



# **BUILDING CONNECTIONS FOR BLUE CARBON ACROSS CANADA**

**Next Steps Workshop Report**

**Building Connections For  
Blue Carbon Across Canada**

Next Steps Report

April 14<sup>th</sup>, 2021

5<sup>th</sup> in a Five Part Series

Summary Report

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# SUMMARY

Blue carbon habitats, such as seagrass meadows, salt marshes and kelp forests can play an important role in addressing the dual crises of climate change and biodiversity loss. These habitats can rival or exceed terrestrial carbon storage and accretion on a per area basis. They provide valuable habitat for many species, including species which are important for food security. And they provide a variety social, economic and cultural benefits to coastal communities. Blue carbon habitats are also complex and require a holistic, ecosystem-based approach to the design and implementation of conservation and restoration projects.

A growing number of individuals and organizations are working on research, restoration, conservation and policy related to blue carbon ecosystems in Canada. To bring the community of practice together and identify knowledge gaps and opportunities for collaboration, WWF-Canada hosted a five-part virtual workshop series. This report summarizes the fifth and final workshop in the Building Connections for Blue Carbon Across Canada workshop series and reiterates the key points identified by participants at the first four workshops. The fifth workshop, called Next Steps, took place on April 14<sup>th</sup>, 2021 and had 17 participants. This workshop aimed to tackle the question: **Where do we go from here as a community of practice?**

Contact information for the attendees is provided, as well as additional links to blue carbon initiatives and resources mentioned in all the previous workshops.



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# INTRODUCTION

Blue carbon – carbon stored in coastal ecosystems, such as seagrass meadows, salt marshes and kelp forests – can play an important role in the fight against climate change and biodiversity loss. These coastal ecosystems are interconnected and complex. Carbon and other nutrients are transported among blue carbon habitats and wildlife species can move among these ecosystems, relying on different habitats during different life stages. Human relationships to blue carbon habitats are complex and differ depending on the economic, social and cultural significance of different land- and seascapes. Blue carbon ecosystems provide valuable services such as protection against flooding and storm surges and improved water quality. These ecosystems and the benefits they provide are being threatened by climate change – in particular from warming waters, sea level rise and coastal squeeze – as well as other human activities.

Designing effective and impactful projects to conserve, steward or restore blue carbon ecosystems requires us to address not just ecological considerations, but to integrate social, economic and cultural considerations. It also means we need to take a systems perspective to ensure we account for ecosystem function and the transport of carbon, nutrients and wildlife among blue carbon habitats. We need to collaborate with the Indigenous Peoples whose territory we work in, prioritizing the values of Indigenous partners and supporting Indigenous-led conservation. In all our work we need to respect Indigenous jurisdiction, knowledge and law. And we need to work across disciplines and sectors and in collaboration with local communities who are most affected by changes to blue carbon ecosystems.

There are many researchers, practitioners and policy makers working on different aspects of blue carbon ecosystems across Canada. To bring the community of practice together and identify knowledge gaps and opportunities for collaboration, WWF-Canada hosted a five-part virtual workshop series. The objectives of the workshops were to:

- Facilitate connections within the blue carbon community and share information on ongoing blue carbon work;
- Discuss key questions on blue carbon research, policy and application; and
- Identify areas of opportunity to advance collaboration on blue carbon across Canada.

The fifth workshop in the series focused on potential Next Steps for the blue carbon community of practice and aimed to tackle the question: **Where do we go from here as a community of practice?**

Following the first four workshops but prior to the last workshop, WWF-Canada circulated a short survey to assess possible action items workshop participants would be interested in exploring further.

This report provides an overview of the key points outlined by participants at the first four workshops and a summary of the discussions at the final workshop.

# REFLECTIONS ON THE WORKSHOP SERIES

At each of the first four workshops, participants were asked to choose a discussion question to explore with others in breakout groups. Each breakout group was tasked with identifying two to three key points to share with the broader group. Some key points were specific to the theme of individual workshops. However, over the course of the workshop series, common narratives emerged.

