

MISTRA ARCTIC FUTURES IN A GLOBAL CONTEXT

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Mistra Arctic Futures in a Global Context

What is the challenge?

The Arctic and its people are facing major challenges. Climate change is already dramatically affecting the Arctic, where signs of other environmental impacts are also clear. New technological developments are expected to further increase man's direct impact on the region. Sweden – one of the eight members of the Arctic Council – bears important responsibilities for international collaboration on the future of the Arctic. In addition, Sweden, like all other Arctic countries, must adapt and actively address the changes that are underway, both regionally and locally.

Environmental disruption is presenting Arctic communities with both dangers and possibilities. In the wake of these lie socio-economic changes and new political ambitions. The consequences can be of widely varying character, running the full range from local to international levels. Natural resources that were once deemed inaccessible are now potentially valuable assets, causing increased focus on geopolitical questions. Shrinking sea ice creates new potential transportation routes for shipping. This development is of great economic and political interest, not only to the Arctic countries but to countries outside the Arctic region as well. At the same time, people and organizations from around the world want to protect the Arctic landscape, animals and nature.

How can the Arctic Futures programme contribute to a solution?

The changes taking place in the Arctic require society to stand ready for new and varied challenges. A broad and strong knowledge base, powerful and flexible tools, and insightful dialogue between many different stakeholders are required. The five projects included in Arctic Futures can contribute by showing how society can act and respond to new conditions in the Arctic.

The Arctic Futures programme is funded by the Foundation for Strategic Environmental Research (Mistra), and hosted by the Swedish Polar Research Secretariat.





PREPARING FOR AND RESPONDING TO DISTURBANCE:

Arctic lessons for Sweden

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The project *Preparing for and responding to disturbance: Arctic lessons for Sweden* is grounded in an understanding that both climatic and socio-economic change strongly influence the Arctic region. The Swedish part of the Arctic is largely comprised of boreal forest, including industries such as forestry, and significant infrastructure. Economic changes, and disruptions resulting from storms, flooding and forest insect pests, are expected to increase as a result of globalization and climate change. Such changes have implications for both industry and the public sector.

Researchers participating in this research project are evaluating how different types of disruption – in the socio-economic sphere and in relation to climate change – may influence the northern regions of Sweden. Particular emphasis is being placed on analyzing the development of policy and crisis preparedness in response to events that have

already taken place, both in Sweden and, comparatively, other Arctic countries, and how preparedness could be strengthened. Comparative studies of the ways in which countries have responded to forest pest outbreaks, and how the forest industry has dealt with economic crises, are being developed. The researchers are preparing an edited book on how municipalities are responding to increased risk of flooding. Publications are also being developed jointly with other ongoing research efforts, for example on Sweden's Arctic policy and on the impacts of globalization in northern areas.

The aim of this project is to improve our knowledge base in order to better support policy development, and to increase society's ability to respond to future change. The study is being performed in collaboration with project partners at the University of Saskatchewan in Saskatoon, Canada, and the University of Lapland in Rovaniemi, Finland. The research is intended to support sub-regional municipalities and counties concerned with crisis response as well as industry and policymakers.

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ASSESSING ARCTIC FUTURES:

Voices, resources and governance

Sverker Sörlin and Nina Wormbs, the Division of History of Science, Technology and Environment, Royal Institute of Technology, Stockholm

The debate regarding the future of the Arctic is heated, and statements describing what lays before us seem convincing and without much room for interpretation. But this is not the first time. Predictions regarding the future of the Arctic – often enthusiastic but at times foreboding – were formulated throughout the entire 20th century. The questions raised in this project explore the people behind those predictions, how the descriptions they anticipated were formulated – against a background of contemporary political, economic, scientific and ideological contexts – and how they were heard.

We are interested in the multitude of voices in the continuous construction of visions of Arctic futures. Whose interest had the most influence during different historical periods? What do different people mean by “positive” development in the Arctic? What were the processes by which certain voices were heard and others not? When, how and why were the voices of certain actors silenced and others amplified? And what can we learn from these historical processes in looking at the production of visions of Arctic futures today?

We believe that one important result will be an improved understanding of why certain actors obtain the power of formulating dominant visions of the future, which others then feel obliged to pursue. By attempting to apply methods from, for example, technology assessment we aim to develop tools with which proposed visions of Arctic futures can be assessed. We believe that such tools can offer decision

makers a more comprehensive understanding of the consequences of different paths.

The project is based at the Royal Institute of Technology in collaboration with the European University at St. Petersburg and the Stockholm Environment Institute. Most of the project participants are historians with expertise in the history of science, technology and the environment. Experts in international relations are also involved.

