Introduction

The **Useful Arctic Knowledge: partnership for research and education (UAK)** project aims at improving multidisciplinarity in Arctic education and research. UAK is funded by the INTPART programme 2018-2020. INTPART (International partnerships for excellent education, research and innovation) is funded by the Research Council of Norway and the Norwegian Centre for International Cooperation in Education (SIU). UAK partners are from a range of institutions in Norway, Canada and USA.

The goal of the Useful Arctic Knowledge: partnership for research and education (UAK) project is to develop long-term collaboration between Norway, Canada and USA to improve multidisciplinarity in Arctic research and education. The project is focused on selected topics of importance to local communities and operators in the Arctic, namely the nature of natural and human-made hazards and ocean acoustic environment, all of which can have significant negative impact.

UAK addresses the following topics:

- Cross-disciplinary data management and integration
- Natural and human-made hazards
- Ocean acoustic environment
- Community based monitoring
- Communication between academic research groups and local communities

In December of 2019, UAK hosted the Svalbard Research School [https://uak.ucalgary.ca/svalbard-research-school/]. The Svalbard Research School focused on cross-disciplinary science in the Arctic and collaboration with local communities with a particular focus on training and education for early career researchers. It was organised by the Nansen Environmental and Remote Sensing Center as part of the UAK project.

From October 1-3, 2019, the National Snow and Ice Data Center at the University of Colorado will host a workshop on Communicating and Mobilizing Research and Community Data, Information and Knowledge. This workshop will bring together UAK project partners, domain experts, and some early career researchers to explore new ways of communicating and disseminating research for a wide range of different audiences.

Meeting Background and Outline of Methods for Participants

As we experience significant and rapid environmental and social change, science and research are more important than any time in history. Meeting the challenges of current and future generations will require the best available information and knowledge. Moreover, sharing information and knowledge between and among a wide range of actors in society will help to ensure that research has the best possible scientific and societal impact.

Traditionally, research has been shared within the academy through expert-to-expert communication platforms such as journals or scholarly meetings, for example. Increasingly, there is societal interest in ensuring that research results and methods are communicated to broader audiences including policy and decision makers, elementary and secondary school students, researchers from outside disciplines, industry, civil society, governments at all scales, and the general public. Individual researchers or research organizations may not have experience or expertise in communicating and mobilizing community and research results and data. The purpose of this workshop, under the Useful Arctic Knowledge project, is to learn about different theories, methods and examples of research and knowledge communication and mobilization, and to apply what we learn to case studies focused on the particular research domain of workshop participants. Potential products emerging from the workshop include a special issue focused on the results of the workshop and other work of participants and others, and teaching and learning modules for use in teaching environments.

Science and research communications can be broadly defined as the practice of informing, educating, sharing curiosity, and raising awareness of science and research-related topics. Methods include engagement with the media (newspaper, radio, television, blogosphere, social media etc.), compelling story-telling, film making, podcasting, public engagement, and many others.

The term “knowledge mobilization” relates to science and research communications, however refers to more proactively moving available knowledge into active use, particularly by connecting researchers with policy makers and other practitioners “on the ground”. Knowledge mobilization includes communication but goes beyond to include processes such as participatory action research, formal collaborations that involve researchers and other actors, models of knowledge co-production that are prominent in current dialogues in Arctic research, and the development of diverse networks that include many different kinds of knowledge holders/producers and researchers (e.g. community-based Indigenous Knowledge holders, local researchers, university-based researchers).

We will use a multi-tiered approach to enhance participants’ knowledge and inform their practice in the future.

First, a series of speakers who have professional experience in the domain of communicating and mobilizing research and community data, information and knowledge will share their experiences and knowledge of strategies and methods that can be used by researchers and community members. This will provide all participants with a foundation in the topic.

Second, participants will present “case studies” (approximately 15 minute presenation on Day 1 and additional time throughout the workshop) that include several pieces of information for their specific research domain:

- A brief summary of the nature of their research including key questions within their field and some of the research activities that they are engaged in;
- A statement of the types of broader impacts that the participant would like to see come out of their research (e.g. have more impact on policy; be used in elementary level education etc.)
- An overview of the communication and knowledge mobilization activities that the participant and/or their organization are already engaged in. If none, then outline the impediments to engaging in these activities.

