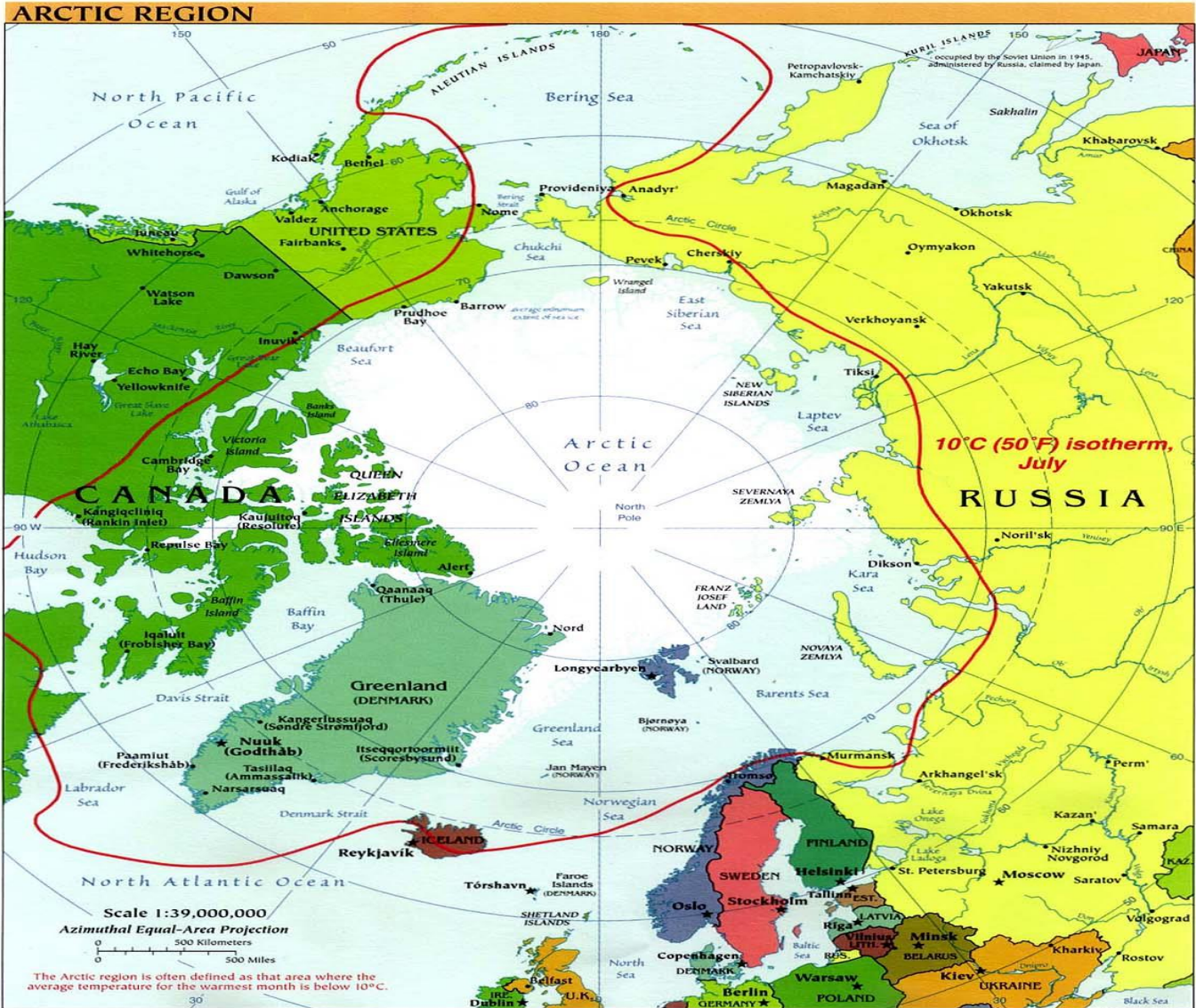


Development and Establishment of an Arctic Safety Centre in Longyearbyen



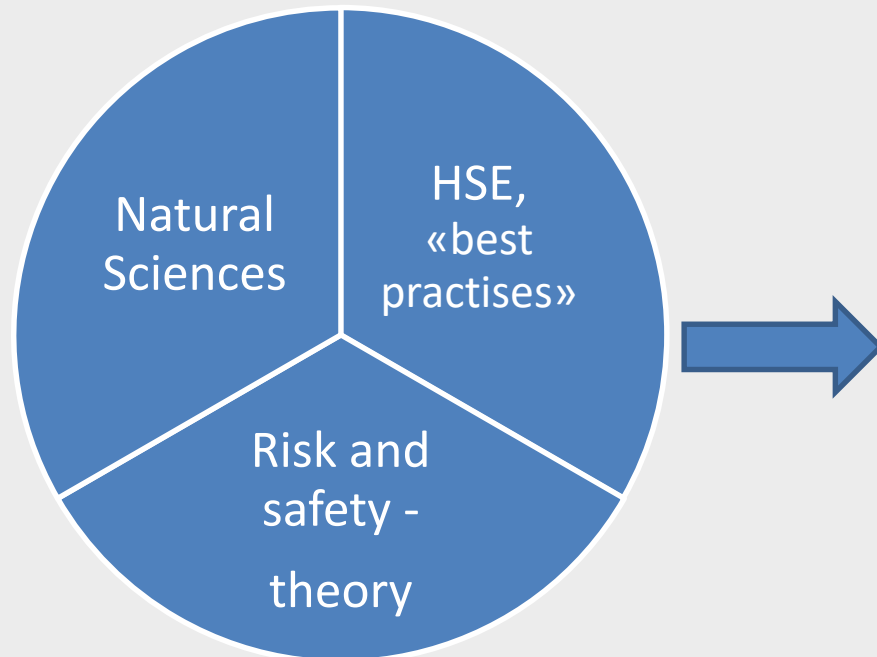
- Goals and Objectives -



Mission/Objectives

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

The ambition is that the Centre shall share this knowledge through education, tailor made courses, guidance of students, industry and residents of Longyearbyen.



Education and Experience transfer

- One year/one semester master studies or courses using natural sciences for improved risk and safety. (60 ECTS)
- PhD courses and projects related to Arctic safety
- Practical, tailor made field safety courses for both academia and industry.
- Practical safety courses for the inhabitants of Longyearbyen.
- Collect, communicate and use relevant field safety data applicable for the region of Svalbard. Give advice and share experience and competence in relation to safe and sustainable presence at Svalbard.

Funding

Ministry of Foreign Affairs

- Courses -



- *AS-302 Risk, Technology and Human Performance in Arctic Operations*
- *AS-303 Safety Management in the Arctic*
- *AS-304 Emergency Preparedness and response in the Arctic*
- **AS-301 'Risk Assessment of Natural Hazards in the Arctic'**

University courses
10 ECTS

-
- **Field Safety at Arctic Field Station**
 - **Tailor made safety courses for industries, tourism and academia**
 - **Biological Hazards «safety course**
 - **Avalanche awareness course**

Tailor made courses

- Master course package Arctic Safety -



AS-301 Risk Assessment of Natural Hazards:

- *Contextualize* Svalbard's spheres and their change in the broader Arctic contexts and *evaluate* the associated hazards and risks.
 - *Recognize* elements in risk theory and risk management and *design* a quantitative risk assessment
 - *Develop* and *execute* a UAV-borne data acquisition campaign
- Weather hazards
 - Slope hazards
 - Bio Hazards
 - Cryo Hazards

AS-302 Risk, Technology and Human Performance in Arctic Operations:

- The course aims to introduce how Arctic operational conditions may affect human and technical equipment performance as well as the resilience of critical infrastructures.
- The course gives an introduction to appropriate models to quantify these effects. In addition, the course provides understanding to support decisions regarding design and operation of technology in the Arctic region.
- The course will be particularly useful for students who specialize in design and planning of different type of activities (e.g. maintenance, emergency evacuation, etc.) for cold regions, especially the Arctic region.

