



Nordic height systems and the Baltic Levelling Ring

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New nationwide levellings have recently been completed or are approaching completion in Denmark, Finland, Norway, and Sweden, and this is leading to the adoption of new national height systems. There are two key issues. First, the modelling of post-glacial rebound (PGR) in the treatment of the levellings and in the height systems, and second, the datum(s). The datum issue is associated with the future of the European Vertical Reference System (EVRS) and European Vertical Reference Frame (EVRF). Whatever the outcome of the current evolution of the EVRF, the connection(s) of the Nordic levelling networks to the main body of the United European Levelling Network (UELN) over the Danish Straits and east of the Baltic Sea (in short, the Baltic Levelling Ring) are essential. Within the Working Group for Height Determination of the Nordic Geodetic Commission, various PGR models have been compared and evaluated. Oceanographic results and GPS/geoid height determination have been tested as shortcuts and/or substitutes for missing sections in the Baltic Ring. The work is a cooperation with the UELN computing center and with Estonia, Latvia, Lithuania, Poland, Germany and the Netherlands.