



THE ZONE

Welcome to the Winter 2018 issue of **THE ZONE**, the CZCA newsletter.

CZC 2018 Conference Highlights

Keith Mercer, Academic Director: Master of Marine Studies in Fisheries Resource Management at Fisheries and Marine Institute Planning Chair: CZC'18

The campus of Memorial University, in St. John's, NL, hosted the Coastal Zone '18 conference from July 16th to the 19th. The Future Leaders Forum preceded the conference along with a public presentation by Sheila Watt-Clutier, a nationally renowned cultural and human rights advocate nominated for the Nobel Peace Prize for her efforts in showing the impact of global climate change on human rights, especially in the Arctic.

discussion about the keynote and the theme. Each afternoon there were a series of special sessions, contributed paper sessions and workshops.

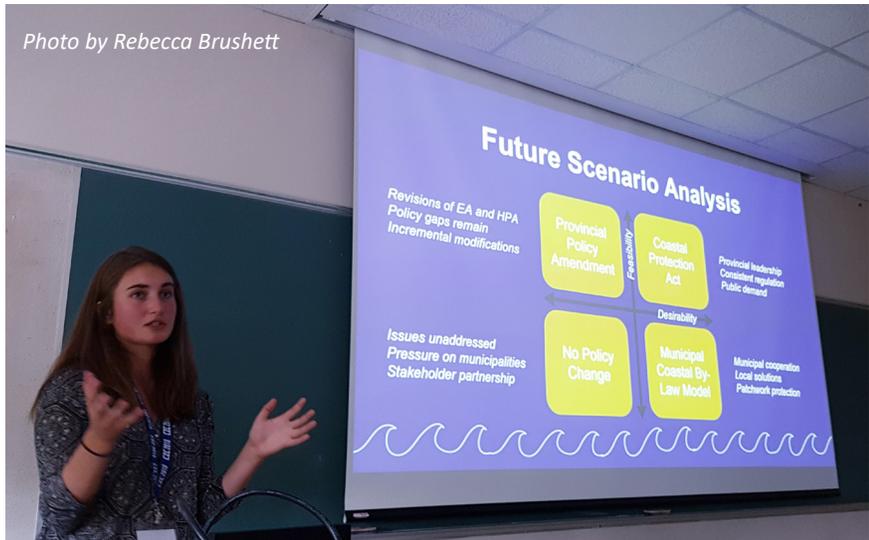


Photo by Rebecca Brushett

Each morning, participants heard a keynote address on a daily theme, followed by a panel



On Monday 16th, Kevin Stringer, the Senior Assistant Deputy Minister, Ecosystems and Fisheries Management, DFO, spoke about the Oceans Protection Plan and discussed the change, challenge and opportunities that it faces. On Tuesday 17th, Dr. Ratana Chuenpagdee, of Memorial University and Canada Research Chair in Natural Resource Sustainability and Community Development, introduced us to Examples from the Field on Engagement and

Collaboration. Through her address, and the resulting panel discussion, we learned just how important is the role that communities can play in the field of integrated coastal management, and how, to increase their chance of success, they often require guidance from knowledgeable sources in the early stages of planning. On Wednesday 18th, Kendra MacDonald represented NATI (The Newfoundland and Labrador Association of

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**Making Room for Wetlands:
Application of Coastal Habitat Restoration for Climate
Change Adaptation in Nova Scotia**

D. van Proosdij¹, T. Bowran², J. Graham³, R. Mulligan⁴, K. Bekkers⁵ & B. Pett⁶

Cheverie Creek - NS first intertidal salt marsh restoration project, Cheverie, NS