## Mapping

The guiding question for the Mapping workshop was: **How can we work towards fully mapping past and current blue carbon stocks and the threats they face?**

The discussion questions that participants could choose from were:

1. What are the best practices and what are the limitations for collecting spatial data on the distribution, sequestration and accumulation rates of blue carbon?
2. How can we ensure we include multiple sources of evidence including local, Indigenous and scientific knowledge to strengthen our mapping efforts?
3. What are the best ways to share and store blue carbon distribution knowledge and what steps are needed to facilitate this?
4. How can we identify and map the ecosystem services provided by blue carbon systems?
5. How can we map threats to blue carbon and how can we incorporate spatial data on threats within the design of blue carbon projects?

The key points participants identified during the discussion sessions to work towards fully mapping blue carbon stocks included:

- We need to develop a strategic and unified approach to data collection. The approach should be driven by clear leadership, and result in standardized protocols for methods and an integrated data portal for new and existing data.
- We need a multidisciplinary approach that brings together federal, provincial and territorial governments, Indigenous governments, environmental NGOs and academics.
- We need a coordinated approach to funding which works across jurisdictions, ecosystems and knowledge systems.

## Restoration and Monitoring:

The guiding question for the Restoration and Monitoring workshop was: **How can we restore and monitor blue carbon systems to sequester carbon, increase biodiversity and be resilient to climate change?**

The discussion questions that participants could choose from to explore restoration and monitoring of blue carbon ecosystems were:

1. What are the current best practices for collecting carbon accumulation, sequestration and flux data, what are the limitations and how do we incorporate these measurements into restoration projects?
2. How do we determine the suitability of a site for restoration and what are the baseline knowledge needs?
3. How do we design restoration projects to ensure we maximize social, economic, ecological and cultural benefits?
4. How do we develop and implement effective monitoring plans for restoration projects?
5. How can we ensure we include multiple sources of evidence including local, Indigenous and scientific knowledge to strengthen our restoration projects?

The key points that participants identified during the discussion sessions included:

- Blue carbon ecosystems are highly variable within and among sites which creates challenges for monitoring restoration projects.
- Blue carbon work is cost, time and resource intensive. Finding funding for long-term monitoring is particularly challenging. Well-designed funding opportunities, training programs to increase capacity within the blue carbon community of practice and collaboration with a wide range of knowledge holders and skilled personnel can help address these challenges.
- Engagement with Indigenous governments and stewardship groups needs to happen very early in a project to build relationships and gain an understanding of the priorities of Indigenous communities.

## Policy

The guiding question for the Policy workshop was: **How can we build a policy framework which facilitates blue carbon projects aimed at sequestering carbon, increasing biodiversity and improving resilience to climate change?**

The discussion questions that participants could choose from were:

1. How can we work on policy across landscapes (land, coastline, marine, freshwater) to build a cohesive framework?
2. How can we navigate multiple management jurisdictions when developing and implementing blue carbon projects?
3. What are the pathways to ensuring that all blue carbon work adheres to The First Nations Principles of OCAP (ownership, control, access, and possession) and the United Nations Declaration on the Rights of Indigenous Peoples?
4. How can we manage multiple impacts to blue carbon systems that originate in terrestrial or freshwater environments?
5. How can we design blue carbon policy to ensure equitable use of marine resources?

The key points that participants identified during the discussion sessions to support policies which facilitate blue carbon work included:

- Federal leadership and coordination are needed to provide a national mandate to develop blue carbon policy.
- Adhering to Indigenous laws and principles is necessary for blue carbon work and all conservation work.
- Synthesized research needs to be made accessible and communicated to policy makers and decision makers to facilitate policy development.



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## Ecosystem approach

The guiding question for the Ecosystem Approach workshop was: **How do we develop blue carbon policy, research and practice with an ecosystem approach?**

The discussion questions that participants could choose from were:

1. What work is being done in Canada using the ecosystem approach that can help inform blue carbon work?
2. How can we encourage policymakers, funders, researchers and practitioners to approach blue carbon work from an ecosystem perspective?
3. How do we integrate wildlife management and conservation into blue carbon policy, research and practice?
4. How do we build blue carbon projects to support food security and how do we make these projects resilient to climate change?
5. How can we ensure we include multiple sources of evidence including local, Indigenous and scientific knowledge to strengthen our blue carbon work?

