Exchanging knowledge inside a nuclear ice breaker: CACCON invited to share its vision at the first Arctic-COAST workshop

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Murmansk, Russia

Arctic-COAST is a new international Research Coordination Network, mainly funded by the National Science Foundation (NSF). Its need stems from the lack of integrated frameworks for monitoring socio-ecological systems that could provide key observations for measuring resilience and assessing environmental and community sustainability on the Arctic Coast.

Network lead, Dr. Andrey Petrov (University of Northern Iowa), organized the first Arctic-COAST workshop in Murmansk, Russia from 23 to 25 June, *Arctic-COAST I: Indicators, Resilience, and Governance in Arctic Coastal Social-Ecological Systems*. Social and physical scientists, community members, policymakers, and business representatives discussed socioeconomic and environmental issues affecting Arctic coastal communities. About 25 participants from eight countries attended the workshop, the focus of which was identifying indicators for sustainable development that could address some of the key challenges related to globalization, climate change, demography, and accessibility (to name but a few).

As two of the CACCON (**C**ircum-**A**rctic **C**oastal **C**ommunities **K**n**O**wledge **N**etwork) co-founders, Don Forbes and Trevor Bell, were both invited to give keynote presentations, the workshop provided an excellent opportunity for CACCON to introduce its vision and demonstrate success stories to a new audience. In his keynote address, emeritus research scientist and adjunct professor Dr. Don Forbes emphasized the need to foster peer-to-peer networking among Arctic coastal communities through capacity sharing, co-learning, and sustainability. Northern residents with a rich store of indigenous knowledge and a culture of adaptation can benefit from CACCON as a pan-Arctic network of communities and knowledge hubs that promotes collaboration to advance adaptation planning.

Using the *SmartICE* (Sea-ice Monitoring And Real-Time Information for Coastal Environments) project as an example, Professor Trevor Bell demonstrated the tangible benefits of community-to-community collaboration, which was initiated by CACCON. *SmartICE* has succeeded in developing not only a system that responds to local sea-ice knowledge needs, but that also serves as a learning and adaptation-sharing tool for other communities that may find similar challenges.

Rudy Riedlsperger, doctoral candidate and member of the CACCON initiating group, presented how researchers in the Nunavut hamlet of Arviat, as part of the CACCON knowledge hub, collaborate with the community of Old Crow (Yukon Territory) to mobilize knowledge through appropriate entry points (in this case, geoscience knowledge of

community landscape hazards) so that decision makers can implement new approaches to landscape hazard mapping based on a variety of knowledge and data sources.
He highlighted some of the challenges, such as identifying available adaptation options that allow residential development to proceed in areas at risk to permafrost thaw.

Other CACCON ambassadors present at the workshop included Andrey Petrov, Tatiana Vlasova, Gleb Kraev, Joan Nymand Larsen, Laura Eerkes-Medrano, David Atkinson, and Rasmus Ole Rasmussen. Arctic-COAST provided a wonderful opportunity for CACCON ambassadors and supporters to re-connect and discuss the current state and future of pan-Arctic knowledge sharing. In addition to meeting like-minded researchers with whom we can explore opportunities to expand our circum-arctic coastal communities network, other outcomes of the workshop included a draft framework for social and physical indicators to achieve sustainable coastal Arctic communities. This framework will be shared on the new [Arctic-COAST website](). The next Arctic-COAST workshop will take place in 2017.