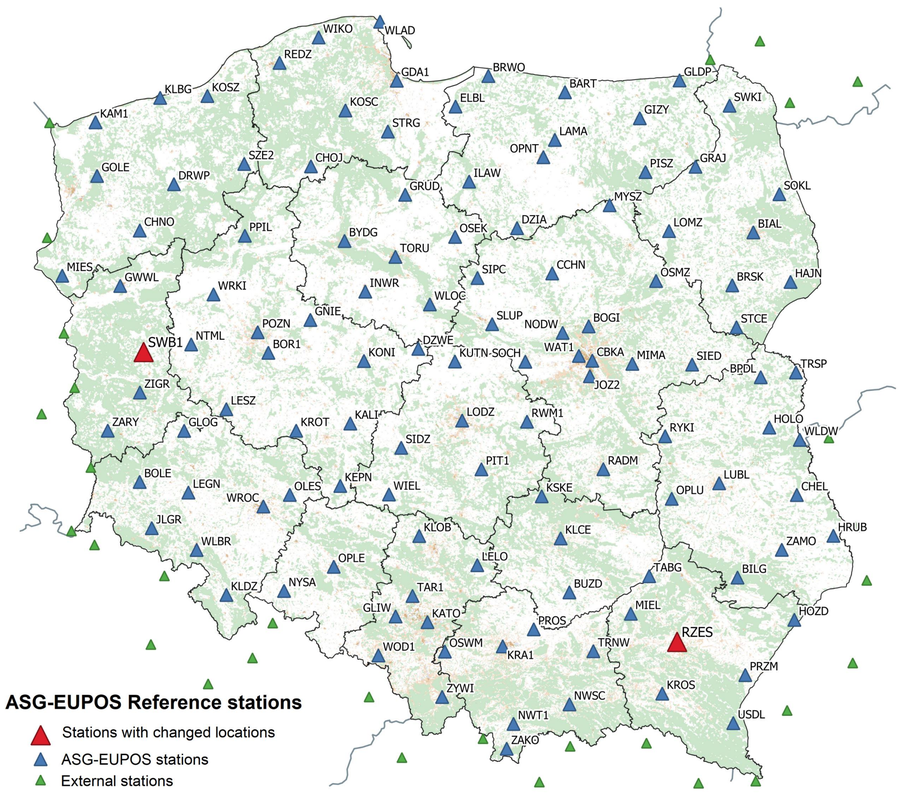
National Report of Poland

Introduction

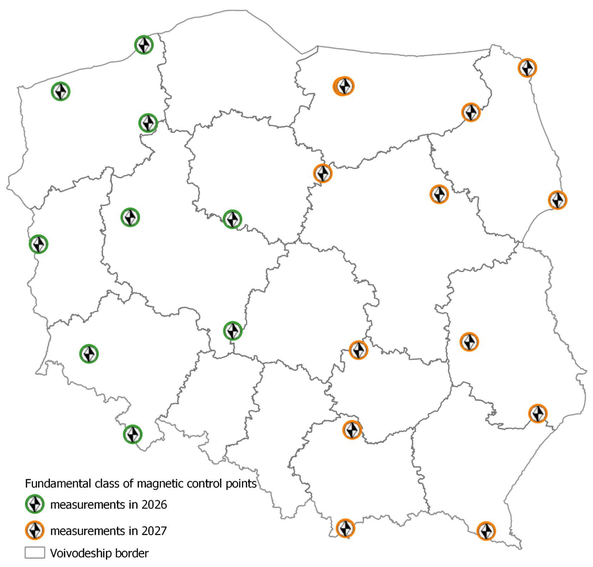
In 2025 Head Office of Geodesy and Cartography (GUGiK) continued works referred to National Registry of basic geodetic, gravimetric and magnetic control points about measurements of the basic vertical geodetic network and the gravimetric basic control points. In ASG-EUPOS network, our works were focused on modernizing the hardware infrastructure and ensuring data security in Management Centers.

The ASG-EUPOS stations



In ASG-EUPOS network, our works were focused on modernizing the hardware infrastructure and ensuring data security in Management Centers. In 2026, 2 ASG-EUPOS system stations will change their location. The system is facing a constantly growing number of users.
In 2025, over 29 thousand users used the ASG-EUPOS system services.

Magnetic measurements



In 2025, a field survey of the fundamental-class magnetic control points was carried out. Based on this survey, points were selected for the repair or replenishment of marker sets.
Between 2026 and 2027, measurements will be taken of the components of the Earth's magnetic field: declination, inclination and magnetic field strength.