The key points that participants identified during the discussion sessions to promote working with an ecosystem approach included:

- The ecosystem approach should be integrated, comprehensive and holistic, go beyond ecological considerations to include social, economic and cultural factors, embrace multiple sources of evidence and promote co-benefits in addition to carbon storage.
- Multiple people in coordinator roles are needed to connect people across sectors and regions.
- Respect for Indigenous knowledge holders is very important and knowledge holders should control how their knowledge is shared and applied.
- Not all groups working in coastal environments use “blue carbon” terminology; we need to rethink this terminology to ensure we are communicating in a meaningful and inclusive way.

## Cross Workshop Series Emerging Themes:

- Blue carbon ecosystems are complex and interconnected. When working in these ecosystems we need to consider variability within and among sites and the transport of carbon and other nutrients among systems.
- Relationship building with Indigenous governments must be a first priority for blue carbon work. Projects should be co-created to meet the needs of Indigenous communities who have been stewarding the lands and waters since time immemorial.
- Indigenous jurisdiction, law and knowledge needs to be respected when working in blue carbon ecosystems.
- There are many co-benefits to blue carbon restoration, protection and stewardship beyond carbon storage. Co-benefits such as food security, biodiversity conservation, water quality and flood protection need to be included in projects and communicated to communities and decision makers.
- A coordinated, national approach to data collection is necessary to avoid duplication of efforts and maximize impact.
- Coordinated funding across jurisdictions and sectors is needed to facilitate a holistic approach to blue carbon work.
- Collaboration among diverse sectors, such as archaeologists, property holders, geochemists, policy and decision makers, etc. is needed early in a project to ensure success.
- Capacity building and training is needed, especially in Indigenous communities, to address the major gaps in data on blue carbon ecosystems and facilitate work on the stewardship, restoration and protection of these ecosystems.



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# NEXT STEPS WORKSHOP SUMMARY

After the first four workshops and prior to the Next Steps workshop, WWF-Canada circulated a survey to identify priorities for actions that the blue carbon community of practice could tackle next. The top responses consisted of:

- Establishing regional or topic-focused themed working groups
- Developing a strategy for standardizing methods

As a result of the survey responses, the main focus of the Next Steps workshop was to identify topics for potential working groups to tackle (with the assumption that a possible working group could focus on developing standardized methods). For each identified topic, participants then outlined relevant goals, stakeholders, and primary action items. Participants identified possible working group topics through the online collaboration tool, [Mural](#). There were 10 working groups identified:

- Mapping
- Research
- Policy
- Implementation
- Funding
- Methods and protocol development
- Training and capacity building
- Communications
- Data sharing
- Regional working groups

Participants chose to explore the potential working group topics of Mapping, Research, Policy, Implementation and Methods and protocol development further. Participants were asked to answer three questions for each potential working group topic in breakout discussion groups:

- What could the objectives or goals for this working group be?
- Who should be involved in the working group to successfully deliver on the objectives or goals?
- What could be a good first step for this working group?

Below is a summary of the discussions for each breakout group.

## Mapping

### GOALS:

- Collection and sharing of data from different regions, organizations, etc.
- Create/improve a Canada wide map (include different types of knowledge such as Traditional Ecological Knowledge) with clear and consistent metadata
- Create guidelines for methodology and address methodological uncertainties
- Help people get started and build capacity

### WHO SHOULD BE INVOLVED:

- Everybody should be involved (academia, Indigenous governments and organizations, federal, provincial and territorial governments, NGOs, communities, Traditional Ecological Knowledge holders, government agencies such as Fisheries and Oceans Canada, fisherfolk, property holders, etc.)

### FIRST ACTIONS:

- Define study areas of interest and priorities
- Identify and build on past and current mapping initiatives
- Find suitable platforms for meeting, mapping and data sharing
- Create outreach list, establish initial meeting time and send invites
- Hotspot mapping for data gaps

## Research

The Research breakout discussion group found that research as a stand-alone working group might not work well. Instead, research should be tied into many of the other potential working group topics. They also identified that funding capacity is key to achieving research goals.

