

Metadata Details

Title

Mass balance and dynamics of selected glaciers of Spitsbergen, Svalbard.

Science Keywords

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|-----------------|---------------------|
| Category | Cryosphere |
| Topic | Glaciers/Ice Sheets |
| Expedition Year | 2017-2018 |
| ISO Topic | Atmosphere |

Summary

Abstract

The basic approach for this study is field experiments and data collection from the selected glaciers (Feiringbreen and Vestre Broggerbreen at Spitsbergen, Svalbard) by monitoring mass balance, energy balance. The study may also be expanded in future based on the feasibility and value addition. 1. Mass Balance: Direct glaciological methods will be used to measure the surface mass balance of both the proposed glaciers. Mass balance will be also calculated with the help of satellite imageries. Satellite data in the form of InSAR, ASTER and other compatible images will be used for preparing the Digital Elevation Model and precise calculation of vertical and horizontal variations of the glaciers surface, ELA , AAR including terminal will be measured to calculate the mass balance. 1.1 Ice flux: Ice flux will be calculated by help of glacier velocity and ice thickness. Glacier surface flow velocity will be calculated by collecting accurate coordinated of well distributed installed stake.

Purpose

The basic approach for this study is field experiments and data collection from the selected glaciers (Feiringbreen and Vestre Broggerbreen at Spitsbergen, Svalbard) by monitoring mass balance, energy balance. The study may also be expanded in future based on the feasibility and value addition. 1. Mass Balance: Direct glaciological methods will be used to measure the surface mass balance of both the proposed glaciers. Mass balance will be also calculated with the help of satellite imageries. Satellite data in the form of InSAR, ASTER and other compatible images will be used for preparing the Digital Elevation Model and precise calculation of vertical and horizontal variations of the glaciers surface, ELA , AAR including terminal will be measured to calculate the mass balance. 1.1 Ice flux: Ice flux will be calculated by help of glacier velocity and ice thickness. Glacier surface flow velocity will be calculated by collecting accurate coordinated of well distributed installed stake.

Data Center