

SCAR WG-GGI NATIONAL REPORT

Report of Current Activities of Finland for 1998-2000

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The following Finnish organizations / institutes have developed working programmes to conduct research or operational work in the Antarctic in the field of Geodesy, Photogrammetry and Remote Sensing.

- Finnish Geodetic Institute

1. FIELD ACTIVITIES

1.1. Geodetic Surveys

none

1.2. Remote Sensing (Helsinki University, Department of Geophysics)

a) Radarsat images were used and ground truth measurements were performed at several sites in Western Dronning Maud Land. The quantities were density, temperature, crystal size, permittivity, electric conductivity and salinity, pH, albedo, and spectral reflectance. In addition, airborne measurements of spectral reflectance were carried out. The measurements are part of the project "Seasonal snow in Antarctica" (season 1999/2000).

1.3. Gravity Surveys (Geological Survey of Finland)

a) Gravity was measured on 200 km of profiles between Vestfjella and Heimefrontfjella in Western Dronning Maud Land. Positions were determined by GPS. The measurements were a part of a geophysical survey, aimed to study conditions at the ice sheet base and in bedrock. In addition to gravity, magnetic and electromagnetic "SAMPO" measurements were made. (season 1997/1998).

2. MAPPING ACTIVITIES

2.1 Topographic Mapping: *none*

2.2 Thematic Mapping : *none*

3. GEOGRAPHIC INFORMATION ACTIVITIES

3.1 Digital Datasets: *none*

3.2 GIS Established: *none*

4. SCIENTIFIC PAPERS PUBLISHED / PRESENTED

Ruotoistenmäki T. and J. Lehtimäki: *Analysis of flow parameters of continental ice and permafrost geometry in underlying bedrock using geodetic and geophysical ground measurements on glaciated terrain in Queen Maud Land, Antarctica*. Presented at: 8th International Symposium on Antarctic Earth Sciences 5-9th July, 1999, Wellington, New Zealand (Abstract and poster).

Rasmus K. and E. Kärkäs: *Some ideas on the factors affecting the Antarctic albedo*. Presented at: 8th International Symposium on Antarctic Earth Sciences 5-9th July, 1999, Wellington, New Zealand (Abstract and poster).

5. PLACE NAMES

5.1 *zero (0)* place names have been approved and submitted to the Composite Gazetteer of Antarctica in the past two years.

6. GROUND CONTROL POINT LIBRARY

6.1 The status of Ground Control Point Libraries - what work has been done on ground control points in the past two years.

none

7. PLANNED ACTIVITIES FOR THE NEXT TWO YEARS

7.1. Geodetic Surveys (Finnish Geodetic Institute)

a) A GPS observation campaign will be carried out in the international framework of the SCAR 2001 Epoch GPS Campaign at Wasa (Western Dronning Maud Land).

b) Absolute measurement of gravity will be performed at Aboa (Western Dronning Maud Land). This is a repeat of the 1994 measurement.

7.2. Remote sensing (University of Helsinki, Department of Geophysics)

a) The work described in 1.2.a) will continue during the season 2000/2001

7.3 Topographic Mapping

none

7.4 Geographic Information Activities

none