### RESEARCH-BASED PRIORITIES:

- Understand the influence of vegetation and plant type on greenhouse gas emissions
- Develop methods to compare among regions and ecosystems and across latitudes
- Include multiple sources of knowledge
- Link research goals to the UN Sustainable Development Goals.

### FIRST ACTIONS:

- Integrate research into other working groups and identify key research questions
- Plan a broad scale pilot or research project
- Identify ways to collaborate and meet in the future

## Policy

### GOALS:

- Evaluation of existing protection measures across levels of government and how they could be applied or strengthened for blue carbon habitats
- Comparison of Canadian blue carbon policies with other jurisdictions
- Develop overarching policy framework at federal level that other levels of government can implement
- Host a series of workshops with decision-makers across levels of government
- Ensure funding and capacity building is included in policy
- Investigate how to integrate policy across levels of government to provide effective threat mitigation

### WHO SHOULD BE INVOLVED:

- Everyone should be involved (all levels of government and managers across government departments, research scientists, environmental NGOs, Indigenous governments and organizations, etc.)

### FIRST ACTIONS:

- The first step would be to do a policy scan and comparison among regions and with other countries

## Implementation

### GOALS:

- Define targets for implementation, including for restoration, protection and land-use planning (i.e., # hectares; amount of greenhouse gas emissions reduction)
- Integrated education / best practices (i.e. workshops on how to do restoration; how to include carbon in a project or land-use planning)
- Integration of blue carbon into land-use planning; municipal planning; community planning, etc.

### WHO SHOULD BE INVOLVED:

- Everyone should be involved, including environmental NGOs, academics, local community development organizations, Indigenous governments and organizations, property holders, government (Parks Canada, Fisheries and Oceans Canada, Environment and Climate Change Canada, provincial and municipal, Indigenous), industry, etc.

### FIRST ACTIONS:

- Identify a current project or develop a pilot project that includes multiple working groups and takes an integrated approach
- Develop relationships with Indigenous governments or co-develop a project in a place where relationships with Indigenous governments already exist

## Methods and protocol development

### GOALS:

- Identify best practices that are currently used, where gaps in available methods exist and the end use of collected data
- Create clear guidelines and protocols for collection of blue carbon data in Canada

### WHO SHOULD BE INVOLVED:

- Restoration practitioners
- Environmental Assessment/Impact Assessment contributors
- Environmental consultants
- Governments (Indigenous, Fisheries and Oceans Canada, Environment and Climate Change Canada, Parks Canada)
- Academic researchers
- NGOs (Ducks Unlimited, WWF-Canada, Clean Foundation, Ecology Action Centre, SeaChange Marine Conservation Society)

## FIRST ACTIONS:

- Conduct a gap analysis to identify where new or refined protocols are needed
- Identify current best practices for blue carbon work
- Host regional workshops to share information on best practices (Pacific, Atlantic, Arctic)
- Produce training resources (e.g. online videos for training)

# MOVING FORWARD

This five-part workshop series highlighted the wide range of blue carbon work currently being undertaken from coast to coast to coast. The workshops also demonstrated the interest of many in actively participating in a community of practice to share ideas and challenges and work collaboratively. Moving forward, WWF-Canada will aim to support an inclusive network of researchers, practitioners and policy makers working to protect, steward and conserve ecosystems along the coast of Canada as we tackle the dual crises of climate change and biodiversity loss.



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# APPENDICES

## Workshop Agenda

### Building Connections for Blue Carbon Across Canada

#### Next Steps – April 14th 2021

10am-12:30pm PT, 1pm-3:30pm ET, 2pm-4:30pm AT, 2:30pm-5pm NT

#### Where do we go from here as a community of practice?

#### Workshop Objectives

Through a series of focused workshops, these sessions will bring together a range of blue carbon researchers and practitioners from across Canada to:

- Facilitate connections within the blue carbon community and share information about ongoing blue carbon work
- Discuss key questions on blue carbon research, policy and application
- Identify areas of opportunity to advance collaboration on blue carbon across Canada

#### Preparation

We will be using an online collaboration tool called Mural during this workshop. **Please take a few minutes to familiarize yourself with the tool using this [link](#) and the tips on the next page**

