

Postdoctoral Fellowship Posting:

Research Focus – Co-Creating Equitable Marine Carbon Dioxide Removal (mCDR) Pathways through Free, Prior, and Informed Consent (FPIC) with Mi'kmaq Communities in Nova Scotia

The urgent challenge of initiating a green transition to address rising atmospheric CO₂ requires not only technological innovation but also ethical governance rooted in Indigenous rights and environmental stewardship.

This project explores how Marine Carbon Dioxide Removal (mCDR) technologies, such as ocean alkalinity enhancement, can be responsibly assessed and potentially implemented through frameworks that prioritize Free, Prior, and Informed Consent (FPIC) with the Mi'kmaq in Nova Scotia.

By co-developing equitable models for decision-making, benefit-sharing, and environmental monitoring, the research aims to ensure that mCDR pathways respect Mi'kmaq jurisdiction, uphold ecological integrity, and contribute to a just, green transition within the blue economy.

The postdoctoral fellow will work collaboratively with Mi'kmaq organizations, academic researchers, and industry partners to integrate ecological modelling, Indigenous knowledge, and policy analysis into shared governance models for mCDR. Efforts will focus on assessing ecological and socio-economic risks and benefits of ocean alkalinity enhancement, while identifying culturally grounded approaches to stewardship and consent. Through participatory design workshops, scenario modelling, and Community Economic Benefits Agreement (CEBA) development, the project will generate practical tools and policy guidance to support equitable, consent-based innovation in marine climate mitigation.

The economics and engagement objectives include:

- Develop a potential economic value chain for local mCDR projects, informed by other regional sectors and broader global trends, using a Two-Eyed Seeing approach.
- Co-create a document with our partner organization to outline a specific process for anticipating and engaging with emerging ocean sectors to support local decision-making and better community benefits guided by the principles of Free, Prior and Informed Consent.
- Provide recommendations to establish and enhance collaboration between Mi'kmaq communities and industry partners to define consent-based governance and ownership models for mCDR.
- Provide policy recommendations for the implementation of enforceable CEBA frameworks that embed Indigenous rights, including veto power, equity stakes, and long-term revenue sharing.

About Ocean Frontier Institute (OFI) and Transforming Climate Action (TCA)

The Ocean Frontier Institute (OFI), led by Dalhousie University in collaboration with domestic and international partners, is a global hub for ocean research and innovation. CONVERGE CDR is part of OFI's

Transforming Climate Action ([TCA](#)) program, a \$397M research initiative at the nexus of oceans, climate, and people. Through TCA and CONVERGE CDR, OFI is training the next generation of leaders to deliver world-class research with societal, environmental, and economic impact.

Salary and Support

- Minimum salary of CAD \$70,000 per year plus benefits (up to two years, subject to approval)
- Professional development budget of CAD \$3,000 to support training, conferences, and networking

Requirements

- PhD in Management, Economics, Fisheries Science/Ecology, Marine Ecology/Biology, Oceanography or related discipline
- Demonstrated Indigenous, qualitative, and quantitative skills in Indigenous Knowledge Systems, Two-Eyed Seeing, Community Economic Benefits Agreements, ecosystem, and/or statistical modelling
- Strong collaboration, listening, writing and communication skills

How to Apply

Interested candidates should send the following to: Dr. Wendy Gentleman (wendy.gentleman@dal.ca), Dr. Tyler Eddy (tyler.eddy@mi.mun.ca), and Dr. Carolyn Buchwald (cbuchwald@dal.ca) .

- Curriculum Vitae (CV)
- University transcripts
- Contact information for two referees
- A brief statement of research interests and modelling experience, and how they align with the CONVERGE CDR program and the HERO ideology
- Send applications to Heidi.Weigand@dal.ca

Location and Start Date

CONVERGE HEROs will be based at Dalhousie University in Halifax, Nova Scotia, Canada, with opportunities for international collaboration and exchange. The position is presently open to be filled with preference for a December 1, 2025, or January 5, 2026 start date.

Diversity

Dalhousie University commits to achieving inclusive excellence through continually championing equity, diversity, inclusion, and accessibility. The university encourages applications from Indigenous persons (especially Mi'kmaq), persons of Black/African descent (especially African Nova Scotians), and members of other racialized groups, persons with disabilities, women, and persons identifying as members of 2SLGBTQ+ communities, and all candidates who would contribute to the diversity of our community.

Learn more: dal.ca/hiringfordiversity

Highly Entrepreneurial Research Operators (HEROs) in Transdisciplinary Ocean Carbon Dioxide Removal Research

The Ocean Frontier Institute ([OFI](http://ofi.ca)), led by Dalhousie University, invites applications for five (5) postdoctoral fellowships as Highly Entrepreneurial Research Operators ([HEROs](#)) within the transdisciplinary [CONVERGE CDR](#) research program. These positions are designed for exceptional PhD graduates who want to leverage their deep expertise to advance the boundaries of research, innovation, and impact in ocean-climate solutions.

CONVERGE CDR

Climate change is one of the greatest challenges of our time. While rapid reductions in greenhouse gas emissions are essential, complementary approaches are also needed to remove carbon dioxide from the atmosphere. Carbon Dioxide Removal (CDR) is emerging as a critical part of the solution. CONVERGE CDR is a focused initiative to coordinate, integrate, and fund research and activities to advance the responsible and equitable development of the marine carbon dioxide removal (mCDR) sector in Canada. The CONVERGE CDR research bridges science, data, community engagement, public policy, and business economics.

Learn more: ofi.ca/impact/converge-cdr

HERO Cohort

The heart and engine of CONVERGE CDR will be a cohort of five Highly Entrepreneurial Research Operator (HERO) postdoctoral fellows, working within their discipline and across diverse disciplines to inform and advance the mCDR sector in Canada. Unlike traditional postdoctoral fellowships, the HERO cohort will be early-career researchers with a drive and commitment to bring expertise from their research to work collaboratively with new people and across new organizations.

The HERO cohort model provides peer support, professional growth, and an entrepreneurial environment to accelerate research, discovery, and real-world impact.

The HERO cohort is best suited for postdoctoral fellows who not only excel in research but also possess a strong drive to translate their discoveries into tangible outcomes. This program fosters:

- **Entrepreneurial Leadership:** Cultivate skills to identify opportunities, secure additional funding, and build partnerships with industry, community, and government.
- **Interdisciplinary Collaboration:** Engage with a diverse cohort of researchers and organizations across various scientific and societal domains.
- **Impact Translation:** Bridge the gap between scientific discovery and practical application, contributing to policy development, community engagement, economic impact, and real-world solutions.
- **Professional Development:** Benefit from mentorship, networking opportunities, and tailored professional development to become a leader in your field.

Learn more: ofi.ca/impact/heros