Third, during the last session of Day 1, the group will synthesize these case studies to create a preliminary "framework" that can be applied to a particular domain case study. The framework will be developed at the workshop, however we can expect it to build on the content of keynote talks and the participant case studies and may include:

- Rationales for engaging in communication and knowledge mobilization activities
- Possible types of communication and mobilization strategies, methods, and approaches etc. that could be used
- Methods for identifying appropriate audiences
- Ways of engaging with different audiences
- How to package, preserve and effectively share results of communication and mobilization
- Network building approaches
- Obtaining resources for activities
- *Other elements emerging from keynote talks, discussion, and case studies*

Fourth, on Day 2, the framework will be applied to a set of case studies presented on Day 1 with the objective of creating an actual communications and mobilization strategy and materials for the case study (e.g. marine acoustics, a particular community-based research project, seismic etc.).

Fifth, On Day 3, we will establish a plan for how to "mobilize" the results of the workshop (e.g. special issue, teaching materials) and carry forward the effort through the remainder of the Useful Arctic Knowledge project.

Draft Agenda

Day 1 (1 October 2019)			
Time	**Topic**	**Speaker(s) or Lead**	**Notes**
	Session 1		
9:00 - 9:15	Introductions	All	
9:15 - 9:30	Review of UAK to date and theme of workshop:	Peter Pulsifer, All	Communicating and Mobilizing Research and Community Data, Information and Knowledge
9:30 - 10:05	Keynote talk and discussion: - "An Overview of Science Communications and Knowledge Mobilization"	Jennifer Walton	
10:05 - 10:30	Keynote talk and discussion: Experiences and Lessons Learned at the Cooperative Institute for Research in Environmental Sciences	Katy Human	
10:30 - 10:50	Break		

10:50 - 12:00	Communication and Mobilization (C & M) Case Studies. Current examples and state of the art across the discipline (Part 1)		
	C & M at Nansen Centre	Stein Sandven	
	C & M at AINA	Maribeth Murray	
	C & M at U. Of Manitoba	Ryan Galley	
	C & M at NSIDC	Jennifer Walton, Peter Pulsifer	
12:00 - 1:30	Lunch		
1:30 - 3:15	Communication and Mobilization (C & M) Case Studies (Part 2)		
	C & M at with local communities	Lisbeth Iverson	
	C & M with local communities	Sascha Schiøtt	
	C & M focus on partnerships with Indigenous communities and organizations	Josh Jones, Peter Pulsifer, Matt Druckenmiller, Noor Johnson	
	C & M for Acoustics	Hanne Sagen	
	C & M for Seismology	Jan Michalek	
	C & M for Sea Ice	Ryan Galley	
3:15 - 3:35	Break		
3:35 - 5:00	Open Forum (Facilitated discussion) on C & M		
	Review and synthesize Case Studies	All	- Based on presentations earlier in the day and people's individual experience, what are key opportunities, challenges, methods. etc.?
	Enhance framework for use in Day 2	All	- Enhance a C & M "framework" for application on Day 2, building on preliminary framework provided by Jennifer Walton

17:00	Adjourn		
	Dinner on your own		
Day 2 (2 October 2019)			
	C & M in Practice: Focus on specific case studies of participants. Use C & M framework to apply to specific case studies. Objective is to create actual C & M strategy and materials for each case study. See Background and Outline of Methods for Participants above		
	Case Study: Marine Acoustics	Hanne Sagen; Torill Hamre	
	Case Study: Sea Ice	Ryan Galley, (Jennifer Walton)	
10:30 - 10:50	Break		
10:50 - 12:15	Case Study: Community-based research	Josh Jones, Sascha Schiøtt, Peter Pulsifer, Noor Johnson, Matthew Druckenmiller	
12:15 - 1:30	Lunch		
1:30 - 3:15	Case Study: Seismology	Jan Michalek	
3:15 - 3:35	Break		
3:35 - 5:00	Peer review.	All	Entire group critiques the results for the day. Mock "Press Conference" or other kind of C & M activity [Note: We have a link to the school of environmental journalism. Could bring students in to act as peer reviewers]
5:00	Adjourn		
7:00	Group Dinner (Location TBD)		
Day 3 (3 October 2019)			
	Synthesis and Product Planning		
09:00 - 10:30	Teaching and learning modules for use in teaching environments		

