

Newsletter – Arctic Safety Centre

2016

The University Centre of Svalbard

December 2016

<http://www.unis.no/arctic-safety-centre>

Number 1

Introduction

A year ago the University Centre in Svalbard received positive news from the Ministry of Foreign Affairs that the funding for developing an Arctic Safety Centre in Longyearbyen was approved.

The mission of the Arctic Safety Centre is to contribute to safe and sustainable human activity in the Arctic.

Our ambition is that the centre shall share this knowledge through education, tailor made courses, guidance of students, industry, residents of Longyearbyen and the arctic society in Svalbard.

Throughout the application phase several partners became part of development of the Arctic Safety Centre, and during the first part of the project period we have included several new collaboration partners

Mandate		 UNIS
The mandate is to establish an arctic safety center in Longyearbyen.		
Background		
The natural environment in the high north is undergoing rapid change while at the same time the interest in presence and economic development in the region has never been greater. As a consequence the need to increased competence and sharing of experience in how to operate in a safe and environmental manner in the high arctic is acute and extremely relevant. Both location of UNIS and years of experience collection related to arctic safety makes Svalbard an excellent location for arctic safety competence center. There is already a demand from several national and international partners for an arctic safety center.		
Objectives	Success criteria	
The purpose is to contribute to as safe and sustainable human Activity in The High Arctic as possible	The natural sciences that is already fully or partly at UNIS E.g. Remote sensing "Best practice" in terms of experience and expertise UNIS has on completion of training of students; also expertise from other partners Communication of roles and responsibilities Safety and risk theory from our partners in mainland institutions.	
Expectations and frame		
Deliver according to agreed deliverables Deliver a product of good quality Establish the project within timeframe Deliver according to agreed budget		
Deliveries		
Courses in safety risk topics Practical safety courses New knowledge and theory and models		
Task owner		
University Center in Svalbard		
Schedule		
Year One:	Kick off, thematic workshops	
Year two:	Pilot courses Development of safety training at field station in arctic How to use scientific observations to achieve increased Arctic safety	
Year three:	Master courses within Arctic Safety, Practical safety courses, safety at field station.	
Users		
Students from mainland, UNIS and other national institutions Industry and organizations Local settlement in LYR		

General progress of the project:

2016 has been a productive year for developing the Arctic Safety Centre.

The project had a kick-off meeting in Longyearbyen 30 March to 2 April, and we registered a very positive interest in participating in this project. A project manager was hired to ensure that the project deliveries were according to agreed milestones and Ann Christin Auestad started working in August 2016.

Communication with partners and identification of possible new stakeholders has been an important part of her work.

The Steering committee for the Arctic Safety Centre has had two meetings during 2016. The picture below is from our last meeting on 7th to 8th of November.



The steering committee: from left: Hanne H. Christensen, Ann Christin Auestad, Fred S. Hansen, Harald Ellingsen, John Guldahl, Morten Rasch, Lars Kullerud, and Thor Bjørn Arlov. (Photo: Inger Lise Næss).

Progress of activities according to milestones:

The project activities have been divided into several different work packages:

- **Risk- and Safety theory**
 - Design of Arctic safety courses for industry, tourism and academia
- **Field safety at Arctic field stations**
 - Pilot course planned for 2019.
- **Integration of natural science observation for improved field safety also using SIOS** (Svalbard Integrated Observation System)
 - Pilot course planned for 2018
- **Develop Longyearbyen to become a 'High Arctic Safety Awareness Society'**
 - Pilot course in 2018

To ensure that the project reaches its goals according to the outlined milestones we have established four workgroups that are responsible to deliver according to list above.

Below is an overview of the course development in the Arctic Safety Centre per December 2016.

Arctic Safety Course Package					
Work group 1		Work group 2		Work group 3	Work group 4
Field Safety in an arctic context <ul style="list-style-type: none"> ➤ Explain the arctic risk factors ➤ Planning/Execution ➤ Decision making ➤ Human Factor ➤ Best practices ➤ Social Science students ➤ 10 ECTS ➤ 6 weeks ➤ Start up 2019 	Preparedness and Response in an arctic context: <ul style="list-style-type: none"> ➤ Community resilience ➤ Risk acceptance ➤ Training and exercises ➤ Crises management and a high degree of uncertainty ➤ Social Science students ➤ 10 ECTS ➤ 6 weeks ➤ Start up 2019 	Operational Challenges and safe operation in the arctic: <ul style="list-style-type: none"> ➤ Human performance ➤ Material behavior ➤ Failure mode ➤ Remote sensing ➤ Forecast of arctic operations ➤ Engineer Students ➤ 10 ECTS ➤ 6 weeks ➤ Start up 2019 	Field Safety at Field Station: <ul style="list-style-type: none"> ➤ Safety course for station managers Manual ➤ Station Managers/Engineers/Natural Science ➤ 10 ECTS ➤ 6 weeks ➤ Start up 2019 	Risk Assessment of Natural Hazards in the Arctic: <ul style="list-style-type: none"> ➤ Bio ➤ Meteorology ➤ Marine ➤ Cryospheric ➤ Geological ➤ Natural Science students ➤ 10 ECTS ➤ 6 weeks ➤ Start up 2020 	Develop Longyearbyen to become a 'High Arctic Safety Awareness Society': <ul style="list-style-type: none"> ➤ Biologic hazards" ➤ Safety course ➤ Avalanche awareness course ➤ Free courses for LYR inhabitants ➤ 2-3 evenings ➤ Start up 2017
Possibility for a Master Theses in Arctic Safety with co-supervisors at UNIS					
Run in shoulder season September-November			TBD	Run January to May	
Tailor Made Safety Courses for Industry and Academia					
Risk Assessment of Natural Hazards in the Arctic:		<ul style="list-style-type: none"> ➤ Bio ➤ Meteorology ➤ Marine ➤ Cryospheric ➤ Geological 	<ul style="list-style-type: none"> ➤ «Etter/Videre utdanning» students ➤ 10 ECTS ➤ 6 weeks ➤ Start up 2020 		

