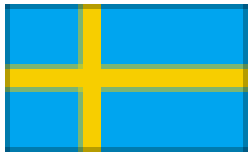


National Report of Sweden

- geodetic activities at Lantmäteriet

M Lidberg, C-G Persson, L Engberg, A Engfeldt, L Jivall,
B Jonsson, R Svensson, J Ågren, D Klang & D Norin

EUREF Symposium Brussels

June 18-21 2008

SWEPOS

LANTMÄTERIET

Contents

- SWEPOS (GNSS infrastructure)
- Introduction of New Reference Frames (SWEREF 99 & RH 2000)
- Absolute Gravity Program
- New National Digital Elevation Model (DEM)

SWEPOS

LANTMÄTERIET

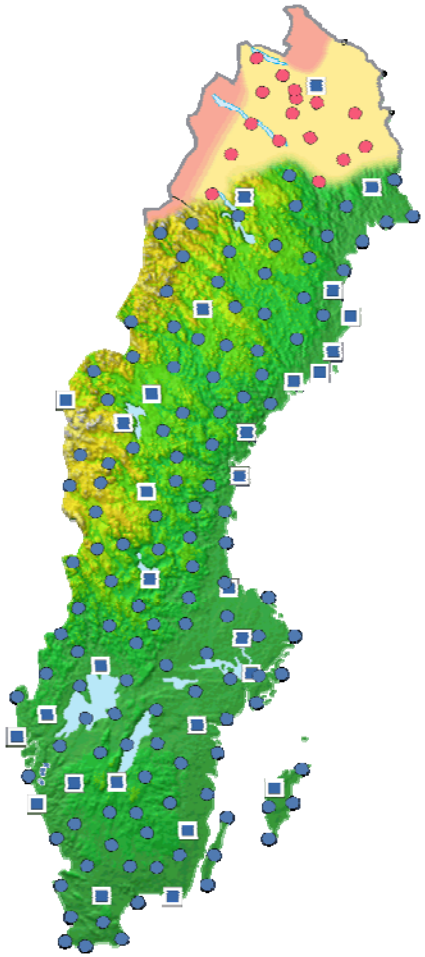
SWEPOS

- Currently 161 stations (June 2008)
  - 21 original SWEPOS sites
  - 32 on bedrock (incl. the original)
  - 7 EPN
  - 6 real time streaming to EUREF-IP
- Dual-frequency GPS/GLONASS receivers on all SWEPOS stations
- Lantmäteriet operates the NKG EPN LAC (47+2 sites June 2008)
- SWEPOS is the foundation for SWEREF 99 (ETRS89 in Sweden)

SWEPOS

LANTMÄTERIET

SWEPOS Network RTK Service



- Passed 1000 subscriptions! (June 16, 2008)
  - Trend: increased use in machine guidance and precision navigation
- Distribution using GSM & GPRS
- The “yellow area” will be completed in 2009
- Users within the “pink area” are directed to SWEPOS' automated post-processing service
- Further info: www.swepos.com

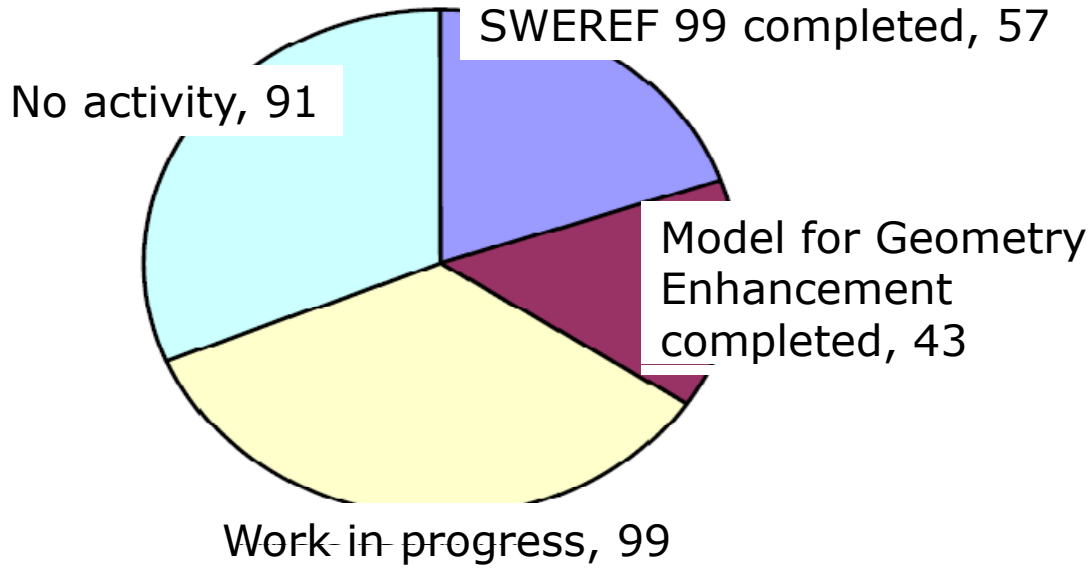
SWEPOS

LANTMÄTERIET

New reference frames

Implementation at the national level

- In January 2007, RT 90 was replaced by SWEREF 99 in databases and production lines at Lantmäteriet - and new map sheet divisions and a new index system were adopted
- Island of Gotland connected to RH 2000, combining tide gauge /oceanographic model, and GPS/levelling/geoid model



