DOKIPY – Svalbard

Data set title: Engelskbukta

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Sediments
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Fluvial Landforms/Processes
- Oceans
  - Coastal Processes
    - Beaches, Lagoons, Sedimentation
  - Marine Sediments
    - Sedimentation, Terrigenous Sediments

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Data centre

NGU

Contact person

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Summary

Surface sediments were sampled at eight sites in and around the Engelskbukta Bay, NW Svalbard (approx. N 78°50’30’’ E 11°50’55’’ to N 78°48’50’’ E 11°54’30’’) within the SciencePub-project in 2008. Data consist of results from optically stimulated luminescence analyses. Photos have been used for outreach activities, such as popular science talks and blogs.

Data set title: Kiærsvika

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Radiocarbon, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Models
- Geologic/Tectonic/Paleoclimate Models

Data centre

NGU

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Summary

Coastal cliff sections at Kiærsvika on Brøggerhalvøya, Spitsbergen (at N 78°55’25’’ E 11°25’00’’) were investigated in 2008 within the SciencePub-project. The central data are descriptions of sediments and stratigraphic successions exposed in the up to 27 m high coastal cliffs. Analytical data from the sediments include sediment petrographic composition, clast shape and properties, directional

elements, macrofossil content, water content, optically stimulated luminescence age and radionuclide activity. The data has been used to reconstruct depositional environments, glacier/ice-sheet dynamics and sea-level change during the last c. 200 000 years. Photos and other documentation have been used for outreach activities, such as popular science talks and blogs.

Data set title: Kongsfjordhallet

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Radiocarbon, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes, Fluvial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Beaches, Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Models
- Geologic/Tectonic/Paleoclimate Models

Education/Outreach
- Exhibit Materials, Curriculum Support

Data centre

NGU

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Summary

An area at the northern shore of Kongsfjorden, Svalbard was investigated in 2007, 2008 and 2009 within the SciencePub-project. The studied area stretches from Kap Guissez in the northwest to Austneset in the southeast but most work was carried out at Kongsfjordhallet (approx. N 79°01'40'' E 11°52'30'') and at Tønsneset (approx. N 79°00'40'' E 11°57'20''). The central data are descriptions of sediments and stratigraphic successions exposed in the up to 45 m high coastal cliffs, including 4926 m of ground penetrating radar profiles, as well as geomorphological/geological maps of the area. Analytical data from the sediments include sediment petrographic composition, clast shape and properties, directional elements, macrofossil content, water content, optically stimulated luminescence age and radionuclide activity. A few macrofossils (marine molluscs, whale bones) have been dated by AMS radiocarbon dating and/or electron spin resonance dating. Boulders along a transect from the coast up unto the Knølen mountain have been sampled for cosmogenic exposure dating. The data has been used to reconstruct depositional environments, glacier/ice-sheet dynamics and sea-level change during the Quaternary, particularly the Late Quaternary. Outreach data include one short movie, one slide show and a website about outreach through digital storytelling. Photos and other documentation have been used also for other outreach activities, such as popular science talks and blogs.

Publications:

Brandsborg E F & Larsen K B. 2007: *Arbeidsplass: 79° nord Geologer på tokt.* Movie available at http://statisk.umb.no/info/film/svalbard.wmv

Brandsborg E F & Larsen K B. 2008: *Fortell om forskning*. Website at http://www.jbi.hio.no/FoU/FoF/

Brandsborg E F & Larsen K B. 2008: *Steinene som kunne snakke*. Slideshow available at http://www.jbi.hio.no/FoU/FoF/eksempel.html

Peterson G. 2008: *The development and relative chronology of landforms at Kongsfjordhallet, Spitsbergen*. Bachelor thesis K-15, Department of Physical Geography and Quaternary Geology, Stockholm University, Sweden.