Workgroup 1:

The overall ambition is to establish three master courses within Arctic Safety. We are also planning for the students to complete their master theses in cooperation with their home university in Norway or abroad. The ambition is to build on already established safety theory and combine this with real-life examples, incidents and accidents in an Arctic context.

The group is also planning a conference on Arctic Safety in September 2017 at UNIS.

An adjunct professor and several adjunct associate professors are hired in 20% and 10% positions from the University of Stavanger, NTNU and University of Tromsø. They are hired due to their competence and expertise within the field of Arctic Safety. The group has had good progress and will continue to develop the courses further in 2017.

Workgroup 2:

The overall ambition is to establish a generic safety course for station managers at Arctic field stations. Another task for this group is to produce a HSE manual in this field. The work will be performed in close cooperation with the EU project INTERACT II. Further progress and development of this group will be discussed in January 2017 when the INTERACT II has a Station Managers Forum.

A pilot course is to be planned for 2018 or 2019.

Work group 3:

The ambition in this group is to develop a course, mainly for natural science and engineering students, that utilize the natural science competence and data collected already at UNIS. This information will be used for both decision-making and planning related to arctic safety. Topics such as meteorology, polar bears and other mammals, diseases (rabies, etc.), avalanches, glaciers, sea ice, permafrost and oceanography will be taught in the course.

A pilot course will be held at UNIS in spring 2018 and the course content was developed during a workshop held in November at UNIS with national and international participants. The working title for the course is “Risk assessment of natural hazards in the Arctic”.

The aim is that the course shall be part of the course portfolio of the Arctic Safety Centre.

Below is a group picture of the workshop participants in November 2016.



From left: Jim Parsons, Aleksey Marchenko, Chris Borstad, Marius Jonassen, Nataly Marchenko, Sarah Strand, Hanne Christiansen, Dominik Lang, Markus Eckerstorfer, Sara Cohen, Ann Christin Auestad, Lena Rubensdotter, Holt Hancock, Graham Gilbert, Mike Retelle, Mads Forchhammer, Abbas Barabadi, Frede Lamo (Photo: Fred S. Hansen).

An adjunct associate professor is hired in a 10 % position for two years to further develop this course in close cooperation with the workgroup and with the other workgroups.

Workgroup 4:

The ambition is to share knowledge between the scientific environment and the local authorities responsible for safety in Longyearbyen.

As a start-up, the Arctic Safety Centre will offer two short pilot courses for the population of Longyearbyen in February 2017.

“Biologic hazards safety course” is one of these courses. The learning outcome is to provide the participants with theoretical and practical knowledge on polar bear, walrus, polar fox and rabies, the

mouse parasite. The course will end with a practical session on use of deterrents and teach defensive behaviour in relation to the same subjects.

The second pilot course will be an ‘‘Avalanche awareness course’’. The course outcome will be increased awareness of avalanches on Svalbard. This course will contain both theory and practical training. The target group is people who are interested in avoiding avalanche prone terrain and understanding what kind of weather and snow conditions, in combination with terrain features, which leads to an increased avalanche danger.

In addition, the group has identified several initiatives that they are looking into:

- Re-establish the «Safety Forum in Longyearbyen»
- Production of safety maps for the population.
- Establish a Polar bear protection group.
- Single point of contact regarding natural hazards
- Increase communication coverage.

Hired Adjunct professors/ Adjunct associate professors:

During this first year we are pleased to introduce these new employees to the Arctic Safety Centre:



Presentations from left to right:

- *Bjørn Ivar Kruke*, Associate professor at University of Stavanger; UiS. His special field is risk management and societal safety. He will be responsible for the course ‘‘Preparedness and response in an Arctic context’’ together with Are Kristoffer Sydnes
- *Markus Eckerstorfer*, Scientific Researcher; Northern Research Institute NORUT. His special field is within physical geography and periglacial geomorphology. He will be responsible for the course ‘‘Risk assessment of natural hazards in the Arctic’’.
- *Eirik Albrechtsen*; Associate professor at Norwegian University of Science and Technology; NTNU. His special field is safety management and accident prevention. He will be responsible for ‘‘Field safety in an arctic context’’.
- *Are Kristoffer Sydnes*, Professor at University of Tromsø; UiT. His special field is societal security, safety and environment. He will be responsible for the course ‘‘Preparedness and response in an Arctic context’’ together with Bjørn Ivar Kruke.
- *Abbas Barabadi*, Associate professor at University of Tromsø; UiT. His special field is engineering science and safety. He will be responsible for the course ‘‘Operational challenges and safe operations in the Arctic’’.

If you have questions, please contact our project manager.

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From all of us to all of you

Merry Christmas and a Happy New Year

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