<b>1:00 – 1:10pm ET</b>	<b>Welcome, Introductions and Workshop Overview</b>
<b>1:10 – 1:35pm ET</b>	<b>Workshop Series Summary and Reflections</b> <ul style="list-style-type: none"><li>• What is something you learned from attending this series?</li><li>• What additional questions still need to be answered to further advance the blue carbon community's work?</li></ul>
<b>1:35 – 2:20pm ET</b>	<b>Next Steps Synopsis</b> <ul style="list-style-type: none"><li>• What do you see as an important next step for the blue carbon community to advance the work – thinking policy, research or application?</li><li>• If working groups are formed, what areas/themes should they focus on?</li></ul>
<b>10 minute break</b>	
<b>2:30 – 3:10pm ET</b>	<b>Advancing Blue Carbon Working Groups</b> <ul style="list-style-type: none"><li>• What should the group focus on? Who should be involved? What would be a good first step to advance this working group?</li></ul>
<b>3:10 – 3:30pm ET</b>	<b>Sign up for Working Groups and round table on network communication and Closing Remarks</b>

## Participant List

Name	Organization	Email
<b>Hosts</b>		
Brianne Kelly	WWF-Canada	bkelly@wwfcanada.org
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Kim Dunn	WWF-Canada	kdunn@wwfcanada.org
Sarah Saunders	WWF-Canada	ssaunders@wwfcanada.org
<b>Participants</b>		
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Melisa Wong	Fisheries and Oceans Canada	melisa.wong@dfo-mpo.gc.ca

# SURVEY QUESTIONNAIRE AND RESULTS

## 1. PLEASE RANK THE OUTCOMES YOU WOULD LIKE TO SEE FROM THIS WORKSHOP SERIES FROM HIGHEST (1) TO LOWEST (5).

- Establish regional or topic-focused themed working groups
- Develop a strategy for standardizing methods
- Develop 2-3 page report/policy brief about the role of blue carbon in Canada's Blue Economy Strategy
- Exploration of grant/funding opportunities
- Develop collaborative manuscript on blue carbon in Canada

Most survey participants favored establishing regional or topic-focused working groups as their top priority, followed by the development of standardized methods or protocols for blue carbon work. Many participants also expressed interest in developing a short report or policy brief about Canada's Blue Economy Strategy.

## 2. ARE THERE ANY OTHER OUTCOMES FROM THIS WORKSHOP SERIES OR NEXT STEPS FOR THE BLUE CARBON COMMUNITY OF PRACTICE THAT YOU WOULD LIKE TO SEE?

Suggestions by participants of other outcomes from this workshop series included:

- Including blue carbon in greenhouse gas reporting for emissions/removals for Canada and on the Nature-based Climate Solutions agenda for Environment and Climate Change Canada
- Creating a distribution list, where information could be shared on blue carbon and people could stay connected as a community of practice
- Creating a working group focused on analytical blue carbon methods, specifically to identify and discuss methods used to measure blue carbon parameters. This could be the basis to work toward a standardized methodological framework to ensure that work across Canada could be compiled and compared.

- Ensuring that the East and West coasts are connected
- Agreement on how to measure blue carbon storage
- More information on how to implement blue carbon recovery to climate change
- Developing an online GIS portal with projects and relevant datasets to improve accessibility and reduce duplicative effort

## 3. ARE THERE ANY ASPECTS OF BLUE CARBON THAT WERE MISSED IN THE WORKSHOP SERIES?

Participants commented that there could have been a greater exploration of co-benefits (e.g., biodiversity, food security), as well as how to implement current tools (e.g., integrated aquaculture, protected areas, shoreline planning/zoning) throughout the workshop series.