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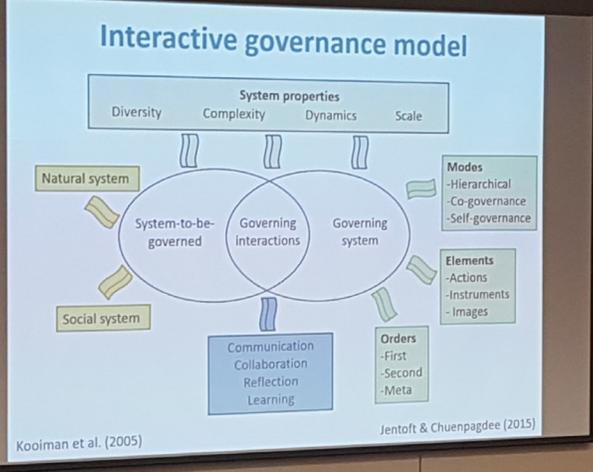
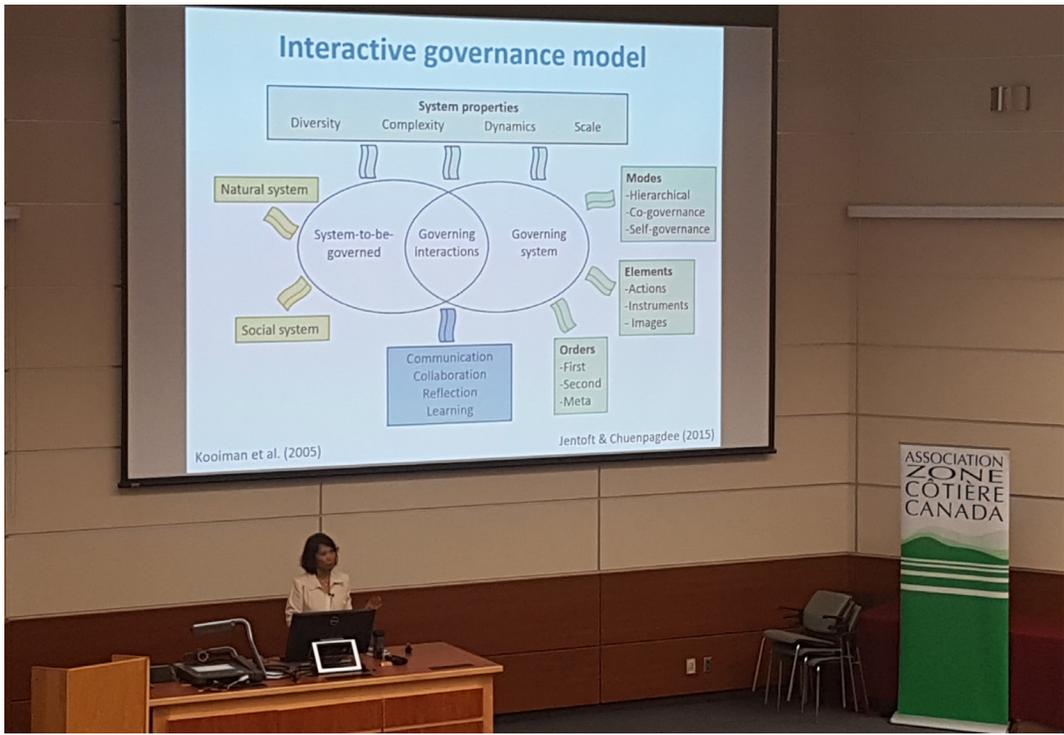
- mitigation
- Helpful technology continues to advance, however availability, afford-ability and accessibility are necessary for all stakeholders to be able to take advantage of it
- Many policies cannot keep up with the pace of changing events, and must be fluid and dynamic to be effective
- Participants in the main conference included federal government scientists and managers, provincial government scientists, academics, representatives from NGO's and the private sector, as well as students, and practitioners with a vested interest in effective management of Canada's coastal oceans and their associated communities. Approximately 150 registrants attended the conference.
- Key sponsorship by Fisheries and Oceans Canada, Natural Resources Canada and ACOA ensured a top rate conference characterized by leading edge keynote addresses, incisive panel discussions, a series of special sessions and several contributed papers. **Z**

Technology Industries) discussing the topic of Tools and Technologies. Ms MacDonald's message was that the technology is rapidly progressing, it is more reliable than before and it is getting more user-friendly. The final session on Thursday morning, hosted by the CZCA, raised the question of what the future of our coasts looks like and what should be the role of the CZCA in Canada. A lot of good discussion ensued, underlining the presence of enthusiastic, dedicated young people focused on issues of coastal management in Canada, who will continue to "carry the torch" for us.

