

# Response of Arctic tundra ecosystem and carbon cycle to climate change

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## Related International Research Project

[ITEX \(International Tundra Experiment\)](#), [IASC-GCTE](#),  
[FATE\(Feedbacks and Arctic Terrestrial Ecosystems\)](#)

## Description of the Program

Current global warming predictions indicate that warming will be more pronounced at high latitudes in the Northern hemisphere. Since 1994, we have been studied the vegetation change, quantitative estimation of the carbon flow among the atmosphere, plant and soils at glacier foreland in both regions of Ny-Alesund, Svalbard (79°N) and Ellesmere Island (82°N). The aims of the project are to study the biological response to environmental change in the glacier foreland, and to understand the pattern of the carbon

cycle (light-, water-, and temperature- photosynthetic responses, potential net primary production).