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## Invited Speaker List

### MAPPING WORKSHOP

- Matt Christensen, University of British Columbia
- Dr. Karen Filbee-Dexter, Laval University and Institute of Marine Research, Norway
- Dr. Margot Hessing-Lewis, Hakai Institute
- Prof. Dr. Brigitte Leblon, University of New Brunswick and President of the Coalition-Southern Gulf of St. Lawrence
- Dr. Allison Schmidt, Dalhousie University

### RESTORATION AND MONITORING WORKSHOP

- Allen Beck, Clean Foundation
- Dr. Gail Chmura, McGill University
- Dan McNeill, Council of the Haida Nation and Lynn Lee, Gwaii Haanas Parks Canada
- Carolyn Prentice, Hakai Institute

### POLICY WORKSHOP

- Dr. Natalie Ban, University of Victoria
- Deborah Carlson, West Coast Environmental Law
- Sage Melcer, Insurance Bureau of Canada

### ECOSYSTEM APPROACH WORKSHOP

- Marlow Pellatt and Chantal Vis, Parks Canada
- Ernie Rabbitskin and Marc Dunn, Niskamoon Corporation
- Anu Rao, Ekalogical Connections, Contractor to Tsleil-Waututh Nation
- Nikki Wright, SeaChange Marine Conservation Society

## Speed Talk Presenter List

### MAPPING WORKSHOP

- Hasini Basnayake, Simon Fraser University
- Sarah Cook, Coastal & Oceans Resources
- Jessica Goldsmit, Fisheries and Oceans Canada
- Jordy Thomson, Ecology Action Center

### RESTORATION AND MONITORING WORKSHOP

- Tony Bowron, CBWES Inc. & TransCoastal Adaptations: Centre for Nature-Based Solutions
- Danielle Denley, Simon Fraser University

### POLICY WORKSHOP

- Al Hanson, Canadian Wildlife Service
- Tanya Prystay, Marine Institute

### ECOSYSTEM APPROACH WORKSHOP

- Jacqui Levy, Simon Fraser University
- Tim Webster, Nova Scotia Community College



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## Blue Carbon Initiatives and Resources

