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ABSTRACT

Arctic maritime activities in changing climatic conditions: Impacts on local community

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This study emphasizes the direct and indirect linkages of climate change impacts on coastal communities' well-being and adaptation in the Barents region. The people living in the Arctic have through history adapted to high variability in weather and environmental conditions. However, the interaction of climatic change with other on-going socio-economic processes and changes in the Arctic can have indirect and cascading effects on coastal communities and create new challenges for adaptation.

One of the examples of such indirect impact is the increasing ship traffic due to sea ice retreat. A limited number of studies describe opportunities and challenges of such development for coastal Arctic communities. The extension of the navigable season brings new economic opportunities to the region in terms of resource development, trade, new tourist destinations and provides a less expensive transport of goods and services to the coastal communities. At the same time more access to imported goods and possible trade with local natural resources (e.g. berries, mushrooms, fish, and reindeer) may affect the traditional socio-economic conditions adding new challenges to indigenous communities that are already exposed to climatic, environmental, demographic and economic changes. Daily sea-ice variability and unpredictable weather conditions coupled with the lack of well-developed guidelines for polar shipping and Just–In–Time (JIT) features of the delivery system (ships being pressed for time to deliver) increases the probability of shipping accidents. This presents new human security challenges.

Accessing those interconnecting effects of climate change will help us to better understand how coastal communities handle and adapt to current and projected changes.