

Conference Schedule

Day 0 - Monday May 16, 2022

18:00 - 21:00 **Registration & Welcome Reception**

The Ocean Frontier Institute intends to welcome all conference delegates in style with a Welcome Reception on Monday evening. Enjoy light refreshments while reconnecting with your colleagues and making new connections with the diverse group of inspirational leaders that unite in Halifax to make a difference for the future of this planet.

Day 1 - Tuesday May 17, 2022

07:30 - 08:30 **Registration & Breakfast**

08:30 - 09:30 **Welcome**

Opening Ceremonies & Water Ceremony

Anya Waite, CEO & Scientific Director, Ocean Frontier Institute

Dorene Bernard, Mi'kmaq Grassroots Grandmother, Water Protector & Water Walker

Introduction

Paul Snelgrove, Associate Scientific Director, Ocean Frontier Institute

Eric Siegel, Chief Innovation Officer, Ocean Frontier Institute

Video - A Love Letter to the Ocean

Achieving Net Zero

Ocean carbon uptake is changing at an uncertain rate and has the potential to fail, critically exacerbating global changes and compromising net zero ambitions. Unprecedented human-induced climate change increasingly impacts the vital ocean carbon sink. However, in climate policy, the ocean is missing — a gap representing the most significant miscalculation of climate policy by nations. Global industry and investment practices are at risk and climate policy frameworks do not account for the changing ocean carbon, treating the ocean as a constant, rather than a variable carbon sink. This session will convene leaders in industry, policy and science to discuss the most pressing issues facing industry and policy in achieving net zero and how OFI research is working to provide necessary insights into this complex system.

Session Moderator

Marie-Chantal Ross, Ocean Program Director, National Research Council

09:30 - 10:30 **Speakers**

Minister Steven Guilbeault, Minister of Environment and Climate Change

Catherine Abreu, Founder & Executive Director, Destination Zero

Stacy Kauk, Head of Sustainability, Shopify

Julie Pullen, Adjunct Research Scientist, Earth Institute, Columbia University

Katja Fennel, Killam Professor, Dalhousie University

10:30 - 10:45 **Discussion**

OCEAN FRONTIER 2022

SCIENCE, INDUSTRY, POLICY FOR CLIMATE ACTION

Halifax Marriott Harbourfront, NS, Canada
May 16 - 19, 2022

Day 1 - Tuesday May 17, 2022 (continued)

Break

11:15 - 12:15

Speakers

David Millar, Government Accounts Director, Americas, Fugro
Jean-François Houle, VP Engineering, National Research Council Canada
Rachel Chang, Assistant Professor, Canada Research Chair in Atmospheric Science, Dalhousie University
Mike Smit, Deputy Scientific Director, Ocean Frontier Institute and Associate Dean (Academic), Dalhousie University
Any Waite, CEO & Scientific Director, Ocean Frontier Institute

12:15 - 12:30

Discussion

Lunch

People and the Ocean

The ocean and climate are changing because of people and the feedback loop has incredible impacts on people's daily lives and long-term social, governance, and business plans. This session is intended to highlight some of the most pressing issues and challenges at the interface of people and the ocean in a changing climate. Social sciences and humanities researchers, community leaders, and NGOs will discuss the complex interactions between society, economy, culture, and marine and coastal environments in Canada and globally.

Session Moderator

Ratana Chuenpagdee, University Research Professor, Memorial University

13:30 - 14:45

Speakers

Shelley Denny, Director of Aquatic Research and Stewardship, Unama'ki Institute of Natural Resources
Karen Gillam, CEO, Workforce Warriors
Tanna Pirie-Wilson, Officer, Workforce Warriors
Carolann Harding, CEO, SmartICE Sea Ice Monitoring & Information Inc.
Robert Stephenson, Research Scientist, St. Andrews Biological Station
Jac Gautreau, Director of Business Development, Distribution and Production, Ocean School - L'École de l'Océan

