National Report of Sweden
geodetic activities at Lantmäteriet

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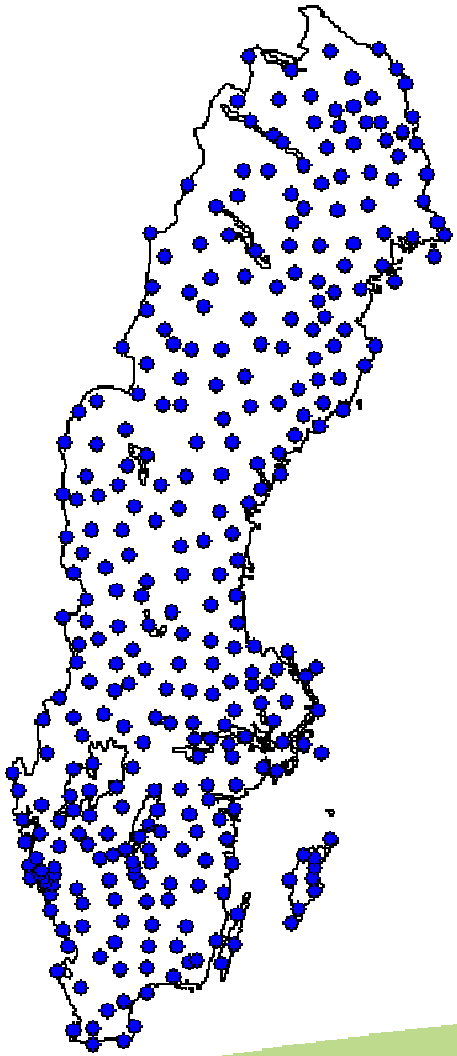
LANTMÄTERIET

New reference frames



Implementation at the national level

- In 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
- In 2005 , RH 2000, the Swedish realization of EVRS was finalised. A systematic inventory/updating of the levelling network is continuously performed

- 300 marks in bedrock (SWEREF-points) are planned to be remeasured in a six year cycle with 50 each year.

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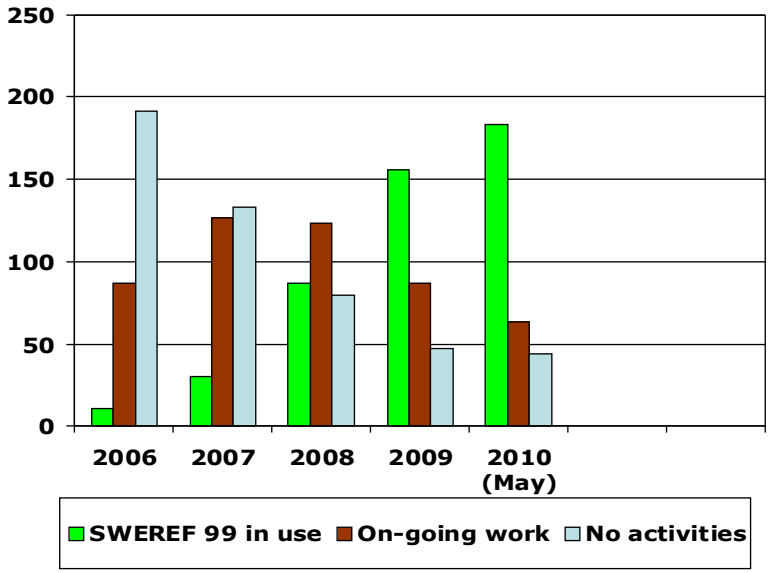
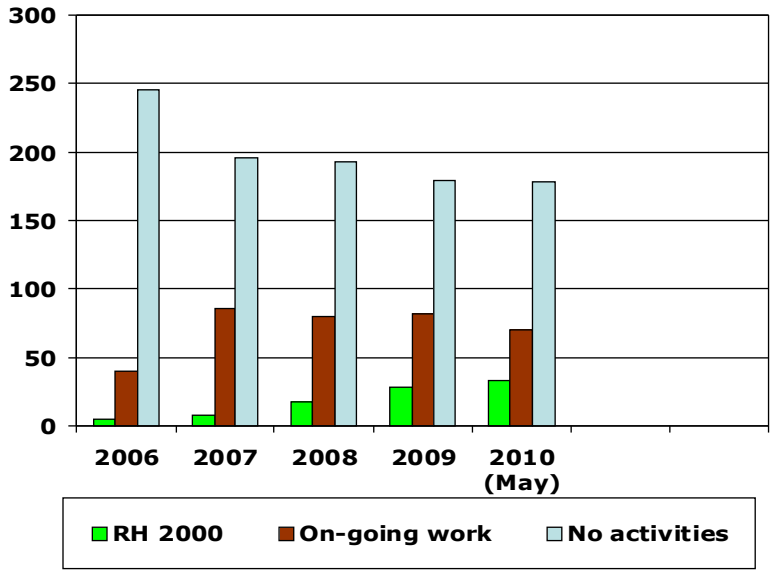
New reference frames