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ARCTIC GAMES:

Interactive development and application of a transdisciplinary framework for sustainable governance options of Arctic natural resources

Tore Söderqvist and Gerda Kinell, Enveco Environmental Economics Consultancy Ltd., Stockholm

Stakeholder disputes in the Arctic are expected to increase as a result of growing pressure to exploit a range of natural resources, due to their increasing accessibility. The challenge is to find compromises that are compatible with sustainable development. In the project Arctic Games, an interdisciplinary framework is being developed that combines game theory, theories on governance of natural resources, and environmental economics for the purpose of evaluating governance options for the Arctic's future. This combination of social sciences enables the identification of players, strategies and payoffs, taking into account present and changed institutional conditions as well as the economic values of natural resources, including ecosystem services in the Arctic.

The framework is being developed through a case study of natural resource issues in the

Lofoten-Barents sea area, for which several potential futures are being formulated and analyzed. One such potential future is focused on issues related to oil exploration and extraction. In addition to providing new knowledge to decision makers and stakeholders (such as oil industry and fisheries), the researchers also aim to deliver a framework that will be useful to researchers and other actors in assessing sustainable governance options.

This international project is also strengthening Swedish Arctic research, through the participation of doctoral students and researchers at Swedish universities.

The project is being carried out in collaboration with: the Centre for Economic and Financial Research at the New Economic School in Moscow; the Division of Environmental Strategies Research at the Royal Institute of Technology in Stockholm; EnviroEconomics Sweden in Umeå; the Northern Research Institute in Tromsø; the Department of Economics at Stockholm University; and the University of Nordland in Bodø.

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FROM RESOURCE HINTERLAND TO GLOBAL PLEASURE PERIPHERY?

Assessing the role of tourism for sustainable development in Arctic communities

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Tourism could become an important industry in the circumpolar regions and contribute to regional development in a broad sense. Preconditions for such development are being created by better access to Arctic destinations as a result of climate change and improved infrastructure, not least catering to resource

exploitation. However, the recent increase in interest in Arctic tourism poses a number of challenges to sustainable development. While tourism represents an economic opportunity, further development of Arctic tourism also risks destroying the tourist industry's own base of attraction, by contributing to climate change and environmental degradation. Nevertheless, tourism development is one of few livelihood alternatives for local communities – and not least indigenous peoples – that otherwise risk losing their traditional livelihoods, for example, owing to climate change. Furthermore, efforts to protect nature, such as the establishment of national parks, have created new attractions for Arctic tourism.

The aim of this project is to analyze the role of tourism in sustainable regional development of Arctic and sub-Arctic communities. An important task within the project is to analyze tourism development through an Arctic tourism innovation systems lens. We aim to interlink social, economic, institutional, cultural and regulatory settings and consider context-specific entities and communities. Special attention is being given to system failures in relation to other economic sectors, such as mining, in order to identify mechanisms that can contribute to more successful overall development. Three countries – Sweden, Russia and Canada – are being examined, enabling the research to benefit from in-depth individual case study and comparative approaches.

The project is a collaborative effort involving researchers at Umeå and Dalarna Universities. The research team maintains links to research communities in Russia and Canada as well. The research outputs are expected to contribute a sound knowledge base for decision makers and tourism developers planning tourism development in northern destinations.

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SIPRI ARCTIC FUTURES:

Managing competition and promoting cooperation

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Increasing accessibility to the Arctic presents new challenges and opportunities in a number of different arenas. Fashioning political and security arrangements to manage the transformation of the region in peaceful and cooperative ways will be critical with the opening of the Arctic. The Arctic is coming into its own as a distinct sub-region in an increasingly globalized world, and is frequently the subject of power projections from a variety of actors, both within and outside of the region. The region is also frequently used by the Arctic nations to evoke a sense of national identity and pride that may be utilized domestically for political purposes.

SIPRI's project, *Arctic Futures: Managing competition and promoting cooperation*, will examine the challenges emerging around

these key issues by asking questions such as: What implications does the opening of the Arctic have for European security and for existing regional governance frameworks? How should the interests of Arctic and non-Arctic states be balanced? What are the domestic interests that drive the Arctic states' policy towards the region?

By continuing the SIPRI tradition of building confidence and sharing knowledge, the research and activities carried out under the project will reduce the risk of harmful misunderstandings and suspicions relating to the region, providing benefits to Arctic and non-Arctic actors alike. The project will engage SIPRI's unique network, extending through Europe and North America to Northeast Asia, and will include a permanent presence in Beijing, China. The aim of the project is to produce policy-relevant research and build new Arctic expertise in Sweden and abroad. As with SIPRI's other activities, the project is intended to provide data, analysis and recommendations to policymakers, researchers, media and the public.

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