Workshop Goals
On December 9, 2014 the Circumarctic Coastal Community Observatory Network (CACCON) held a meeting at the annual Arctic Change/ArcticNet conference in Ottawa, Canada. In addition to two scheduled special sessions within Arctic Change 2014, this meeting brought together members of the CACCON organizing group, representatives of coastal communities involved with CACCON, and interested scientists and organization representatives. The goals of the meeting were to showcase the CACCON concept to the wider community, to learn from community representatives about needs related to CACCON, and to explore potential challenges and examine other examples of network activities.

I: Introduction to the CACCON concept, Introductions of participants and community issues
CACCON seeks to support the development of and foster a distributed knowledge base from all sources, including but not limited to existing data, local and traditional knowledge and observations within coastal communities and from conventional science. Its object is around coastal changes in the environment, social setting within communities in the context of the changes brought on by globalization and new technologies in the north. Given the pace and intensity of change in the north, Northern communities can be regarded as playing the role of “canaries in a coalmine”, which implies a sense of risk and urgency to the undertaking. The approach followed within CACCON is focused on co-design and the long-term building of capacity within the human coastal setting. The premise behind the co-design jargon indicates solution oriented work that aims to produce action-based results. This depends on a co-design process whereby those who use information are involved in setting the research priorities that generate that information, creating an opportunity for data gathering and observations to be based on partnerships and rooted in local communities.

Developing knowledge in this relevant and accessible manner will lead to decisions and actions that are sustainable in nature. It requires an integrative framework based on community priorities (e.g. well-being) rather than a disciplinary approach carried out in isolation (e.g. meteorology).

As an example, the issue of housing in Nunatsiavut is highly relevant to local communities, but housing design inappropriate for local conditions leads to decreased quality of life and housing repairs within a decade of building. Issues of energy efficiency, over-crowding, housing condition, building site suitability and cultural validity intersect in the issue of housing and require and integrative approach to design, site selection, building, maintenance and use that requires input from scientists working on the land, from the community and from engineers and architects. Lessons learned and expertise gained can and ought to be shared between communities and at various governance levels. CACCON proposes to be the network through which this sharing and exchange happens. CACCON will build capacity to generate and house data within communities in a decentralized manner. The network of knowledge and data hubs is a product of CACCON, and can include other networks or overlap with them, using existing resources. The goal is a sustained observatory network.
Figure 1 shows current and proposed CACCON pilot regions. These are

1. Lorino, Chukotka, Russian Federation  
2. Shishmaref, Alaska, USA  
3. Inuvialuit Settlement Region, Yukon and NWT, Canada  
4. Clyde River, Nunavut, Canada  
5. Nunatsiavut, Canada  
6. Unjårgga/Nesseby, Finnmark, Norway  
7. Murmansk, Murmansk District, Russian Federation  
8. Kujalleq, South Greenland  
9. Arviat, Nunavut, Canada (absent from Figure 1)

Throughout the Arctic Change conference, additional communities and regions have indicated their interest in joining CACCON. These are not yet included in Figure 1.
Learning from communities
As part of the meeting, community members presented two narratives from Shishmaref, Seward Peninsula and from Nain, Labrador, that described dealing with the issues of environmental pressures in the form of coastal erosion, and of building community resilience through a youth outreach program, respectively.

Shishmaref, Alaska, USA
Tony Weyiouanna related the recent history of community response to environmental pressures in Shishmaref, Alaska (see Figure 2), where the erosion of the coast is a problem for community infrastructure. He spoke about the role of the intense but temporary media focus on the issue and how this framed the debate around responses to the problem:
- mitigation efforts have been undertaken by different agencies in the past, all with limited success.
- governance issues, who makes decisions, representatives in political hierarchy change over short-term, decisions for mitigation and adaptation made without community involvement
- relocation a potential solution, but expensive, not unanimously accepted within the community, and site selection is difficult.
- the problems in Shishmaref have exposed the lack of an established process for allocating funding or identifying solutions for such problems. There is little to no consistency in approaching the issue. Tony is one of the few people who have been involved in the process from the very beginning.
- this issue is not limited to one community, but has been identified for many communities in Canada, Russia and the US, sometimes for different reasons (e.g. community relocation in Nunatsiavut due to contamination of a military site),
- the only continuous elements in the narrative are community member involvement and their gathered expertise and knowledge

Figure 2 Image showing the location of Shishmaref, Alaska, located on Sarichef Island off the Seward Peninsula.

Figure 3 A 2005 image showing infrastructure vulnerable to coastal erosion in Shishmaref, Alaska (source: http://www.alaskajournal.com/Alaska-Journal-of-Commerce/January-Issue-4-2014/Shismaref-residents-talk-about-coastal-erosion-in-DC/)
Nain, Labrador, Canada
Dorothy and Joey Anngatok relate the creation of a youth outreach program in Nain and its impact on the community. Dorothy is the leader of the “Going off – Growing Strong” initiative, working with young males in the community. At-risk youth are paired with experienced hunters and elders to go out on the land to learn land skills and put local knowledge into practice. The program began to address issues of mental health and suicide prevention, but led to contributing demonstrably to community well being, food security and the preservation of cultural practices.
- the program ultimately led to the creation of a research center in Nain, with personnel partly funded through research funding
- a moving film was presented showcasing the program and its participants.