Implementation in the municipalities (May 2010)

- 183 (out of 290) have changed to SWEREF 99 (Swedish ETRS89 realisation)
- 33 (out of 290) have changed to RH 2000 (Swedish EVRS realisation)

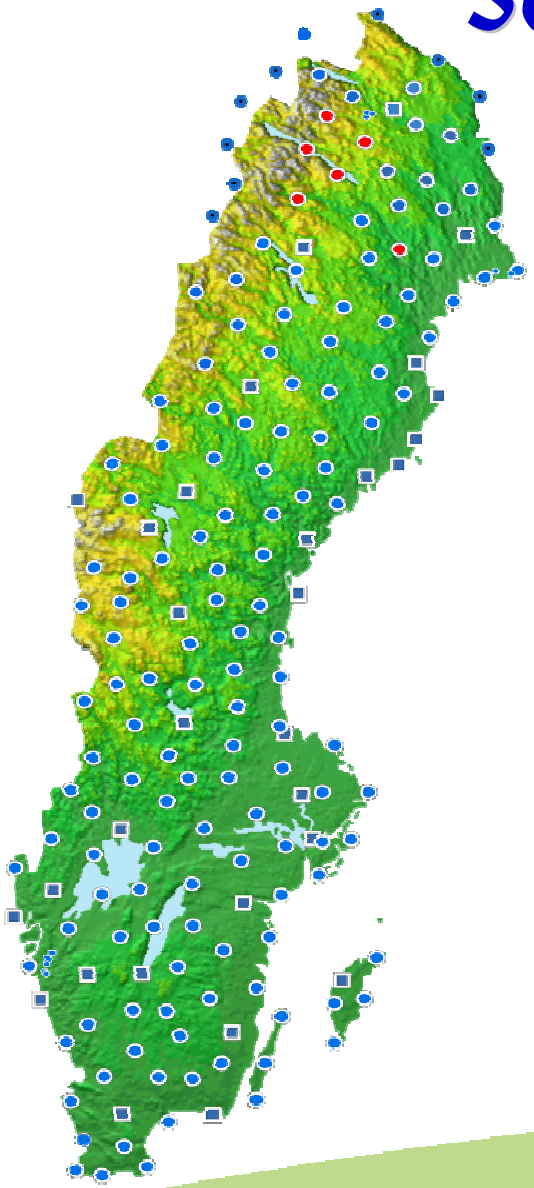




SWEPOS

- SWEPOS is the foundation for SWEREF 99 (ETRS89 in Sweden)
- Currently 189 stations (May 2010)
  - 20 original SWEPOS sites
  - 35 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 (50 sites)

SWEPOS Network RTK Service



- Passed 1400 subscriptions! (May 2010)
  - Trend: increased use in machine guidance and precision navigation
  - Some densifications have been done
- Distribution using GSM & GPRS
- The northern part will be completed in this year
- Improvement of Guidelines for the RTK service

Further info: www.swepos.com

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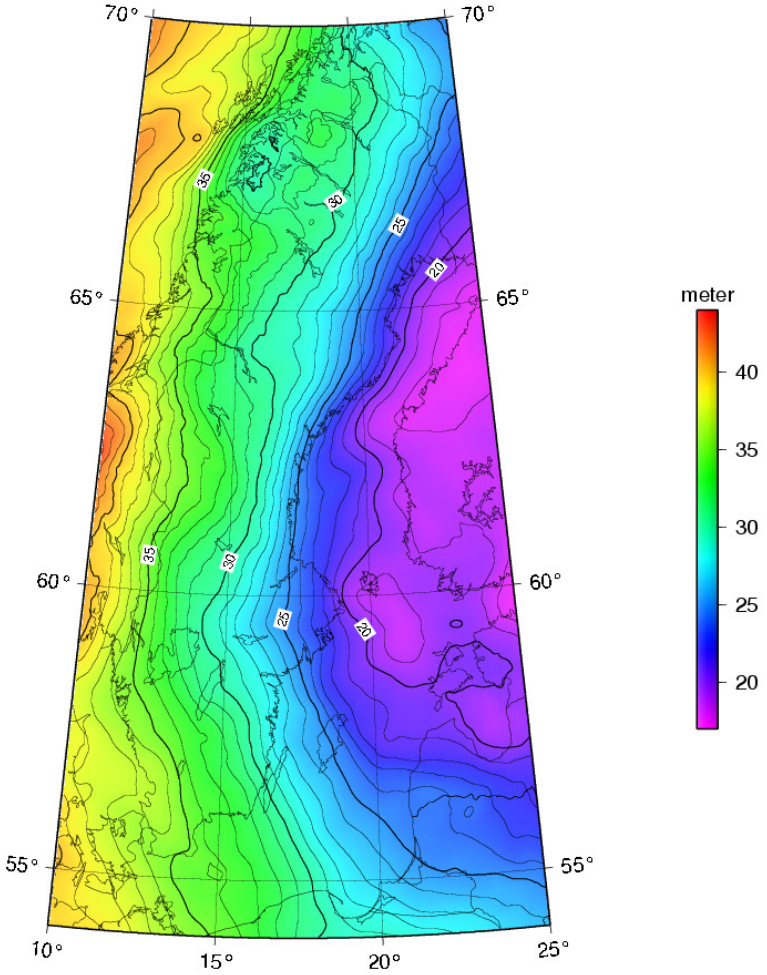
New Geoid Model