The afternoon concurrent sessions provided for lively discussions and debates. Insights from these discussions included:

- resources and support to contribute to a coordinated effort
- Understanding natural processes at a system-scale (as opposed to the isolated issue approach) is fundamental in the search of sustainable solutions for climate adaptation, habitat restoration and impact

- We have come a long way in including LEK & TEK from our Indigenous people into our scientific data bases, but we still have a long way to go.
- We continue to experience the ongoing impacts of climate change, and management options include adaptation, policy changes, increased understanding of the consequences, and acknowledgment of the limitations of human intervention.
- Integrated management (multidisciplinary approaches and community engagement) is a must, but many stakeholders require more



Announcing Iqaluit 2020!

Coastal Zone Canada’s Conference Series is Returning to the Arctic!



The Coastal Zone Canada Association (CZCA) has been promoting coastal and ocean management, climate change adaptation, and integrated science and engineering studies across Canada and internationally for more than 20 years. A core mandate of the CZCA is to convene our biennial National Conferences, which have been hosted across Canada’s four coasts since 1994. At the recent 2018 conference in St. John’s Newfoundland and Labrador, our keynote speaker Sheila Watt-Cloutier spoke about the critical issues facing Canada’s North, including protecting Arctic culture, transportation, and the challenges associated with climate change, such as unreliable ice cover and sustaining traditional hunting.

July 19th to Wednesday July 22nd, 2020. The hotel features a full-service conference facility, a variety of guest rooms and suites, and breathtaking views of the surrounding landscape. The community of Iqaluit is accessible by air from multiple locations across Canada and a true gateway for exploring Canada’s North.

Mark your calendar for this once-in-a-life-time opportunity to attend Iqaluit 2020 and contribute to the dialog about the management of the world’s coastal zones. Updated information will be available from our website in the coming months, including dates for the call for abstracts, and exciting field trips. Save the date and we look forward to seeing you in Iqaluit in July 2020. [Z](#)



Building on Ms. Watt-Cloutier’s inspiring keynote, the Steering Committee is proud to announce that our 2020 conference will be held in Iqaluit, Nunavut! The Frobisher Inn has been secured to host the conference from Sunday

Iqaluit 2020 Steering Committee



are being duplicated and opportunities to amplify sea-level change communication through shared messaging are being missed. There is a recognition among community members and practitioners alike that without collaboration, the pockets of work being done across Canada will continue without a long-term vision for our coasts. There is a desire for more collaborative efforts which would allow for information sharing with communities in a transparent way that is easy to digest and accessible in a variety of formats. The transfer of information to communities is imperative to enable community groups and decision makers to make informed decisions based on the most up to date information. Information needs to be shared in simple ways which make the facts visual and relatable. Sea-level rise tools need to be accessible, regionally relevant and easy to use and understand.

Lessons learned

Sea-level rise information can be frightening, when presented in a dire, alarming manner. However, the information can be shared with a constructive approach which empowers communities to recognize the challenges they are facing, shares adaptation success stories and helps facilitate a discussion towards strategies and solutions.

Based on the sessions that took place through the ECoAS project, the most effective aspects of workshops for communicating sea-level rise information were:

- Establishing a local partnership with a community champion or champion organization to help advertise and provide local knowledge
- Engaging One one of or more local speakers bringing forth local knowledge and current priorities for the community
- Developing interactive exercises done through coastal vulnerability and asset mapping and discussion around adaptation
- Ensuring a diverse participation of individuals to bring different perspectives to the table.
- Using a coastal venue to visually link the audience to the topic

Sharing climate risk knowledge with communities of practice

In 2018, MEOPAR <http://meopar.ca/> (Marine Environmental Observation, Prediction and Response Network) established three communities of practice (CoP) to facilitate knowledge-exchange between the research community and practitioners in Canada’s coastal regions. Each CoP has a distinct focus: transportation risk, risk communication, and policy and governance in changing climate (Table 1). The goal of the MEOPAR CoPs is to create an environment where researchers, organizations and individuals can learn from one another, share experiences and best practices for addressing growing climate risks facing Canadian coastal communities.