II: Open discussion on CACCON concept
Following the presentation of a more detailed description of CACCON including its history and currently pending proposals by Don Forbes, an open and wide-ranging discussion on the nature of community research priorities and the relationship of CACCON to existing networks, programs and projects set the stage for next steps in the process.
CACCON ("catch-on")

Dec. 9, 2014

Ottawa, Canada

Workshop Participants:
1. Joey Angnatak, Community of Nain, Nunatsiavut
2. Dorothy Angnatak, Community of Nain, Nunatsiavut
3. David Atkinson, University of Victoria, Victoria, Canada
4. Trevor Bell, Memorial University of Newfoundland, St. Johns, Canada
5. Tanya Brown, Memorial University of Newfoundland, St. Johns, Canada
6. Nicole Couture, Geological Survey of Canada, Ottawa, Canada
7. Laura Eerkes-Medrano, University of Victoria, Victoria, Canada
8. Don Forbes, Geological Survey of Canada, Dartmouth, Canada
9. Anne Garland, PolarTREC Researcher, USA
10. Jenny Knopp, Trent University, Peterborough, Canada
11. Hugues Lantuit, Alfred Wegener Institute Helmholtz-Center for Polar and Marine Research, Potsdam, Germany
12. Eric Loring, Inuit Tapiriit Kanatami, Ottawa, Canada
13. Gavin Manson, Geological Survey of Canada, Dartmouth, Canada
14. Beth Marino, Oregon State University, Redmond, USA
15. Donald McLennan, Head - Monitoring Science/Gestionnaire Surveillance, Canadian High Arctic Research Station/Station de recherche du Canada l'Extreme Arctique, Aboriginal Affairs and Northern Development Canada
16. Scot Nickels, Inuit Qaujisarvingat, Inuit Tapiriit Kanatami, Ottawa, Canada
17. Paul Overduin, Alfred Wegener Institute Helmholtz-Center for Polar and Marine Research, Potsdam, Germany
18. Alison Perrin, Yukon Research Centre, Whitehorse, Canada
19. Peter Pulsifer, National Snow and Ice Data Center, Boulder, USA
20. Volker Rachold, International Arctic Science Committee, Potsdam, Germany
21. Rudy Riedlsperger, Memorial University of Newfoundland, St. Johns, Canada
22. Catherine Robin, Canadian Hydrographic Service, Ottawa, Canada
23. Mareusz Streletzki
24. Tony Weyiouanna Sr., Shishmaref Village Native Corporation, Shishmaref, USA
25. Fannie Weyiouanna, Shishmaref Village Native Corporation, Shishmaref, USA
Workshop Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00 – 15:15</td>
<td>Introduction to the CACCON concept</td>
</tr>
<tr>
<td></td>
<td>Introductions of participants and community issues</td>
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<tr>
<td>15:30 – 17:00</td>
<td>Thorough introduction of CACCON and open discussion</td>
</tr>
</tbody>
</table>

Associated Arctic Change 2014 Special Session

Pathways to Northern Coastal Sustainability: Understanding and Responding to Environmental and Social Change on the Pan-Arctic Coast (Session T36A)

Co-chairs: Donald Forbes, Paul Overduin, Trevor Bell

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell, Trevor</td>
<td>Circumpolar Arctic Coastal Communities Observatory Network (CACCON): How We See it Working in Nunatsiavut</td>
</tr>
<tr>
<td>Marino, Elizabeth</td>
<td>The Eco-Political Coast: Understanding Extreme Flooding, Migration, and the Social Barriers to Adaptation</td>
</tr>
<tr>
<td>Overduin, Paul</td>
<td>Remote Observations of Environmental Change at Proposed CACCON Communities</td>
</tr>
<tr>
<td>Forbes, Donald</td>
<td>Riding the Flood Wave: Participatory Tracking of Spring Breakup in the Mackenzie Delta and Beaufort Sea</td>
</tr>
<tr>
<td>Riedlsperger, Rudy</td>
<td>Northern Coastal Sustainability: Sustainability of What, for Whom, and How?</td>
</tr>
<tr>
<td>Atkinson, David E.</td>
<td>Working with Northern Residents to Link Local Problem Weather into the Large-Scale</td>
</tr>
<tr>
<td>Thienpont, Joshua</td>
<td>Recent, Unprecedented Environmental Change in the Coastal Mackenzie Delta of Canada’s Western Arctic: a Multidisciplinary Assessment of the Impacts of Storm Surge Activity</td>
</tr>
<tr>
<td>Baranskaya, Alisa</td>
<td>Technogenic Impact on the Pechora and Kara Sea Coastal Dynamics Under Climate Change Conditions: Mechanisms and Risks</td>
</tr>
<tr>
<td>Couture, Nicole</td>
<td>Parameterizing a Coastal Erosion Model for Tuktoyaktuk, N.W.T.</td>
</tr>
<tr>
<td>Whalen, Dustin</td>
<td>Sedimentation in Tuktoyaktuk Harbour and Approaches, Northwest Territories</td>
</tr>
</tbody>
</table>