National Report of Sweden – activities at Lantmäteriet

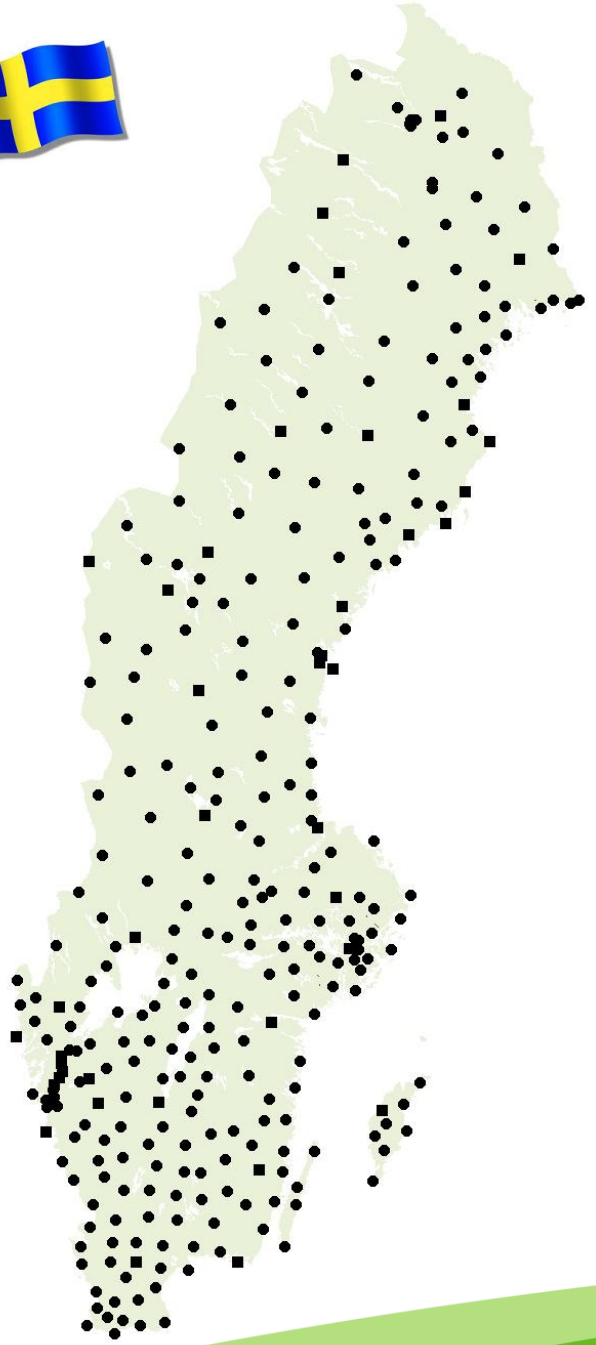
L. E. Engberg, A. Engfeldt, L. Jivall, C. Kempe, M. Lidberg, C. Lilje, M. Lilje, D. Norin, H. Steffen, P. Wiklund, J. Ågren

geodesi@lm.se

EUREF Symposium Budapest

May 29-31 2013

LANTMÄTERIET



SWEPOS celebrates 20 years

- SWEPOS is the foundation for SWEREF 99 (ETRS89)
- 285 stations
- 7 EPN stations
- Since 2010, 40 new stations each year (→ 400 stations in 2015)
- 2120 network RTK users (→ 220 new users since last yr)
- Control centre was relocated, within Lantmäteriet's HQ, during 2012

LANTMÄTERIET

Implementation of RH 2000 and SWEREF 99

- Implementation of RH 2000 (EVRS) and SWEREF 99 (ETRS89) continues
- RH 2000
  - So far, 110 municipalities have implemented RH 2000 in their activities
  - Initiatives to speed up the implementation have been taken together with SALAR (Swedish Association of Local Authorities and Regions)
- SWEREF 99
  - Until now, 252 municipalities have implemented SWEREF 99 in their activities
  - Actions aimed to start the process in the last municipalities have started in cooperation with SALAR

LANTMÄTERIET

Improvement of the geoid

- Today: ~1.5 cm level (RMS)
- Goal by 2015: ~1 cm; goal by 2020: ~0.5 cm

- New gravity system needed (see next slide)
- Gravity data set improved by new measurements

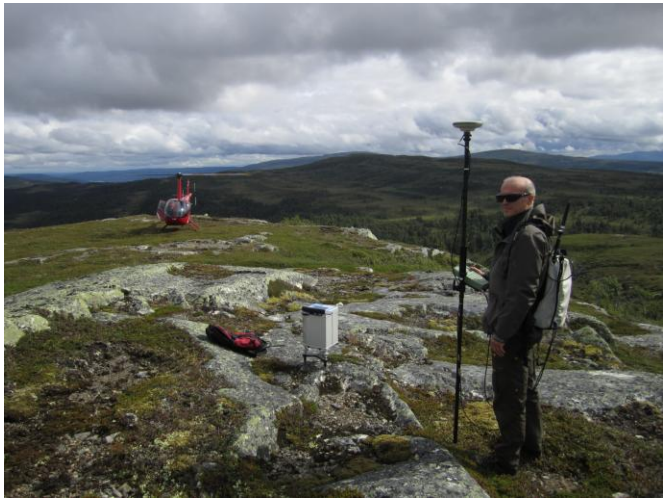
- Two projects within the NKG (Nordic Commission of Geodesy)
  - Aiming at a computing a new common geoid model over the Nordic countries
  - Investigating what is required to reach 5 mm uncertainty over the Nordic area

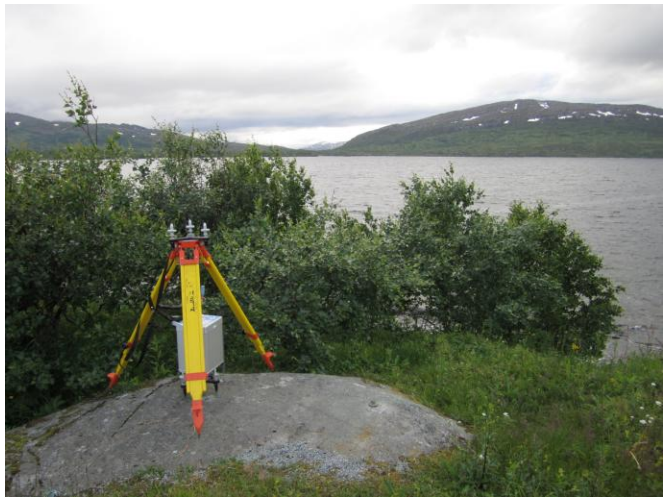
LANTMÄTERIET

New gravity system – RG 2000

- 12 fundamental stations (absolute gravity, FG5)
- ~75 additional absolute gravity stations (A10; in cooperation with the Institute of Geodesy and Cartography, Poland)
- Relative gravity measurements

- Point separation ~50 km





Relative gravity measurements

LANTMÄTERIET

Handbook for Mapping and Surveying

- Lantmäteriet is working on a revised series of handbooks for mapping and surveying
- Involves other organisations, to get their opinions

- Geodata collection
  - Draft version available
  - Ongoing work: During 2013 image data and laser data sections will be improved
- Geodesy: Work has recently started
  - Reference systems and frames
  - GNSS surveying

Old handbook

LANTMÄTERIET