

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**Lila Elliott** (Toronto Metropolitan University) AN EVALUATION OF TORONTO'S WASTEWATER TREATMENT AT REMOVING POLYBROMINATED DIPHENYL ETHERS AND ORGANOPHOSPHATE ESTERS IN THE DON VALLEY RIVER **(Undergrad)**

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**Benjamin Henger** (Acadia University) OVERWINTERING BEHAVIOUR OF JUVENILE JI'KAW (MORONE SAXATILIS, STRIPED BASS) IN MINAS BASIN AND MINAS PASSAGE, NOVA SCOTIA, CANADA

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**Gretchen McPhail** (Acadia University) ASSESSMENT OF METHYLMERCURY CONCENTRATIONS IN ESTUARINE SEDIMENTS, POREWATER, AND INVERTEBRATES IN THE JIJUKTU'KWEJK ESTUARY, BAY OF FUNDY **(MSc)**

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Thursday June 6th

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**Olivier Grimard** (University of New-Brunswick) SPARTINA PATENS DYNAMICS IN SALT MARSH RESTORATION: THE SECOND SPREAD WAVE **(MSc)**

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**Myriam Barbeau** (University of New Brunswick) SALT MARSH RESTORATION IN NEW BRUNSWICK: INITIAL CONDITIONS AND RECOVERY PATTERNS

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**Jeff Ollerhead** (Mount Allison University) REWILDING AND RESTORATION OF INTERTIDAL SEDIMENT ECOSYSTEMS FOR CARBON SEQUESTRATION, CLIMATE ADAPTATION AND BIODIVERSITY SUPPORT (REWRITE)

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**Emily Hodgson** (Saint Mary's University) COMPOSITION OF VEGETATION COMMUNITIES IN SALT MARSHES ALONG THE ATLANTIC COAST & NORTHUMBERLAND STRAIT OF NOVA SCOTIA **(MSc)**

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**Davide Asnicar** (Huntsman Marine Science Centre) EXPLORING DIGESTION AND FOOD PREFERENCES IN SALT MARSH TALITRIDS

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**Mia Francis** (University of New Brunswick Saint John) EFFECTS OF EXPERIMENTAL ENRICHMENT ON POREWATER pH AND INFAUNAL INVERTEBRATES IN MUDFLATS **(MSc)**

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**Maddison Brown** (University of New Brunswick Saint John) INVESTIGATING VARIATION IN ASSEMBLAGES OF FISH AND DECAPOD CRUSTACEANS IN THE SOUTH-WEST BAY OF FUNDY OVER THE PAST 15 YEARS **(MSc)**

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**Sarah Harrison** (The University of New Brunswick (Saint John Campus)) SPATIAL VARIATION IN THE REPRODUCTIVE ECOLOGY OF SOFT-SHELL CLAMS (MYA ARENARIA) IN THE SOUTHERN GULF OF ST. LAWRENCE **(MSc)**

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**Leah Rudderham** (Saint Marys University - TransCoastal Adaptation Centre for Nature Based Solutions) Methodologies for Hydrodynamic Surveying of Highly Turbid Rivers in the Bay of Fundy

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**Amanda Fenech** (University of New Brunswick, Saint John) BASELINE INTERTIDAL MUDFLAT COMMUNITY ANALYSIS ALONG THE NORTH-WEST BAY OF FUNDY SHORELINE **(MSc)**

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**Kiana Endresz** (University of New Brunswick) NEKTON COMMUNITIES USING SUB-HABITATS IN SALT MARSHES EXPERIENCING MEGATIDAL AND MICROTIDAL REGIMES **(PhD)**