Table 1. Description of MEOPAR CoPs

CoP	Domain
Canadian Coastal Resilience Forum	Public policy opportunities and cross-sector collaboration for facilitating climate action in coastal communities
Coast and Ocean Risk Communication CoP	Risk communication of coastal and marine hazards
Climate Risks for Coastal Transportation Infrastructure CoP	Climate change impacts on supply chains and transportation of goods and services in coastal cities and rural communities

Over the course of the year, MEOPAR CoPs have created online resources (e.g., webinars, newsletters) and opportunities for knowledge-exchange through cross-Canada events. Two prominent events are the Expert Forum on Addressing Climate Risks for Coastal Transportation Infrastructure http://meopar.ca/uploads/Expert_Forum_-_Final_Program.pdf and a workshop focused on Flood Risk Management in Canada’s Coastal Regions <https://uwaterloo.ca/canadian-coastal-resilience/events/flood-risk-management-canadas-coastal-regions>.

Expert Forum on Climate Risks for Coastal Transportation Infrastructure

The Expert Forum was held in Vancouver in partnership with the Institute for Catastrophic Loss Reduction (ICLR) and the Western Transportation Advisory Council (WESTAC). This event gathered representatives across sectors including Port of Vancouver, Vancouver Airport, Natural Resources Canada, the University of British Columbia among others. The event explored how sea level rise, amplified storm surges, and high-intensity precipitation can impact supply chain reliability, capacity and costs of air and marine transportation systems in Canada’s west coast.

The Forum brought experts together to answer three pressing questions: Can the BC Lower Mainland transportation infrastructure handle current extreme weather? How should transportation stakeholders manage the current transportation risks for remote and island communities? What should be done to better prepare for future climate and rising sea levels?

The Expert Forum discussed the current state of knowledge about these issues and explored possible actions by private industry, governments and others to reduce the risk of loss and damage from disruption of coastal transportation infrastructure. In particular, the science community sought direction about research that would support the current and longer-term needs of decision makers addressing coastal transportation infrastructure issues. Recommendations for the transportation sector are currently being drafted as a result of this event.

Workshop on Flood Risk Management in Canada's Coastal Regions

Authors: Andrea Minano, Community Coordinator, Canadian Coastal Resilience Forum; Sarah Wilkinson, Research Assistant, Canadian Coastal Resilience Forum

This workshop gathered 34 representatives from all levels of government, the private sector, non-governmental organizations and academia in Halifax for a one-day event (Figure 1). Following morning presentations, workshop participants took part in a discussion about four policy instruments that could be implemented to strengthen flood risk management (FRM) in Atlantic Canada. These policy instruments were property disclosure, flood mapping portals, development setbacks, and managed retreat. Participants asked to carefully consider the efficiency, equity and social and political acceptability of

these instruments. Several key insights were produced from this discussion, notably, that FRM in Atlantic Canada can be improved by implementing these instruments, that local governments lack resources and capacity to implement and enforce FRM instruments on their own and require direction and support from other levels of government. Finally, participants concluded that there is an appetite for new risk reduction strategies but more clarity is required on how they should be used, when and by whom. The full workshop report can be accessed by visiting:

To learn more, <https://corccop.com/event/webinar-whats-that-sound-public-and-official-perceptions-of-the-january-2018-tsunami-warning-and-evacuation-in-the-alberni-valley/> for the full webinar description. To access the webinar recording, visit <https://corccop.com/archives/>.

To learn about upcoming events, please subscribe to our communications list (<http://eepurl.com/dD0tKD>)

Connect with MEOPAR CoPs

To engage with the MEOPAR's CoPs and find out more about upcoming events, contact the Community Coordinators. You can also visit their websites for more resources and follow them on social media.

Canadian Coastal Resilience Forum

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Andrea Minano, Community Coordinator, University of Waterloo

Coast and Ocean Risk Communication Community of Practice

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Climate Risks for Coastal Transportation Infrastructure Community of Practice

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<https://uwaterloo.ca/canadian-coastal-resilience/sites/ca.canadian-coastal-resilience/files/uploads/files/workshopreport-final-september112018.pdf>.

Figure 1. Pictures of workshop presenters and organizers. Dan Sandink, ICLR presenting on basement flood protection (top). Daniel Henstra, Sarah Wilkinson, Andrea Minano and Jason Thistlethwaite from the University of Waterloo organized the workshop (bottom).

