GEUS

Improving the logistic and scientific collaboration in Greenland

USA – Greenland Research and Educational Workshop
Nuuk, August 27-28, 2018

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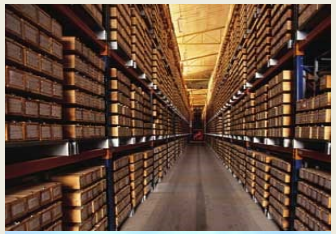
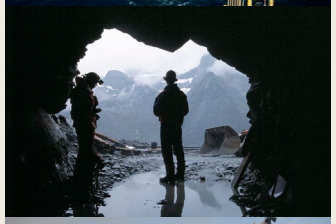
GEUS Nuuk
c/o Greenland Institute of Natural Resources

Geological Survey of Denmark and Greenland
Danish Ministry of Energy, Utilities and Climate

Resources for life





Databanks
- National databases on water, oil and gas, minerals and environment
- National core store

Water resources
- National groundwater monitoring for clean drinking water
- National groundwater mapping and hydrological modelling

Energy resources
- Hydrocarbon potential in Danish and Greenland sectors
- Geothermal energy, ground source heating and geological storage of CO_2

Mineral resources
- Geological and mineral resource evaluation in Greenland
- Geological mapping and exploration for raw materials in Denmark

Nature and Climate
- Paleoclimate and monitoring of earthquakes and Greenland ice sheet
- Coastal zone management and soil pollution

International Development Activities
- Building expertise in Africa, Asia and South America

Dissemination and education 2017

Long-Term knowledge building

Articles in international journals	198
Other scientific publications	43
Abstracts or posters at conferences	106

Running projects, Advisory

Public reports	49
Confidential reports	27
Notes, memoranda, statements	50

General dissemination

Institutional reports	5
Popular scientific dissemination	56

Education

Ph.D. students with GEUS tutors	44
Completed Ph.D. degrees	11

Use of GEUS web

Visits at www.geus.dk	805.000
Use of GEUS' web map services	248.000

GEUS Nuuk

- 3 employees
- Logistical hub
- Permits
- Contacts and a large network in all Greenland
- Contact to experts in Denmark (earthquake, meteorites, landslide etc.)
- Public outreach (Culture night, public presentations, education etc.)
- Involved in several research project (e.g. UpDeep)
- Ad hoc member of the Greenlandic Operational Staff (Grønlands Beredskabsstab)

Logistic

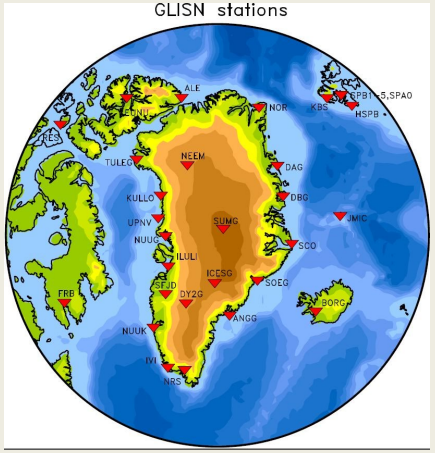
- GEUS is one of the largest operators in Greenland
- We operate in all parts of Greenland
- Contributor to Isaaffik – the Arctic gateway, www.isaaffik.org

2018

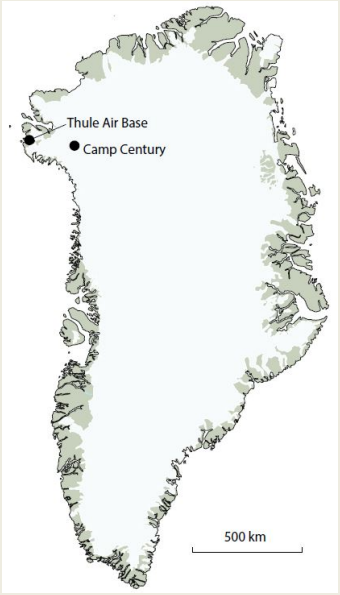
- More than 15 different projects in Greenland
- More than 50 GEUS researchers in the field
- More than 20 non-GEUS researchers in the field on GEUS-projects
- From more than 12 different institutions