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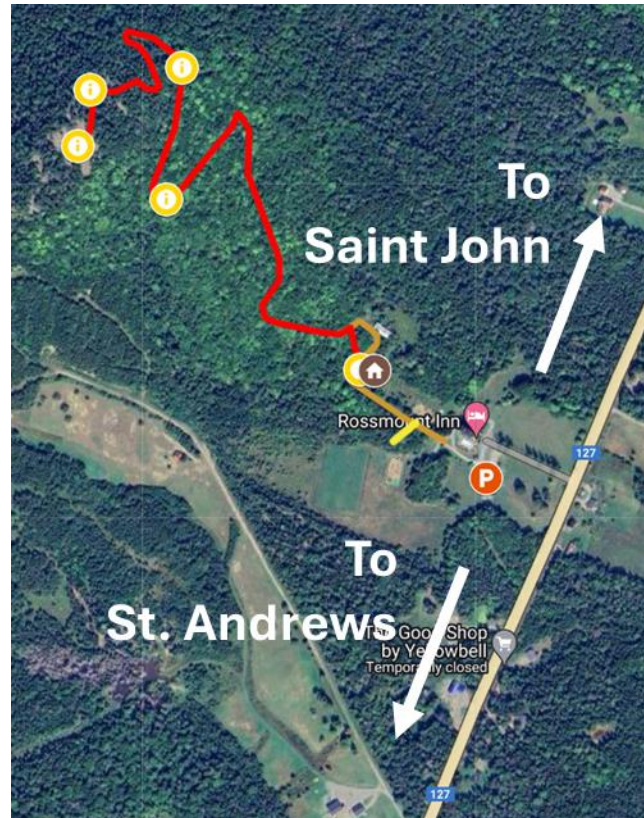
**Simon Diouf** (New Brunswick Geological Survey) EFFECT OF TIDAL BARRIERS AND RESTRICTIONS ON WATER LEVELS ALONG THE POKEMOUCHE RIVER IN THE ACADIAN PENINSULA

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## Self Guided Field Trip

The Chamcook Mountain Trail follows a very old carriage road that climbs to the peak. Interpretive signs describe the deep history of the area. It starts at the beautiful Rossmount Inn and passes a historic carriage house. It continues along the road that was stabilized using large rocks from neighbouring mountains. It passes a lookout that looks out over the islands in Passamaquoddy Bay. It then reaches the peak where you will find panoramic views of the Passamaquoddy Bay and the town of Saint Andrews.

After the conference ends, try this 2.7-km out-and-back trail near Chamcook, New Brunswick. Generally considered a moderately challenging route, it takes an average of 57 min to complete.



## World Oceans Day – June 8<sup>th</sup>

The theme for World Oceans Day 2024 is “Catalyzing Action for Our Ocean & Climate”. World Oceans Day is marked on June 8<sup>th</sup>, and it serves as a reminder of the critical role oceans play in our lives.

- The ocean covers over **70%** of the planet.
- It produces at least **50%** of the planet’s oxygen.
- Most of Earth’s biodiversity resides in the ocean.
- The ocean is a vital source of protein for over a billion people worldwide.
- Ocean-based industries employ an estimated **40 million** people by **2030**.

To celebrate World Oceans Day here are **10 actions** to consider taking on:

### 1. **Beach Cleanup:**

- Organize or participate in a beach cleanup event. Gather friends, family, or community members to pick up trash and debris along the shoreline. Every piece of litter removed helps protect marine life.

### 2. **Reduce Plastic Use:**

- Commit to reducing your plastic consumption. Avoid single-use plastics such as straws, bags, and water bottles. Opt for reusable alternatives instead. Participate in a “plastic-free” challenge by going a day or a week without using any disposable plastic items.

### 3. **Educate Yourself and Others:**

- Learn about marine ecosystems, ocean biodiversity, and the impact of human activities on the oceans. Share this knowledge with others to raise awareness.
- Check out the [DiveDeeper](#) to virtually explore the Quoddy region of the Bay of Fundy

### 4. **Support Sustainable Seafood:**

- Choose sustainably sourced seafood. Avoid overfished species and support local fishermen who follow sustainable practices.

### 5. **Reduce Carbon Footprint:**

- Climate change affects ocean health. Reduce your carbon footprint by using public transportation, biking, or walking instead of driving.
- Conserve energy at home and advocate for policies that address climate change.

**6. Participate in Citizen Science:**

- Join citizen science projects related to oceans. Help collect data on marine life, water quality, or coastal erosion.
- For example, report any sightings of marine invertebrates, fish or mammals, especially unusual or invasive species to the [Sealife Seekers iNaturalist Project](#)

**7. Support Ocean Conservation Organizations:**

- Donate to reputable organizations working to protect oceans. These funds go toward research, conservation efforts, and policy advocacy. Volunteer with local marine conservation groups or participate in their events.

**8. Spread the Word:**

- Use social media to share ocean-related facts, tips, and inspiring stories. Encourage your friends and followers to take action. Use hashtags like #WorldOceansDay and #ProtectOurOceans to join the global conversation.

**9. Naturalize your shoreline:**

- Ocean conservation starts on the shore! Help control coastal erosion and plant a mix of native plants, grasses, and shrubs while minimizing the use of seawalls, bulkheads, and other hard structures.

**10. Visit the Fundy Discovery Aquarium:**

- June 8 – #WorldOceansDay Celebration with a scavenger hunt, face painting, Twoonie Dog BBQ (weather permitting & while supplies last) and more!