Webinar: What's that Sound? Public and Official Perceptions of the January 2018 Tsunami Warning and Evacuation in the Alberni Valley.

Presenters: Alexa Tanner and Ryan Reynolds, UBC

Tying into the theme of coastal risk communication, the Coast and Ocean Risk Communication CoP hosted a free webinar on November 20th focusing on the January 2018 tsunami warning and evacuation in the Alberni Valley, British Columbia. Two leading researchers based at the University of British Columbia surveyed 450 residents and 11 local officials to understand how the event changed their perceptions of tsunami risk, and what lessons can be learned from the event from a risk communication stand-point.



The Case for a British Columbia Coastal Zone Management Act

Author: Jamie Alley, University Centre of the Westfjords, University of Victoria and Jamie Alley and Associates. Former Vice President, Pacific CZCA

Editors Note: This article on the need for provincial coastal management legislation in British Columbia is intended to be the first in a series of articles addressing coastal management approaches throughout Canada. As ownership and jurisdiction of our coastlines and the adjacent seabed varies on each of Canada's coasts and between provinces, The Zone hopes to explore in future issues the need for provincial coastal legislation in other parts of the country to fill management gaps and to serve as companion legislation to the federal Oceans Act.

The British Columbia coast is perhaps the Province's single most important asset. Home to most of BC's population, it is also home to some of the most important and productive ecosystems on earth. Management of coastal issues faces unprecedented challenges, including;

- Proposals for new oil ports and marine transportation corridors,
- Declining and threatened fish stocks and marine mammals,
- Destruction of critical shoreline and nearshore habitats,
- Increased development and loss of public access to the coastline, and
- The need for emergency programs to deal with earthquakes, tsunamis, and the extreme weather events, storm surges and sea level rise caused by Climate Change.

Response to these challenges often falls short, because the coast is governed by a patchwork of federal, provincial, municipal and aboriginal agencies that largely fail to co-ordinate regulatory and management efforts. The Province needs a provincial Coastal Zone Management Act to help secure the future of the BC coast and demonstrate its willingness to play its role in fostering integrated coastal zone management in Pacific Canada.

Coastal Jurisdiction and Ownership

Currently, management of coastal and marine resources is an area of complex shared jurisdiction between all orders of government, including First Nations and local governments. For example, the federal government has jurisdiction over navigation, fisheries regulation and national defence. Local governments have jurisdiction over development and zoning, and other powers over local shorelines and some coastal waters. First Nations' deep spiritual connections to the coast, developed over millennia, inform their laws, traditions and protocols that have been used to share and wisely manage coasts and ocean resources among their communities.

The Province has broad regulatory jurisdiction over numerous activities in the coastal zone including those on terrestrial and adjacent freshwater ecosystems that have an impact on the coast. In addition, BC has jurisdiction and ownership over the foreshore seaward of the high tide mark and all coastal or inland waters within the "jaws of the land", including the seabed. In 1984, the Supreme Court of Canada ruled that the seabed of the Strait of Juan de Fuca, the Strait of Georgia, Johnstone Strait and Queen Charlotte Strait are the property of British Columbia. Ownership of Hecate Strait and Dixon Entrance has not been legally confirmed, but the province has continuously exercised its ownership of this area as well.

As a consequence today, coastal ecosystems are regulated by a plethora of government agencies at numerous levels. This thwarts effective planning and management – especially due to the absence of effective legislative mechanisms to coordinate the actions of multiple agencies and governments. The Province needs to address this by creating a legislative framework to assert its jurisdiction and ownership of coastal resources, to secure the future of coastal communities and their economies, and to coordinate with other governments with responsibility for the BC coast.

Models of Coastal Management Legislation

There are successful models in other jurisdictions around the world. For example, the US Coastal Zone Management Act of 1972 empowered US coastal states to develop some of the most progressive coastal management programs in the world. Under the Act, state level coastal management programs provide for:

- Protection of wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and fish and wildlife habitats,
- Management of coastal development to minimize the loss of life and property,
- Initiatives to improve coastal water quality,
- Siting of coastal-dependent uses and restriction of inappropriate development on the coast,
- Public access to the coasts for recreation,
- Redevelopment of deteriorating urban waterfronts and ports, and preservation of historic and cultural features,
- Coordination and simplification of coastal management decision making,
- Opportunities for public and local government participation, and
- Improved coordination between coastal management agencies.