14:45 - 15:00

Discussion

Break

Day 1 - Tuesday May 17, 2022 (continued)

The Imperative of Ocean-Based CDR

The ocean safely holds more carbon than any other part of the biosphere. As the largest carbon sink, it must be much better understood, and likely employed, to accelerate the safe removal and storage of more atmospheric carbon. While the ocean has enormous potential for carbon dioxide removal (CDR), and there are several emerging technologies and innovations, it will take significant scaling of research, technology development, engineering, investment, and enabling national and international policies to determine whether ocean-based CDR can be deployed at the massive scale needed to achieve net zero targets. This session will convene leaders across disciplines to outline the critical priorities for science, investment, MRV, social and political license, and governance.

15:30 - 17:30

Speakers

Introduction

Brad Ack, Executive Director and Chief Innovation Officer, Ocean Visions

Current state of ocean-based pathways, obstacles and the most critical priorities

Adam Subhas, Assistant Scientist, Woods Hole Oceanographic Institution

Doug Wallace, Professor, Department of Oceanography, Dalhousie University

Antonius Gagern, Program Director, Ocean CO₂ Removal at Additional Ventures

Discussion

Showcase of innovators

Will Burt, Senior Marine Chemist, Planetary Technologies

Randall Purcell, Founding Director, Seafields

Matthew Eisaman, Chief Technology Officer, Ebb Carbon

Max Chalfin, Director of Research, Running Tide

Discussion

CDR Support - Policy, Science, Commercialization

Anya Waite, CEO & Scientific Director, Ocean Frontier Institute

Surita Maddox, Regional Director, Innovation, Science and Economic Development

Jeff Larsen, Assistant Vice President Innovation & Entrepreneurship, Dalhousie University

Discussion

17:30 - 19:00

Networking Reception

Day 2 - Wednesday May 18, 2022

08:00 - 09:00 **Breakfast**

Food from the Ocean

Food from the ocean is becoming increasingly more important as the population continues to grow and the world looks for sustainable and low-carbon alternatives to land-based agriculture. Climate change is impacting international fisheries governance and how industries are making decisions and investing in the future of capture and caged fisheries, as well as other protein and plant-based foods from the ocean. Scientists are working at the forefront to understand the changing ocean environment and how to optimize sustainable and efficient food security and resource management. This session will convene leaders in industry, policy and science to discuss the most pressing issues facing industry and policy in managing these precious resources and how OFI research is working to provide necessary insights into these complex systems.

Session Moderator

Laurenne Schiller, Liber Ero Postdoctoral Research Fellow, Carleton University

09:00 - 10:15 **Speakers**

John Risley, Chairman and CEO, CFFI Ventures and Chair, Canada's Ocean Supercluster

Premier Andrew Furey, Premier of Newfoundland and Labrador

Chief Terry Paul, Chief and CEO, Membertou

Jean-Paul Deveau, President & Chief Executive Officer, Acadian Seaplants

Peter Tyedmers, Professor, School for Resource and Environmental Studies,
Dalhousie University

Stefanie Colombo, Assistant Professor and Canada Research Chair, Aquaculture Nutrition,
Dalhousie University

10:15 - 10:45 **Discussion**

Break

11:15 - 12:15 **Speakers**

Kristin Kleisner, Senior Director, Environmental Defense Fund

Matthew Rise, Professor, Department of Ocean Sciences, Memorial University

Jennifer LaPlante, Executive Director, DeepSense

Mark Fast, Chair, Pathology and Microbiology Professor, University of Prince Edward Island

12:15 - 12:30 **Discussion**

Lunch

Day 2 - Wednesday May 18, 2022 (continued)

Innovation and Commercialization

Researchers and entrepreneurs are increasing the impact of their expertise by commercializing their innovative technology, products, and services and bringing them to the market. Sustainable development of ocean resources are enabled through these innovative commercial ventures. Ocean Frontier Institute and Ocean Startup Project form the base of the innovation and commercialization funnel through aligned programs to inspire, initiate, and invest in new ocean ventures. Founders from Seed Fund, Lab2Market, Ocean Startup Challenge, and Creative Destruction Lab programs will provide three-minute speed presentations on their work to develop new ventures to support ocean sustainability.