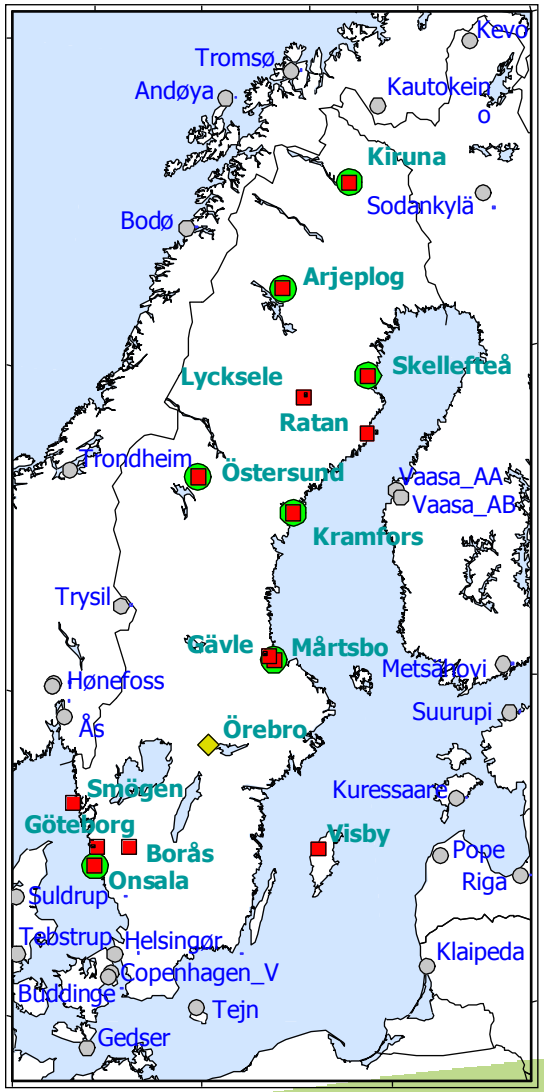
The Model SWEN08_RH2000

... is computed by adaption of the gravimetric model KTH08 utilizing

- GNSS/levelling residuals,
- corrections for land uplift/permanent tide,
- a smooth interpolation surface

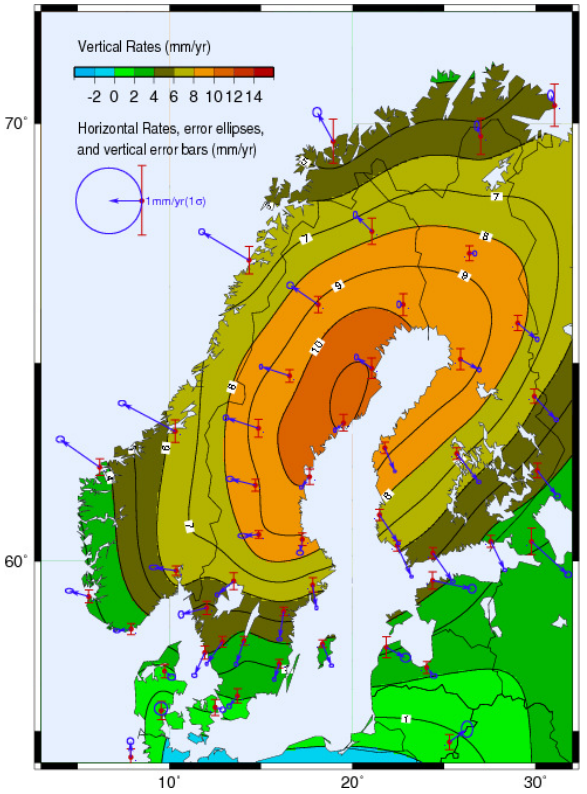
The mean error is estimated to 10-15 mm in almost all Sweden

Absolute Gravity Program



In 2006, a new absolute gravity meter (FG5) was purchased by Lantmäteriet

- *Objective is to study the Fennoscandian land uplift*
- *12 out of 14 sites have been observed since 2007*
- *Several observing teams, coordinated within NKG w. g. for geodynamics*
- *Two inter-comparisons with other gravity meters*
  - *19 in Luxembourg*
  - *22 in Paris*



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