When it was passed in 1996, Canada's Oceans Act was seen as one of the most progressive oceans management statutes in the world and yet it was never intended to take on all of the issues regarding the management of Canada's coastlines. Despite the criticisms over the failure of Canada to fully implement the Oceans Act, its initial promise remains and renewed

efforts are encouraging. The whereas clauses in the preamble are inspiring and reaffirm in statute law the fundamental importance of conservation, maintaining biological diversity and productivity, and the need to take ecosystem and precautionary approaches to management. There are other provisions in the statute for strategic and spatial planning and the designation of marine protected areas that could form the basis for productive partnerships and for parallel provincial legislative provisions to protect coastal resources and ensure their sustainable use.

Potential Elements of Coastal Management Legislation for BC

Following the models in the Canadian Oceans Act and the US Coastal Zone Management Act, a BC Coastal Management Act could include some or all of the following provisions;

- A preamble to reaffirm BC's commitment to the conservation and sustainable management of estuarine, coastal and marine resources,
- Powers to enter into agreements and to delegate and accept powers from other orders of government,
- Development of a Coastal Management Strategy,
- A legislative basis for coastal and marine spatial planning, including regional management plans for estuarine, coastal and marine ecosystems,
- Strategic assessment of marine transportation corridors, including decision-making processes for coastal infrastructure and port facilities,
- Establishment of a comprehensive network of marine protection areas within provincial waters that link with other networks of MPAs,
- Collaborative mechanisms for marine science research and monitoring long-term trends in the condition of coastal and marine ecosystems,
- Establishment of a voluntary local government coastal management program to protect and restore coastal ecosystems on private and public property, and to ensure public access,
- Coastal and marine emergency planning and preparedness,

- Climate change adaptation strategies for issues such as extreme weather events, storm surges and sea level rise,
- Programs for the revitalization of coastal communities, and
- Collaboration and partnerships with other orders of government including First Nations.

A BC Coastal Zone Management Act would signal BC's intent to play its part and take coastal management seriously, and to fully exercise its jurisdiction and ownership. Such an initiative would support and coordinate well with other orders of government and would provide the basis for future cooperation and collaboration in Pacific Canada. [Z](#)

Jamie Alley is a consulting geographer based in Victoria, BC and teaches Coastal and Marine Management at University Centre of the Westfjords, Natural Resource Management Decision-Making at the University of Victoria, and is the former Vice President, Pacific CZCA

GET IN THE ZONE

Submit your news items for the next issue of The Zone. We wish to continue the dialogue of coastal zone work across Canada between our biennial conferences, so please consider sharing an update with us to be included in the next issue. **Z**

News Items

To submit a news item (maximum 500 words) please send to thezone@coastalzonecanada.org

CALL FOR PAPERS

Please consider submitting a paper to the next issue of the CZCA Newsletter. We are looking for paper submissions of 1000-2000 words on a wide range of topics covering Canada's coastal zone: governance and policy, engineering, ocean science, and social science.

If you wish to submit a paper please submit your abstracts (maximum of 250 words) to thezone@coastalzonecanada.org by February 15, 2019. Papers are due March 15, 2019. **Z**

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We would like to sincerely thank all of the contributors to this edition of the Zone, the authors of the papers and articles herein, as well as the reviewers.



Photo: Green Gardens Trail
Gros Morne National Park
by Pete Zuzek

Call for pictures! Please send your best coastal related shots to:

thezone@coastalzonecanada.org



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The Zone is looking for French speaking or bilingual (French and English) volunteer editors. For further information please contact us at

thezone@coastalzonecanada.org

CZCA Membership

Registration at the biennial conferences automatically includes CZCA membership dues for two years. If you missed the 2016 conference and would like to update your membership or become a new member, please visit our website for more details. The fee is \$20/year or \$40 for two years.

www.coastalzonecanada.org