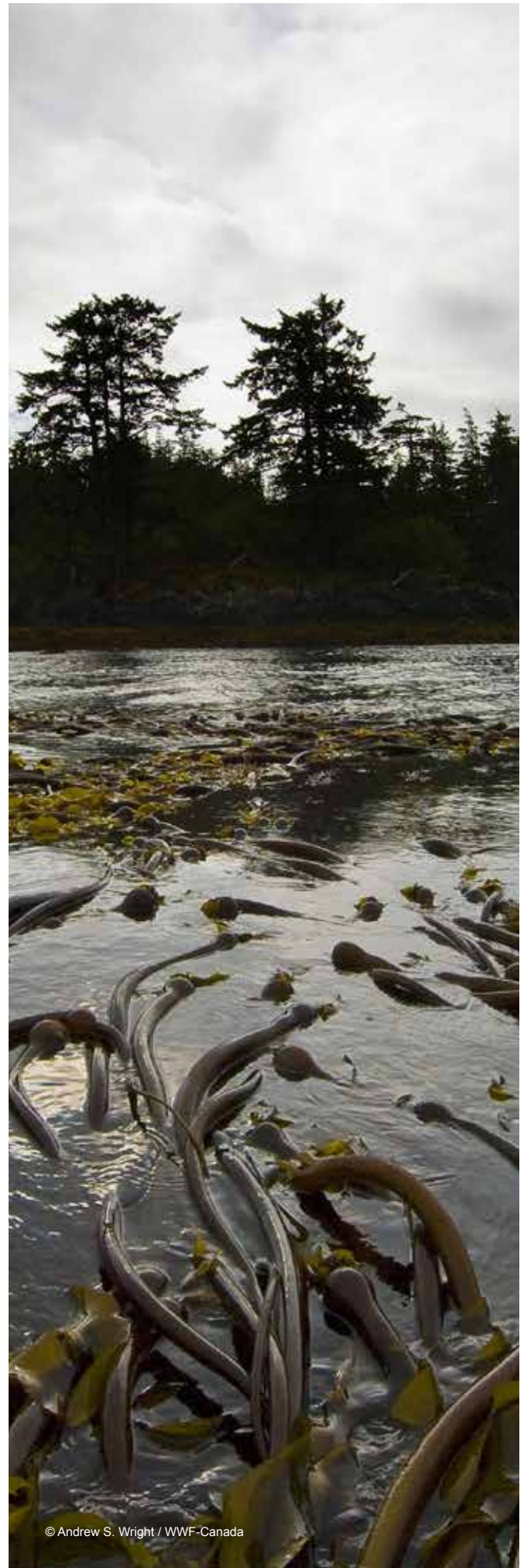
- A Blue Carbon Primer – The State of Coastal Wetland Carbon Science, Practice and Policy. 2018. Edited by Lisamarie Windham-Myers, Stephen Crooks, Tiffany G. Troxler <https://doi.org/10.1201/9780429435362>
- [Applied Geomatics Research Group YouTube Channel](#) – ecosystem monitoring using topo-bathymetric lidar
- [ArcticKelp Canada](#)
- Atlantic Eelgrass Monitoring Consortium
- [BEAHR](#) Building Environmental Aboriginal Human Resources – Customizable training for Indigenous communities
- [Burrard Inlet Action Plan](#)
- Canadian Integrated Ocean Observing System ([CIOOS](#))
- Clean Foundation [CLEAN Dataverse](#)
- Clean Foundation [Online Atlas](#)
- [eBird](#)
- Eelgrass bed monitoring in James Bay (QC) funded by Niskamoon Corporation
- Euromarine Group on global seaweed habitats
- First Nations Principles of [OCAP](#) (ownership, control, access, possession)
- [Funding Proactive Restoration of Wetlands on Agricultural Land](#)
- [Hakai Institute](#)
- [How to Be an Ally of Indigenous-led Conservation](#)
- [HSBC Blue carbon citizen science program](#)
- [iNaturalist](#)
- [Indigenous Circle of Experts](#)
- [Insuring and Restoring the Natural Assets that Protect Coastal Communities](#)
- [Islands Trust Eelgrass Mapping](#)
- [Le Maritime Ringlet et ses Marais](#)
- [Native Land](#) – map of Indigenous territories
- [Nature-Based Insurance for Watershed Protection](#)
- [Nature-Based Insurance Solutions](#)
- [Norwegian Blue Forests Network](#)
- Quadra Centre for Coastal Dialogue [Monitoring BC Nearshore Habitats Web Series](#)
- [REDD A Framework for Defining Equity](#)
- Reefball deployment at Sitmu'k [animation](#)
- Sea Level Affecting Marshes Model ([SLAMM](#))
- [Sea2City](#) – a coastal design challenge focused on False Creek, Vancouver
- [Seagrass Conservation Working Group](#) – Conservation, restoration and stewardship in British Columbia
- The Bay of Fundy Blue Carbon Story <https://arcg.is/oDqLzm>
- [The Maritime Ringlet and Its Marshes](#)
- [Towards a Regional Monitoring Framework for Cumulative Impacts Assessment in the Northumberland Strait](#)
- [Towards Reconciliation: 10 Calls to Action to natural scientists working in Canada](#)
- Two-Eyed Seeing approach ([Etuaptmumk](#)). Hear from Elder Albert Marshall and [learn more](#) about Etuaptmumk in-practice.
- [Understanding OCAP](#)
- [West Coast Environmental Law report: Policy and Planning for Coastal Ecosystems in British Columbia through a Blue Carbon Lens](#)