Svensson J. 2009: *Beach processes and recent sea-level changes at Tönsneset, Kongsfjorden, northwestern Spitsbergen*. Bachelor thesis KG-2, Department of Physical Geography and Quaternary Geology, Stockholm University, Sweden.

http://sciencepub.blogg.no/

Data set title: Kvadehuksletta

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Radiocarbon, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes, Fluvial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Beaches, Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Models
- Geologic/Tectonic/Paleoclimate Models

Data centre

NGU

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Summary

Kvadehuksletta on northern Brøggerhalvøya, Spitsbergen was investigated in 2007 and 2008 within the SciencePub-project. The main data are 28.74 km of ground penetrating radar profiles of the central part of the plain (our base was at N 78°57’03’’ E 11°28’32’’). There are also descriptions of

sediments and stratigraphic successions exposed in small sections / river cuts. Analytical data from the sediments include sediment petrographic composition, clast shape and properties, directional elements, macrofossil content, water content, optically stimulated luminescence age and radionuclide activity. A few fossil marine molluscs have been identified to family/species level and dated by AMS radiocarbon dating and/or electron spin resonance dating. The data has been used to reconstruct depositional environments, sea-level change and glacier/ice-sheet dynamics during the Late Quaternary. Photos and other documentation have been used for outreach activities, such as popular science talks and blogs.

Data set title: Leinstranda

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Radiocarbon, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Models
- Geologic/Tectonic/Paleoclimate Models

Data centre

NGU

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Summary

Coastal cliff sections at Leinstranda on Brøggerhalvøya, Spitsbergen (N 78°52’54’’ E 11°33’24’’) were investigated in 2007 and 2009 within the SciencePub-project. The central data are descriptions of sediments and stratigraphic successions exposed in the 30 m high coastal cliffs, including 3381 m of ground penetrating radar profiles. Analytical data from the sediments include sediment petrographic

composition, clast shape and properties, directional elements, macrofossil content, water content, optically stimulated luminescence age and radionuclide activity. Macrofossils, particularly marine molluscs, have been identified to family/species level and dated by AMS radiocarbon dating and electron spin resonance dating. The data has been used to reconstruct depositional environments, glacier/ice-sheet dynamics and sea-level change during the last c. 200 000 years. Photos and other documentation have been used for outreach activities, such as popular science talks and blogs.

Publications:

Alexanderson H, Landvik JY & Ryen HT. in press/online: *Chronology and styles of glaciation in an inter-fjord setting, northwestern Svalbard.* Boreas.

Alexanderson H, Funder S, Landvik JY, Molodkov A & Murray AS. in revision: *Absolute chronology of Middle and Late Quaternary high relative sea-level events on NW Svalbard – a case study*. Quaternary Geochronology.

Data set title: McVitiepynten

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Data centre

NGU

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Summary

Coastal cliff sections at McVitiepynten on Prins Karls Forland, Svalbard (between N 78°51’24’’ E 10°53’25’’ and N 78°51’11’’ E 10°53’53’’) were studied in 2008 within the SciencePub-project. The data include descriptions of sediments and stratigraphic successions together with optically stimulated luminescence ages and radionuclide activity of mainly raised shallow marine sediments. Photos and other documentation have been used for outreach activities, such as popular science talks and blogs.

Data set title: Poolepynten

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Data centre

NGU

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Summary

Coastal cliff sections at Poolepynten on Prins Karls Forland, Svalbard (between N 78°27’03’’ E 11°40’02’’ and N 78°27’07’’ E 11°39’30’’) were studied in 2008 within the SciencePub-project. The data include descriptions of sediments and stratigraphic successions together with optically stimulated luminescence ages and radionuclide activity of mainly raised shallow marine sediments. Photos and other documentation have been used for outreach activities, such as popular science talks and blogs.

Data set title: Stuphallet

Parameters (Category – Topic – Term – Variable)

Earth Science
- Paleoclimate
  - Land records
    - Glaciation, Macrofossils, Sediments, Stratigraphic Sequence
  - Paleoclimate reconstructions
    - Sea Level Reconstruction
- Land Surface
  - Geomorphology
    - Coastal Landforms/Processes, Glacial Landforms/Processes
  - Soils
    - Soil Moisture/Water Content
- Oceans
  - Coastal Processes
    - Sedimentation
- Terrestrial Hydrosphere
  - Glaciers/Ice Sheets
    - Glaciers, Ice Sheets