Future plans

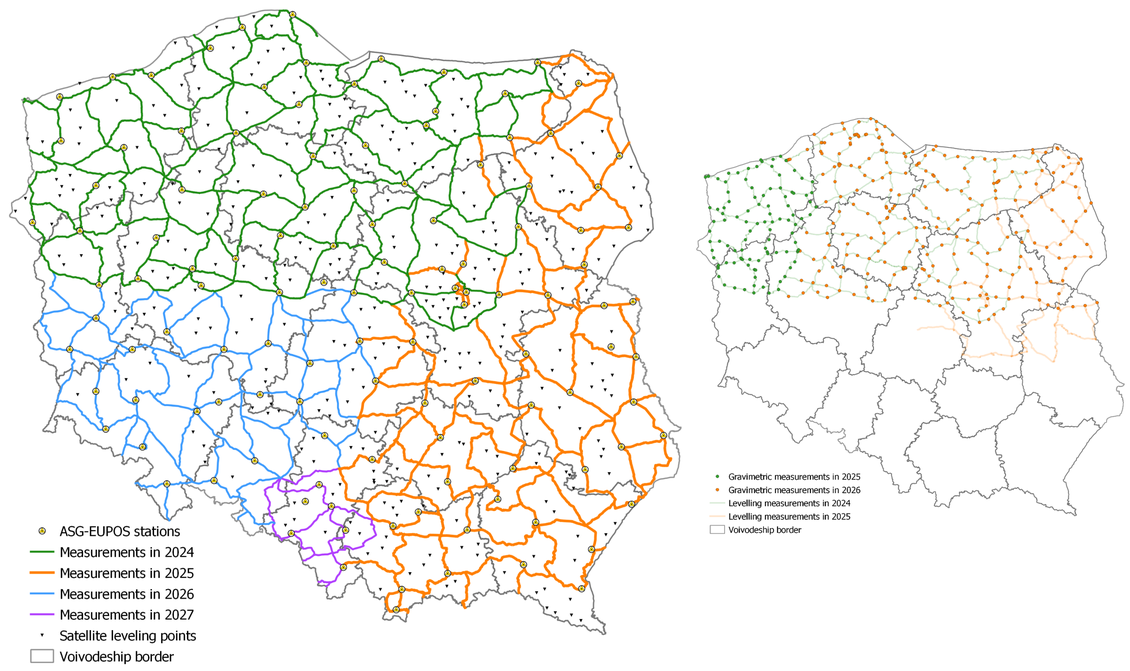
- Upgrading the hardware infrastructure of the ASG-EUPOS system
- Development of the ASG-EUPOS system and firmware.
- Continuation of work on vertical and gravimetric control points
- Realisation of satellite measurements campaign for base geodetic networks in Poland
- Implementation of gravity measurements for vertical geodetic networks in Poland
- Creation of a new quasi-geoid model
- Realisation of measurement at fundamental class of magnetic control points

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Basic vertical geodetic network



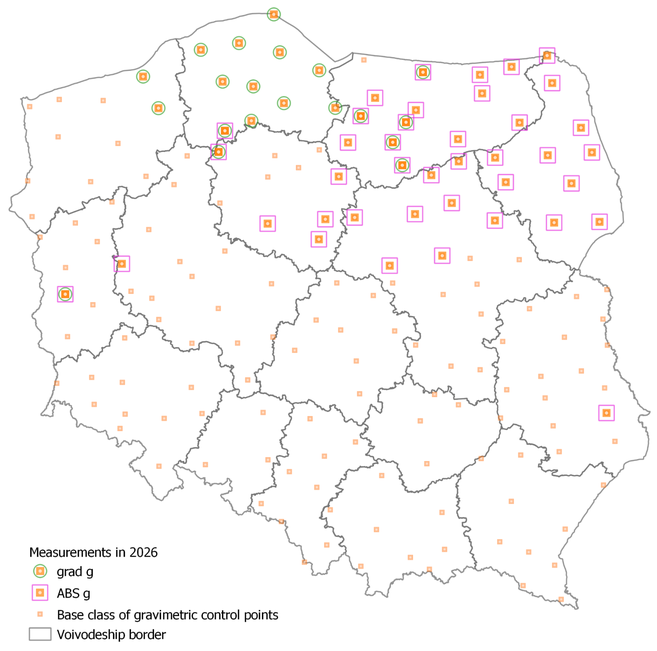
In 2023 GUGiK finished the designing works of the levelling campaign for area of Poland. The new vertical network is built by 354 levelling lines (almost 18 450 km) with almost 13 400 base control points and 227 nods (fundamental control points).
Additionally, 310 base control points has been designed, dedicated for GNSS measurements with satellite levelling method. The ASG-EUPOS reference stations eccentric (ground) points had been included as nodal points of levelling lines (65% all eccentric points) and base control points in levelling lines (35% eccentric points).

In 2024 4 Companies had measured more than 7 000 km levelling lines by geometry levelling method, with m1 < 0,4 mm/km. I 2025 5 Companies had measured 6 500 km levelling, with the same accuracy. Rest of the levelling network will be measured in 2026 and 2027.
To integrate various techniques in geodetic works, as part of the levelling campaign, we planned also:

- Gravimetric measurements at the part of the vertical control points, mainly in southern part of Poland (with uplands and mountainous areas)
  - Part of measurements in northern Poland had been done in 2025, rest part of these area will be measured in 2026
  - southern part of Poland will be measured in 2027/2028
- Satellite levelling measurements at „satellite levelling lines" inside the levelling polygons
- Joined adjustment for geometry and satellite levelling observations, after adjustment at United European Levelling Network

Gravimetric measurements

In 2024 GUGiK signed a contract with the Institute of Geodesy and Cartography for the measurements at the base gravity control points with the absolute method and vertical gradient of gravity measurements (2-years campaign).
In 2024, measurements, with minor problems with the A10 instrument, were made in the northern part of Poland and were continued in the southern part of Poland in 2025.



Points, at which in 2024 measurements with absolute method or vertical gradient had not been done, will be proceed in 2026.