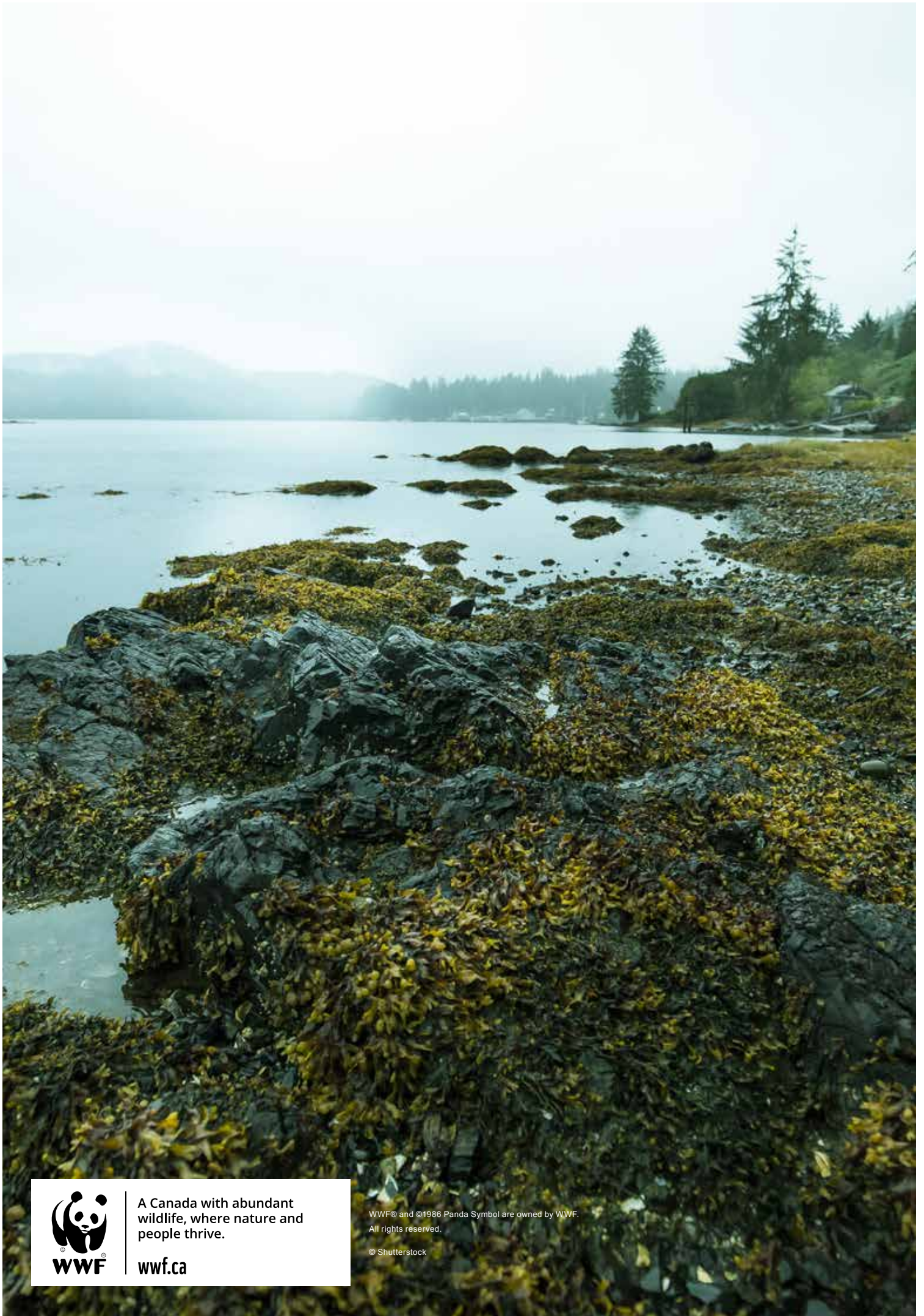


## Publications

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- Chastain, S. G., Kohfeld, K., & Pellatt, M. G. (2018). Carbon stocks and accumulation rates in salt marshes of the Pacific coast of Canada. *Biogeosciences Discussions*, 1-45. [doi.org/10.5194/bg-2018-166](https://doi.org/10.5194/bg-2018-166)
- Greiner, J. T., McGlathery, K. J., Gunnell, J., & McKee, B. A. (2013). Seagrass restoration enhances “blue carbon” sequestration in coastal waters. *PloS one*, *8*(8), e72469.
- Oreska, M. P., McGlathery, K. J., Aoki, L. R., Berger, A. C., Berg, P., & Mullins, L. (2020). The greenhouse gas offset potential from seagrass restoration. *Scientific reports*, *10*(1), 1-15.
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- Webster, T., MacDonald, C., McGuigan, K., Crowell, N., Lauzon-Guay, J. S., & Collins, K. (2020). Calculating macroalgal height and biomass using bathymetric LiDAR and a comparison with surface area derived from satellite data in Nova Scotia, Canada. *Botanica Marina*, *63*(1), 43-59. [doi.org/10.1515/bot-2018-0080](https://doi.org/10.1515/bot-2018-0080)
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