

Stakeholders, Scenarios, And Sustainable Futures Within And Beyond The Arctic

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As the Arctic regions undergo rapid changes ranging from melting of sea ice cover and permafrost to fish stock movements to shifting polar weather patterns, opportunities have increased for economic growth driven by demand from many non-Arctic regions for Arctic fossil fuel and mineral resources. This ongoing transformation involves substantial opportunities for growth in some regions and certain sectors and simultaneously great ecological, social, and economic risks. This raises the two central questions in the work I will discuss:

How can we engage a broadly diverse set of stakeholders and rights-holders¹ living and working in different levels and sectors of society both within and beyond the Arctic in making better-informed and more effective decisions on paths toward a more sustainable future for the Arctic?

How can we best develop and use scenarios in full collaboration with stakeholders and rights-holders to suggest options and clarify tradeoffs and consequences for better decision-making that can lead towards more sustainable futures in the Arctic?

I will focus on the strategies, methods, and preliminary steps in our objective of collaborating effectively with diverse stakeholders in our IASS Arctic project, called SMART (Sustainable Modes of Arctic Resource-driven Transformations and global interconnections). Our aim is first of all to understand the interdependence and feedback processes within and among Arctic regions and with non-Arctic regions. To do this we are working in close collaboration with a wide range of Arctic stake- and rights-holders, including those with stakes in the Arctic, but who are located in non-Arctic regions. The latter includes agencies, corporations, and organizations, such as in the six countries - China, India, South Korea, Singapore, Japan, Italy - who became observers in the Arctic Council in 2013.

Secondly, our aim is to produce stakeholder-relevant scenarios as effective tools for decision-making for sustainable futures at multiple levels and scales of governance and facilitate their use by stakeholders. This is intended to contribute to "socially transformative science" through engagement of stakeholders throughout the research process and to strengthen "science-policy bridges" by co-designing options for decisions and action with stakeholders. In this process, we aim to facilitate the identification and use of positive incentives and levers for changes to more sustainable policies and practices.

Even before describing more about the SMART project, I want to highlight important links between the aims and processes of ILEK and SMART. In addition to the common strong focus on local stakeholders, their knowledge, and their relationship with environmental science, both projects seek to find solutions to local problems in a global context and facilitate their transformative effect on the relevant communities.

Our geographic focus is on the Eurasian Arctic (Norway and western Russia), as well as on the feedback loops and interdependencies between the Arctic and

¹ The term "stakeholder" means individuals and institutions that have personal, economic, or cultural interests in a particular situation or might be able to influence the situation, as well as those who are affected or influenced by conditions or changes in conditions. I will use the term stakeholder to also represent rights-holders - i.e., people who have rights or legal status by virtue of being members of indigenous peoples' groups.

regional/global systems as mentioned above. We are working with researchers and institutions, who are focused on other regions of the Arctic, but due to the economic dependence of Russia and Norway on exploitation of Arctic fossil fuels, the Eurasian Arctic is likely to remain an area of continuing expansion in resource exploitation.

This economic dependence on Arctic resources is in contrast to the situation in the US and Canada, which have on-shore and non-Arctic oil and gas fields that are being exploited more easily than in Arctic areas at this time. Potentially this could change due to changes in economic or political conditions, so with our partners, we will continue to monitor closely the relationship between Eurasian and American Arctic resource developments, not only because this could change quite substantially with consequent major changes in the Arctic, but also because it is part of the global interdependencies that are central to the SMART project.

The SMART project is inter- and trans-disciplinary. Our collaboration among researchers at IASS and partner institutions includes colleagues with expertise in law, philosophy, natural sciences, and social sciences. The transdisciplinary process entails a process of developing strong collaborations among researchers and the diversity of Arctic stake- and rights-holders. In the current early stages of this multi-year project, a significant portion of our efforts have been and will continue to be directed toward identifying and mapping characteristics of diverse stakeholder groups and engaging with individuals from these groups to establish trust and good working relationships. Among the stakeholder groups, we want to include those who have not been recognized or included thus far among stakeholder interactions and mutual learning opportunities.

We have held workshops and meetings with stakeholders in St. Petersburg and Moscow, Russia and in Potsdam, Germany. The stakeholders in these workshops and meetings plus those with whom we are developing collaborations include the following:

Russia:

Russian Academy of Sciences Institute of World Economy and International Relations

Geocon, a Russian Gas and Oil Industry consulting company

Higher School of Economics in Moscow

Nansen International Environmental And Remote Sensing Center (NIERSC), St. Petersburg

Greenpeace, Russia

World Wildlife Fund, Russia

Reindeer Herders' Association of the Nenets Autonomous Okrug

Principal advisor of the Russian State Duma Energetics committee and vice-president of The Russian Union of Industrialists and Entrepreneurs

USA: Carnegie Mellon University, Center for Climate and Energy Decision Making, Department of Engineering and Public Policy

Norway: Fridtjof Nansen Institute

Germany: Alfred Wegener Institute for Polar and Marine Research

Switzerland/Canada: International Institute for Sustainable Development

What has come out of these workshops and meetings has been an expanding network of contacts with stakeholders, valuable information about the economic, political, and social conditions in the Arctic regions of interest, and very importantly, the establishment of a degree of trust with several key individuals. We plan to conduct more detailed meetings and interviews in the coming six to nine months with stakeholders in Russia, Japan, China, Germany, Iceland, Finland, and Norway.