Locations

Geographic Region
- Arctic

Ocean
- Atlantic Ocean
  - North Atlantic Ocean
    - Svalbard And Jan Mayen

ISO topic category

Environmental Advisories
- Geological Advisories

Models
- Geologic/Tectonic/Paleoclimate Models

Data centre

NGU

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Summary

Coastal cliff sections at Stuphallet on Brøggerhalvøya, Spitsbergen (at N 78°58’00’’ E 11°35’00’’) were investigated in 2008 within the SciencePub-project. The central data are descriptions of sediments and stratigraphic successions exposed in the up to 30 m high coastal cliffs. Analytical data from the sediments include clast properties, directional elements, macrofossil content, water content,

optically stimulated luminescence age and radionuclide activity. The data has been used to reconstruct depositional environments, glacier/ice-sheet dynamics and sea-level change during the last c. 200 000 years. Photos and other documentation have been used for outreach activities, such as popular science talks and blogs.

DOKIPY Svalbard NGU

- *Data set title:* **Braganzavågen**
- *Parameters*
- **Cryosphere > Seasonally Frozen Ground**
- **Land Surface > Erosion/Sedimentation > Stratigraphic sequence, sediments, sedimentation**
- **Land Surface > Geomorphology > Coastal landforms/processes**
- **Paleoclimate > Ocean/lake record > boreholes, sediments**
- **Oceans > Coastal processes > Sedimentation, Intertidal zone**
-
- *Location*

- **Geographic Region: Arctic**
- **Continent> Europe> Northern Europe > Scandinavia > Norway**
-
- *ISO topic category*

- **Environmental Advisories > Geological advisories**
- **Models > Geologic/Paleoclimate Models**
-

- *name of data center* **Geological Survey of Norway (NGU)**
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- *Summary*

The Braganzavågen site is located in Svalbard at Van Mijenfjorden. The study aims at understanding the tidal flat dynamics in a cold modern setting and evaluate its potential for paleoenvironmental reconstructions. A total of sampled 7 sediment-tubes (max 1 m length), 10 samples for modern foraminifers, 1 sample (algae identification), 35 samples for grain-size distribution at the surface of the tidal flat. GPS coordinates of the sampling locations are included in the report.

The Charsovo section (Russia, Site N°06023, UTM: 39W 479565 6874739) was investigated in 2006. Available data are stratigraphic descriptions and OSL samples for dating. Locations of the samples are provided on the stratigraphic description. Dating results are included in the data set.

Data set title: **NP05-11-21GC**

Parameters

Paleoclimate > Ocean/Lake Records >Microfossils
Oceans > Marine Sediments > Sediment Chemistry

Location: Ocean > Atlantic Ocean > North Atlantic Ocean > Svalbard

ISO topic category

Environmental Advisories > Marine Advisories > Ocean Temperature
Environmental Advisories > Marine Advisories > Marine Biology

-

Data center : **Geological Survey of Norway (NGU)**

Contact person

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Summary

Core NP05-11-21GC in the inner part of Kongsfjord trough (79º03`N; 11º05`E) was collected at 327 m water depth. The core is 516 cm long. The core has been logged (MSCL) followed by visuel description and x-rayed, and a sedimentologic log was compiled. After subsampling the core has been analysed for the content of benthic and planktic foraminifera, and stable isotopes (carbon and oxygen) and ice iafted debris, and detailed sedimentologic properties. The chronology of the core is based on ten AMS dates.

Data set title: **NP05-11-71GC**

Parameters

Paleoclimate > Ocean/Lake Records >Microfossils
Oceans > Marine Sediments > Sediment Chemistry

Location: Ocean > Atlantic Ocean > North Atlantic Ocean > Svalbard

ISO topic category

Environmental Advisories > Marine Advisories > Ocean Temperature
Environmental Advisories > Marine Advisories > Marine Biology

Data center : **Geological Survey of Norway (NGU)**

Contact person

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- *phone (work)* +47 77 75 06 53

Summary

Core NP05-11-71GC in the northern part of the Barents Sea (9°35N, 31°53E) was collected at 360m water depth. The core is 469 cm long. The core has been logged (MSCL) followed by visuel description and x-rayed, and a sedimentologic log was compiled. After subsampling the core has been analysed for the content of benthic and planktic foraminifera, and stable isotopes (carbon and oxygen) and sedimentologic properties. The core was investigated for the content of diatoms (93 samples) but samples were barren. The chronology of the core is based on five AMS dates.