AS-303 Safety Management in the Arctic:

The main focus of the course is prevention of accidents and unwanted occurrences that may lead to loss in the Arctic. The course demonstrates how systematic work with loss prevention should be performed in organizations operating in the Arctic, i.e. by generating knowledge to support decisions about mitigating measures.

- Safety management in the Arctic: theories, models and framework conditions
- Methods and tools for control of hazards in the Arctic:
- Mitigating occupational accident risk in the Arctic.
- Practical management of arctic safety

AS-304 Emergency preparedness and response in the Arctic:

- The particular challenges of the Arctic, such as remoteness, cold climate, long distances, darkness.
- Key characteristics of different types of undesirable events, such as incidents, accidents, crises, emergencies and disasters.
- Key challenges we may face in different types of undesired events, information collection, communication and processing; decision-making; emergency management.
- Understanding of the structure of the preparedness and response systems in the Arctic, with special emphasis on Svalbard.
- International maritime preparedness and emergency management.

Summery:

- First course has been executed June 2018
- 89 applied for the course and 75 were qualified
- 10 Norwegian students and 10 international students
- Multidisciplinary course

Feedback/take always:

- Interesting course with great potential
- Positive with split between practical and theoretical approach related to geo hazards
- Useful field component
- Challenging to develop a multi disciplinary course



- Pilot course “Field Safety Course for Station leaders-



Summary:

- First course has been executed October 2018
- 11 participants
- Different field of expertise
- Main focus were leadership and safety
- Several days in the field
- Modules:
 - Risk theory, roles and responsibilities, natural hazards, first aid, mental challenges in remote areas, motorized transportations, maritime challenges

Feedback/take always:

- Interesting course with great potential
- Positive with split between practical and theoretical approach
- Longer time in the field
- Useful with tabletops, exercises
- More focus on leadership
- Very motivating course



- PhD Projects Arctic Safety -



Arctic Safety and petroleum activities in the Barents Sea

Applicant: Ann Christin Auestad

- This project aims to study preparedness plans and systems related to exploration activities in the Barents Sea. The project will look into the degree to which experiences gained from exploration activities along the coast of Norway are relevant to cover similar activities in the Barents Sea, and study the processes of experience transfer from exploration activities along the Norwegian Continental shelf to exploration operations in the Barents Sea.
- The key research problem will be:
What are the main experiences on preparedness gained from exploration activities along the coast of Norway and how are they influencing the preparedness processes in exploration operations in the Arctic conditions of the Barents Sea?
- Awaiting funding

Role of science in disaster risk reduction decision making processes

Applicant: Hrefna Dögg Gunnarsdóttir

- This project identifies risk management procedures that outline roles and responsibilities of scientists who contribute to disaster risk reduction decision making processes in selected Nordic Arctic communities. Current roles and responsibilities of scientists vis-a-vis the authorities will be mapped. Furthermore, scientists' perceptions of the procedures will be investigated. The project contributes to an ongoing, trans boundary and inter disciplinary dialogue in relation to integration of science in disaster risk reduction. The project provides the selected Nordic Arctic communities with a framework on how risk management procedures can be improved to ensure efficient and timely decision making in face of disasters.
- The key research problem will be:
If risk management procedures outlining the role and responsibilities of authorities and scientists who provide theoretical and practical expertise in disaster risk reduction decision making processes in selected Nordic Arctic communities can be improved to ensure efficient and timely decision making in face of a disaster?
- Awaiting funding

- Approved research projects and possibilities -



Approved research projects

INTERACT

- Partner in INTERACT II project that has the overall objective to provide a geographically and excellent infrastructure of terrestrial research stations in the Arctic.

Pre-project:

- Safe and sustainable presence in the nature at Svalbard
- From tacit knowledge to experience transfer.

NORUSS Project:

- Risk reduction in the high North
- Budget 2 Millions; UNIS; 200 000 NOK

SARex3:

- Full-scale exercise regarding IMO code
- Gap between rescue equipment and requirements

Risk Workshop:

- Perception and Evaluation of Risk in the Arctic
- Workshops X2

Mosaic project:

- Deliver safety course to researchers and crew

Research possibilities

Resilience Assessment and Management

- Toward a resilient tourism infrastructure in the Arctic”.
- Scope of the project is maritime tourism activities (cruise ships and local operator) in the North Atlantic region (Greenland, Iceland, Faroe, Norway including Svalbard) with possible future extension to other Arctic countries.

