

CP2.1 European Gravity and Geoid Project (EGGP)

Chair: **Heiner Denker** (Germany)

Terms of Reference and Objectives

Within the first 4-year term of this project from 2003 – 2007, a new geoid and quasigeoid model EGG07 was developed. The EGG07 model is a complete update compared to the previous computation from 1997 (EGG97), employing all high-resolution gravity and terrain data available for Europe in mid-2007 as well as a GRACE based global geopotential model (EIGENGL04C). The computation procedure was based on the remove-restore technique, residual terrain model reductions and the spectral combination approach. The evaluation of the EGG07 model by independent GPS and levelling data proved significant improvements as compared to the previous EGG97 model, indicating an accuracy potential of 0.03 – 0.05 m at continental scales and 0.01 – 0.02 m over shorter distances up to a few 100 km, provided that high quality and resolution input data are available.

The aim of this project for the time frame 2007 – 2011 is to further refine the geoid and quasigeoid modelling in Europe, continuing and extending the present contacts and successful cooperation with the respective national and international agencies.

The main topics of interest in the project include:

- improvement of a few land areas with insufficient gravity and terrain data (e.g., East Europe),
- improvement of the marine gravity data,
- utilization of improved satellite altimetry results,
- inclusion of GPS and levelling data,
- use of GOCE geopotential models,
- test of other modelling techniques,
- refinement of the mathematical modelling,
- development of location-dependent error estimates.

The project reports to Sub-Commission 2.4. It is organised by a steering committee and has national delegates (project members) from most of the countries in Europe.

Steering Committee

Heiner Denker (Chair) (Germany)

Riccardo Barzaghi (Italy)

Rene Forsberg (Denmark)

Johannes Ihde (Germany)

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