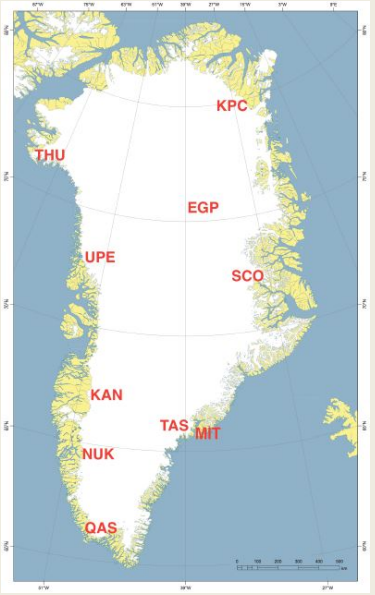
Selected research projects

- **GLISN – Greenland Ice Sheet Monitoring Network**
  - www.GLISN.info
  - 11 countries, 13 institutions (US: IRIS and LDEO Colombia University, DK: GEUS)



- **PROMICE – Programme for Monitoring the Greenland Ice Sheet**
  - www.PROMICE.org
  - Collaboration with different international institutions (US: CIRES)

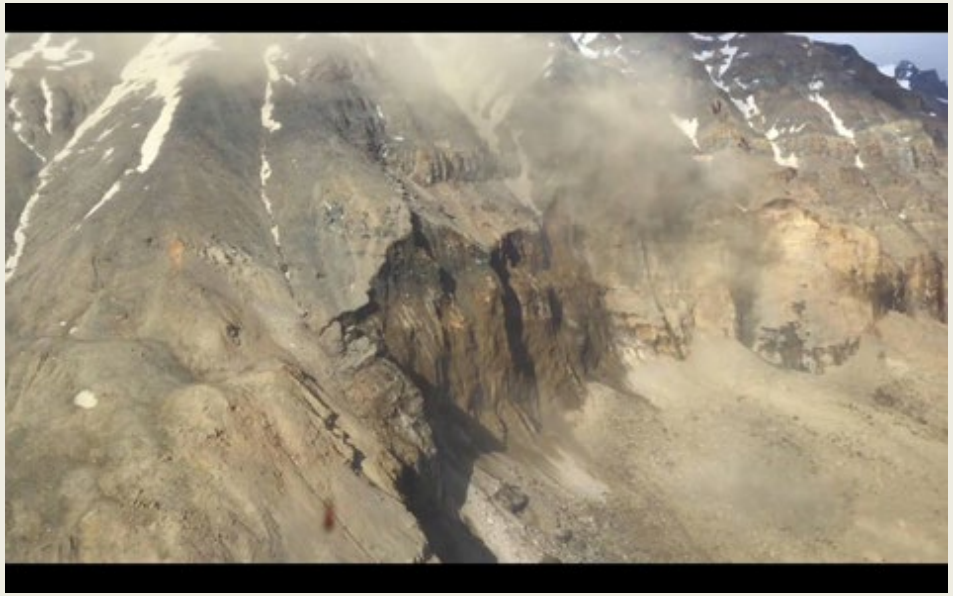




- **Camp Century**
  - www.campcenturyclimate.dk

Satellite and remote sensing

- **Digital Elevation Model**
- **Satellite data**
  - Spectral data
  - Magnetic data
  - Gravimetric data
- **Remote Sensing data**



Karrat Fjorden, June 2017 Photo: Arctic Command

Screening analysis of risk of serious landslides in Greenland

Forward looking

- Closer dialogue and coordination regarding logistic operations – can Isaaffik be used for this
- Seismological stations
- Automatic Weather stations
- Better access to satellite and remote sensing data
- But also regarding the marine environment and other areas …

Thank you

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