Tacit knowledge to experience transfer

- The project shall have experience transfer as overall goals.
- The project has a potential to increase the quality of tourism reputation.
- A application will be sent to “Svalbard Miljøvern fond” for funding to a larger project .

- Activities planned -



Arctic Frontiers

- Poster presentation

Workshops

- Experience transfer AS 301

Arctic Safety Conference

- The aim of the conference is to bring multidisciplinary experts together for sharing experience, new findings and best practises for safety in the Arctic. The ambition for the conference is to advance in the understanding and management of risk, safety and reliability in an Arctic context. The conference address technological, human and societal aspects of arctic safety
- The time for the conference is 13-15th of May 2019.
- The conference venue will be at the University Centre in Svalbard.

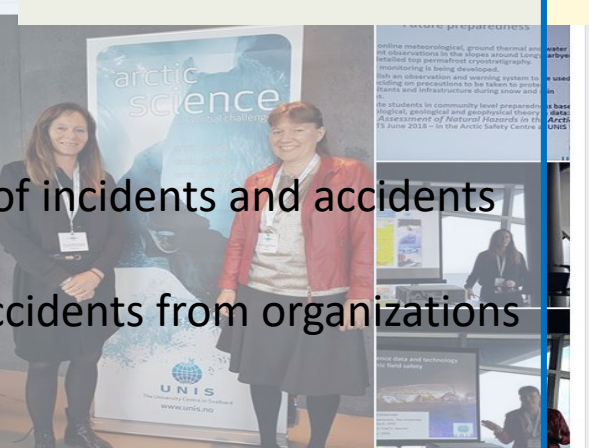
Part time/Continuing education

- The ambition of the course is to increase awareness and understanding regarding prevention of incidents and accidents in the Arctic.
- The course will give the students a systematic approach towards prevention of incident and accidents from organizations operation in Arctic conditions.
- The decision-making process is an important part of the course.
- Combination of practical knowledge of Arctic operations and theoretical foundations regarding safety has a strong focus throughout the course.



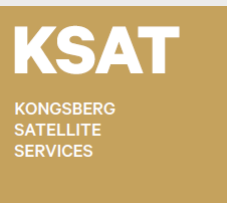
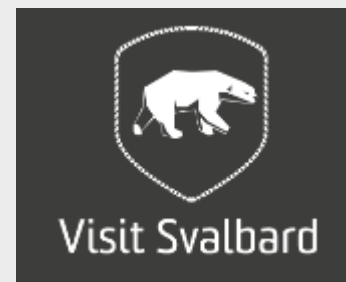
Arctic Safety Centre, som nå etableres ved UNIS, er med på å sikre Norges sin posisjon i Arktis, skriver Christin Kristoffersen. (Foto: Bent

Kronikk: Forskning kan styrke Norge på Svalbard



Arild Olsner har lagt til 4 nye bilder — sammen med Ann Christin Auestad
UNIS var tilstede på Artic Circle i Reykjavik og presenterte Arctic Safety Centre.
Et spennende konsept, som trekker til seg internasjonal oppmerksomhet.
Takk til Ann Christin Auestad og Hanne Hvidtfeldt Christiansen for at de setter Longyearbyen på kartet med kunnskapsbasert sikkerhet. Et konsept som har vært i seg til å bli en egen næringsvei for Longyearbyen.
Fred Skancke Hansen

- Partners -



Thank You!

- Web page
 - <http://www.unis.no/resources/arctic-safety-centre/>
- Facebook
 - <https://www.facebook.com/arcticsafetycentre/>



Skaper arktiske sikkerhetsstudier

I 2019 kan Unis vokse med mastergradstudie i arktisk sikkerhet. Kursene lages nå.

SVAlBARDPOSTEN.NO