	Special issue on C & M for research		
10:30 - 10:50	Break		
10:50 - 12:15	UAK Meeting - Planning for next phases of UAK	All	
12:15 - 1:30	Lunch		
1:30 -	Free time to explore Boulder. Suggested activities: ● Tour Downtown Boulder (https://www.boulderdowntown.com/) ● Hike at the Colorado Chautauqua National Historic Landmark (https://www.chautauqua.com/) ● Rent a B-Cylcle (https://boulder.bcycle.com/) and tour Boulder bike paths (https://bouldercolorado.gov/goboulder/bike) ● More suggestions will be posted here before the workshop		

Participants

Last Name	First Name	Organization	Country	Role	Attendance Status
Sandven	Stein	Nansen Centre	Norway	UAK Partner	Confirmed
Murray	Maribeth	Arctic Institute of North America, U. of Calgary	Canada	UAK Partner	Confirmed
Pulsifer	Peter	NSIDC, University of Colorado	USA	UAK Partner	Confirmed
Iversen	Lisbeth	Nansen Centre	Norway	UAK Partner	Confirmed (Day 1)
Galley	Ryan	University of Manitoba	Canada	UAK Partner	Confirmed
Sorensen	Mathilde	University of Bergen	Norway	UAK Partner	Remote
Sagen	Hanne	Nansen Centre	Norway	UAK Partner	Confirmed
Hamre	Torill	Nansen Centre	Norway	UAK Partner	Confirmed
Jones	Josh	IARC	USA	Early Career	Confirmed

Michálek	Jan	University of Bergen	Norway	Early Career	Confirmed
Thuesen	Thomas	University of Bergen	Norway	Early Career	Confirmed
Spiers	Kent	Arctic Institute of North America, U. of Calgary	Canada	Early Career	Confirmed
Schiøtt	Sascha	Greenland Institute of Natural Resources	Denmark/Greenland	Early Career	Confirmed
Johnson	Noor	ELOKA, NSDIC, University of Colorado	USA	UAK Partner	Confirmed
Druckenmiller	Matt	ELOKA, NSDIC, University of Colorado	USA	UAK Partner	Confirmed

Location

The workshop is planned to be held at the **University of Colorado Boulder Student Recreation Centre**

1835 Pleasant St
Boulder, CO 80309, USA

See https://www.colorado.edu/map/ (Menu: Buildings -> Athletics Facilities -> Student Recreation Centre)

Location: 40°00'37.4"N 105°16'10.0"W
See also Google Maps location

Accommodations

A block of hotel rooms has been reserved at:

Best Western Plus Boulder Inn
770 28th Street
Boulder, CO 80303
303-449-3800 ph

303-402-9118 fx

There are several ways to make a reservation:

Online code:
https://www.bestwestern.com/en_US/book/hotel-rooms.06103.html?groupId=X11CD4H6

Phone code:
call 800-233-8469 and reference code " Useful Arctic Knowledge Workshop "

- Arrival Date: Monday, September 30, 2019
- Departure Date: Thursday, October 3, 2019
- Group Rates: $149 for a room with one King bed
- Method of reservation: Guests will make own reservations and guarantee with individual credit cards.

NOTE THAT RESERVATIONS MUST BE MADE BY 30 August 2019 TO GUARANTEE THE RATE.

Property Description

Prominently located directly across from CU, the Boulder Inn gives guests easy access to the city's principal attractions, premier shopping, and fabulous dining. Stylish, well-appointed rooms reflect a gracious ambiance, found throughout the hotel.

During your visit, enjoy our complimentary hot breakfast, free in-room high speed internet access, 40 inch LCD tvs with 60 HD channels, and 24-hour business center. Relax poolside and watch the sunlight bounce off colorful mountain peaks, or have our staff make a tee time at the nearby Hale Irwin signature golf course. Other guest facilities include hot tub, sauna, fitness facility, and conference center.

Our multilingual staff is well known for exceptional personalized service to both business and leisure guests. Unmatched levels of courtesy and comfort, coupled with the captivating backdrop of the majestic Rocky Mountains, will guarantee your perfect stay.

Check in: 3:00 PM Check out: 11:00 AM

Complimentary hot breakfast served 6:30 AM to 10:00 AM – Includes: scrambled eggs, bacon, sausage, juices, 3 cereals, English muffins, bagels, doughnuts, assorted fresh fruit, and coffee.

Pictures of the hotel are located at http://www.boulderinn.com