13:30 - 14:15

Speakers

Kendra MacDonald, CEO, Canada's Ocean Supercluster

Kerri Smith, Seed Fund, Reconstructing the spatial and trophic ecology of the stranded Sambre blue whale

Fadi Oudah, Seed Fund, Probabilistic tools to assess the impact of climate change on coastal infrastructure

Rachael Cadman, Seed Fund, Participatory mapping on Labrador Inuit use and value of the marine environment

Hugh MacIntyre, Seed Fund, Up-cycling high-nutrient wastes through algal culture

Kyle Rauch, Seed Fund, UV-LEDs for disinfection of salmon pathogens

Daniel Ruzzante, Seed Fund, Population abundance estimates of ecologically and economically important species

Peter Rawsthorne, Ocean Set, Brokerage platform to acquire and exchange ocean data and algorithms

Beth Mason, Skaldyr, Green extractions of marine derived natural products and ingredients

Kshitij Jha, Kavacha, Improving shellfish farming sustainability by reducing biofouling and plastics

Stephen Jones, Ashored, Sustainability-enabling technologies for the commercial fishing industry

Celeste Leroux, SeafoodCheck, Evaluating Illegal, unreported and unregulated fishing risk in seafood trade

Zhuliang Tan, SuBait, Sustainable lobster bait

Ben Wiper, 3F Waste Recovery, High-value collagen products from seafood processing by-products

14:15 - 17:00

Scientific Poster Session

17:00 - 18:30

Reception

18:30 - 21:00

Delegate Dinner

Day 3 - Thursday May 19, 2022

08:00 - 09:00 **Breakfast**

Biodiversity

Concurrent with the global climate crisis, the ocean is facing a biodiversity crisis that risks severe impacts on ocean ecosystems and how they function. A healthy and biodiverse ocean ecosystem is prerequisite to all other functioning elements of the ocean, including carbon sequestration and harvesting sustainable food from the ocean. Ocean Frontier Institute researchers are working on a range of topics that intersect these crises, including Marine Protected Areas and their positive impacts on biodiversity and climate, using environmental DNA for biodiversity assessments, and identifying indicators to monitor ocean health. This session will convene leaders in industry, policy and science to discuss pressures on ocean biodiversity, and how industry, policy and science can align to provide the needed insights, protection, and investments to achieve a healthy and productive ocean ecosystem.

Session Moderator

Jake Rice, Chief Scientist, Emeritus, Department of Fisheries and Oceans

09:00 - 10:15 **Speakers**

Deep Saini, President and Vice-Chancellor, Dalhousie University

Andy Fillmore, MP for Halifax and Parliamentary Secretary to the Minister of Innovation, Science and Industry

Johan Lopez, Network Coordinator for the Americas, UNEP Finance Initiative

Peter Houlihan, Executive Vice President Biodiversity & Conservation, XPRIZE

Kristina Gjerde, Senior High Seas Advisor, IUCN's Global Marine and Polar Programme

Paul Snelgrove, Associate Scientific Director, Ocean Frontier Institute

Julie Laroche, Professor, Department of Biology, Dalhousie University

10:15 - 10:45 **Discussion**

Break

11:15 - 12:15 **Speakers**

Daniel Boyce, Research Scientist, Fisheries and Oceans Canada

Derek Tittensor, Jarislowsky Chair in Marine Ecosystem Forecasting & Associate Professor, Dalhousie University

Geneviève Therriault, Professeure en psychopédagogie de la formation pratique au secondaire, Université du Québec à Rimouski

Boris Worm, Professor, Department of Biology, Dalhousie University

12:15 - 12:30 **Discussion**

Lunch