Svalbard Science Conference 2025: Svalbard as an Arctic hotspot for climate change and international cooperation

28-29 October 2025, Quality hotel Expo, Fornebu, Oslo

Preliminary program

Tuesday 28 October: Plenary sessions

The three plenary sessions will be organised around a keynote speaker (invited), several talks of 8 min each followed at the end by 15 min questions and panel discussion with the session's participants and a moderator. We invite abstracts on integrating the Svalbard region in a wider context with special focus on pan-Artic system, inter-disciplinary approaches and wider time frames (historical and future).

1. **Strategies for the next International Polar Year (IPY-5)**
   The next IPY is planned for 2032-2033. Many climatic changes are happening faster than previously predicted and the most serious consequences are linked to the unprecedented changes in polar areas. How can the next IPY contribute to close major knowledge gaps through collaborative efforts? How can research in Svalbard contribute to these goals?

   Keywords: circumpolar, interdisciplinarity, International Arctic Science Committee, research funding, research planning needs, co-production, international cooperation

2. **Svalbard in a pan-Arctic context**
   Svalbard is an important platform for research and higher education, as well as for international cooperation. Svalbard has a unique location in the Arctic and is the starting point for a number of research activities, including national and international collaborative expeditions. How does research carried out in Svalbard contribute to our understanding of polar environments? How does the community of Svalbard compare to other Arctic communities?

   Keywords: pan-Arctic ecosystem, global earth system, hot-spot for climate change, energy transition for Arctic communities, sustainable livelihood for Arctic communities, international relations

3. **Managing risks in a changing Arctic**
   With the striking effects of climate change in the Arctic comes a variety of associated risks. Natural hazards have effects on societal security which requires risk management strategies at a variety of levels. How can different Arctic regions contribute to each other's long-term risk mitigation strategies? Can the Svalbard community contribute to climate adaptation measures and more resilient Arctic societies?

   Keywords: societal security, preparedness, climate change adaptation, natural hazards, housing, extreme climate events, geopolitics

4. **Science-to-policy: challenges and opportunities for Arctic science - Debate**
   In this session we will invite several panelists with diverse backgrounds to discuss their views on bringing science to policy and society. We wish to foster discussions on creating engagement in civil society. No abstracts are required for this session.

Wednesday 29 October: Parallel sessions

Parallel sessions are more topic-oriented and include several oral presentations (8 min presentation + 2 min questions). To encourage interdisciplinarity, we invite all research fields in all sessions.

1. **New technologies and methods: how can they benefit polar science?**
   Innovative technologies and techniques enable scientists to make huge advances in knowledge and understanding. We observe the Earth from space, from beneath the ice and deep in the ocean. We integrate and model large volumes of data in new, creative frameworks. What are these newly developed tools and how can they contribute to polar science?

   Keywords: technological innovations, new approaches and methods, artificial intelligence, environmental DNA, integrated modelling effort, remote sensing, digital twins

2. **Coast and fjords as systems in change**
   Arctic coastal zones are changing following the rates of change of the cryosphere affecting biodiversity, local communities, livelihoods, and other ecosystem services. Which changes in the land to sea interface are critical to understand? How can these socio-ecological systems be managed in the light of rapid climate changes?

   Keywords: land to sea interface, socio-ecological systems, ice meets the ocean, glacier calving, erosion, freshwater discharge, adaptation to changing coasts and fjords

3. **The increasing footprint of anthropogenic activities**
   The Arctic ecosystem has experienced low anthropogenic disturbance for decades. Warming has increased the accessibility of sea and land in this region, leading to development of human activities. How can we understand where and what kind of human activities take place and how to ensure sustainable development?

   Keywords: soundscapes, lightscapes, laws and regulations, research as an anthropogenic activity, environmental protection, sustainable tourism, transport

4. **Climate resilience of Arctic settlements**
   Changes in sea ice, snow cover, lake and river ice, and permafrost will affect economy, infrastructure, health, livelihoods, culture, and identity. Advancing sustainable development and improving environmental, economic and social conditions of Arctic communities is key to ensure the management of these fragile regions. What can be learnt from current Arctic settlements to contribute to their resilience to climate change?

   Keywords: cultural heritage, tourism infrastructure, green transition, resilient societies, societal security, adaptation to climatic changes

5. **Unstable ground: Instabilities in the solid and frozen earth**
   Deepening and accelerating permafrost thawing is linked to ground instability, and carbon release to the atmosphere. This puts ecosystems, infrastructures and activities in the Arctic at risk. How can we tackle these challenges at local and regional scales?

   Keywords: permafrost, methane leaks, geohazards, hydrogeological processes, cryosphere, biogeochemistry, erosion, governance and management of permafrost challenges

6. **Svalbard in transformation: from seasonal variability to long-term trends**
   August 2024 marked the third record-breaking summer in Svalbard. In the near-future, Svalbard will likely experience significant changes such as intense rainfall events, greater river flows, shorter snow season, permafrost thawing and intense sea ice loss. How will these changes affect ecosystems and human activities in the archipelago? How does this situation translate to other Arctic regions?

   Keywords: water cycle, changes, effects and adaptation, seasonal dynamics, ocean, atmosphere, cryosphere, interaction, monitoring, heatwaves, Arctic amplification, social and ecological consequences

Other sessions

A polar bear ate my zodiac
We have all been there; something, some things, nothing worked out as planned…..

As a recurrent feature of the Svalbard Science Conference this fast-moving mini session explores the unexpected. Take the chance to get your 3 minutes of fame. It can be related to anything extraordinary; wild animals or colleagues, equipment or experiments that did not work out exactly as their description said, weather or vessels not cooperating as you wanted. Present your 3 minutes story however you wish, for example with 3x3 pictures or with a video. What can we all learn from your story? How to avoid troubles in the future or how to have a good laugh together?

Art and science session
Climate science often involves complex data that can be difficult for non-experts to grasp. Art—whether visual, musical, literary, or performative—translates this information into forms that are more intuitive and emotionally compelling. Art has the power to evoke emotions; fear, joy, hope, urgency, or inspiration—that raw data alone may not. Emotional engagement is crucial for motivating people to care about climate change and act. While scientific papers and reports often reach policymakers and academics, art can engage a broader audience, including those who may not typically seek out scientific information.

We will invite several artists to present their outlook on Svalbard, Arctic science and climate change through unusual lenses.

Poster session
Posters will be accessible throughout the whole conference with three dedicated sessions to meet the presenters.