Data set title: **Surface sediment samples NP07-13-08 to NP07-13-64** (40 samples in total)**.**

Parameters

Biological Classification > Plants> Microalgae> Dinoflagellates
Biological Classification > Protists> Amoeboids> Foraminifers
Oceans > Marine Sediments > Sediment Chemistry

•

Location: Ocean > Atlantic Ocean > North Atlantic Ocean > Svalbard

•

ISO topic category

Environmental Advisories > Marine Advisories > Ocean Temperature
Environmental Advisories > Marine Advisories > Marine Biology

Data center –**Geological Survey of Norway**

Contact person

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▪

Summary

40 surface sediment multicore samples were collected in the two areas close to Svalbard (Kongsfjorden and Hinlopen through) (south-north: 78°34'N – 80°30´N, west-east: 10°40´E – 18°50´E) by R/V Lance from water depths between 109 and 453 m. The multicore samples were subsampled with 0.5 cm and 1.0 cm intervals down to 5 cm. The samples will be analysed for the content of living benthic foraminifera (Rose Bengal and ethanol mix used for preserving and staining), a suite of grain size parameters (e.g., grain size, source rocks of IRD) and for various lipid analyses and organic carbon measurements.

Data set title: **Surface sediment samples NP08-16-10 to NP08-16-64** (38 in total).

Parameters

Biological Classification > Plants> Microalgae> Dinoflagellates
Biological Classification > Plants> Microalgae> Amoeboids> Foraminifers
Oceans > Marine Sediments > Sediment Chemistry

•

Location: Ocean > Atlantic Ocean > North Atlantic Ocean > Svalbard

•

ISO topic category

Environmental Advisories > Marine Advisories > Ocean Temperature
Environmental Advisories > Marine Advisories > Marine Biology

Data center **Geological Survey of Norway**

Contact person

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- *phone (work)* +47 77 75 06 53

▪

Summary

38 surface sediment samples were collected in Kongsfjorden-Krossfjorden, Svalbard (south-north: 78°52'N – 79°17´N, west-east: 09°40´E – 14°24´E) by R/V Lance from water depths between 109 and 378 m. The multicore samples were subsampled with 0.5 cm and 1.0 cm intervals down to 5 cm. The samples will be analysed for the content of living benthic foraminifera (Rose Bengal and ethanol mix used for preserving and staining), a suite of grain size parameters (e.g., grain size, source rocks of IRD) and for various lipid analyses and organic carbon measurements..

Data set title: **Surface sediment samples NP09-13-01 to NP09-13-27** (total 25 surface sediment samples)

Parameters

Biological Classification > Plants> Microalgae> Dinoflagellates
Biological Classification > Plants> Microalgae> Amoeboids> Foraminifers
Oceans > Marine Sediments > Sediment Chemistry

•

Location: Ocean > Atlantic Ocean > North Atlantic Ocean > Svalbard

•

ISO topic category

Environmental Advisories > Marine Advisories > Ocean Temperature
Environmental Advisories > Marine Advisories > Marine Biology

◦ Data center – holding center for the data, can only be one

Name of data center: **Geological Survey of Norway**

Contact person

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Summary

25 surface sediment samples were collected in Kongsfjorden-Krossfjorden and Hinlopen through, Svalbard (south-north: 78°54'N – 79°17´N, west-east: 10°39´E – 12°24´E) by R/V Lance from water depths between 105 and 371 m. The multicore samples were subsampled with 0.5 cm and 1.0 cm intervals down to 5 cm. The samples will be analysed for the content of living benthic foraminifera (Rose Bengal and ethanol mix used for preserving and staining), a suite of grain size parameters (e.g., grain size, source rocks of IRD) and IP25 and organic carbon measurements..