



NUNATARYUK: Permafrost thaw and the changing Arctic coast. Science for socio-economic adaptation

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Abstract

NUNATARYUK is a H2020 project that investigates the impacts of thawing coastal and subsea permafrost on the global climate, and develops targeted and co-designed adaptation and mitigation strategies for the Arctic coastal population

Keywords: Permafrost, Climate Change, Impacts, Coast, Community engagement

Introduction

Most human activity in the Arctic takes place along permafrost coasts. These coasts have become one of the most dynamic ecosystems on Earth because permafrost thaw is now exposing them to rapid change: change that threatens the rich biodiversity, puts pressure on communities that live there and contributes to the vulnerability of the global climate system.

The project

Aims

NUNATARYUK is a H2020 project that investigates the impacts of thawing coastal and subsea permafrost on the global climate and develops targeted and co-designed adaptation and mitigation strategies for the Arctic coastal population. NUNATARYUK brings together world-leading specialists in natural science and socio-economics to:

- (1) develop quantitative understanding of the fluxes and fates of organic matter released from thawing coastal and subsea permafrost;
- (2) assess what risks are posed by thawing coastal permafrost, to infrastructure, indigenous and local communities and people's health, and from pollution;
- (3) use this understanding to estimate the long-term impacts of permafrost thaw on global climate and the economy.

Key numbers

NUNATARYUK involves 28 partners in 12 different countries. It is funded with 11.5 M€ for the 2017-2022 period. It is focused on three focal areas in the Arctic: The East Siberia Area, the Nordic Area (Greenland and Svalbard) and the Beaufort Sea Area. NUNATARYUK is guided by a Stakeholders' Forum of representatives from Arctic coastal communities and indigenous societies, which will create a legacy of collaborative community involvement and a mechanism for developing and applying innovative evidence-based interventions to enable the sustainable development of the Arctic.