Implementation in the municipalities

- 57 (out of 290) have changed to SWEREF 99
- Some 60 have started the process to change to RH 2000 (Swedish EVRS realisation)

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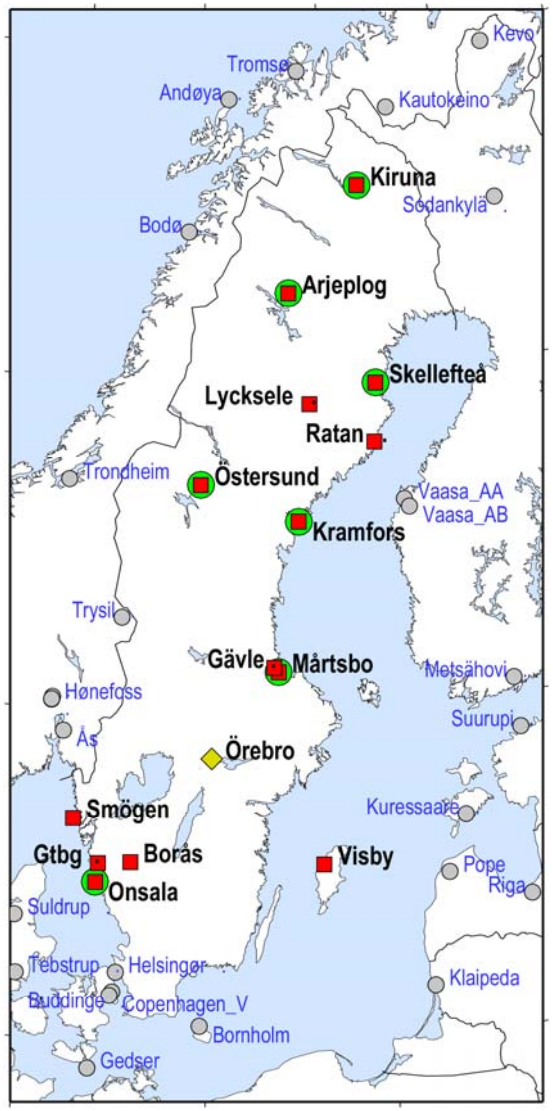
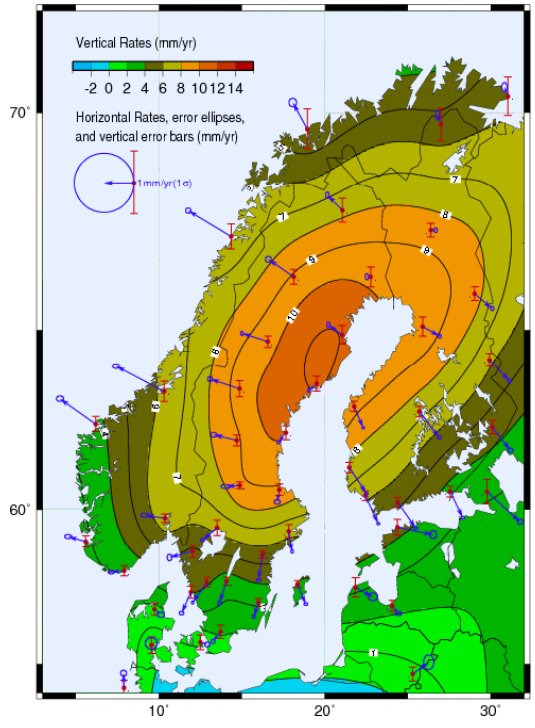
Absolute Gravity Program



- In 2006, a new absolute gravity meter (FG5) was purchased by Lantmäteriet
- Objective is to study the Fennoscandian land uplift
- 7 out of 14 sites have been observed annually since 2003
- Several observing teams, coordinated within NKG w.g. for geodynamics



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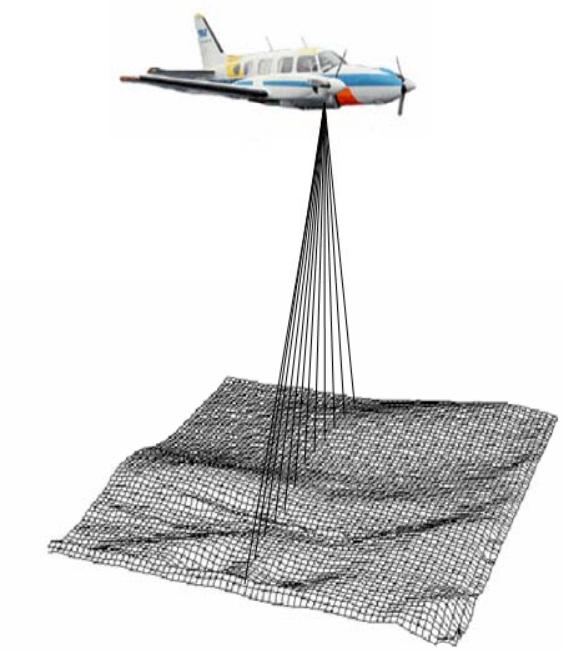
New National DEM



Lantmäteriet, Informationsförsörjning, Geodesi, Martin Lidberg

- Based on airborne laser scanning from ~3000m altitude
- Estimated accuracy 0.5 m (1σ) at 2.5 m grid spacing
- 7 year project (2008-2015)
- 450 000 km^2
- Financing based on governmental founding

SWEPOS

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