



National report  
Norway  
2026



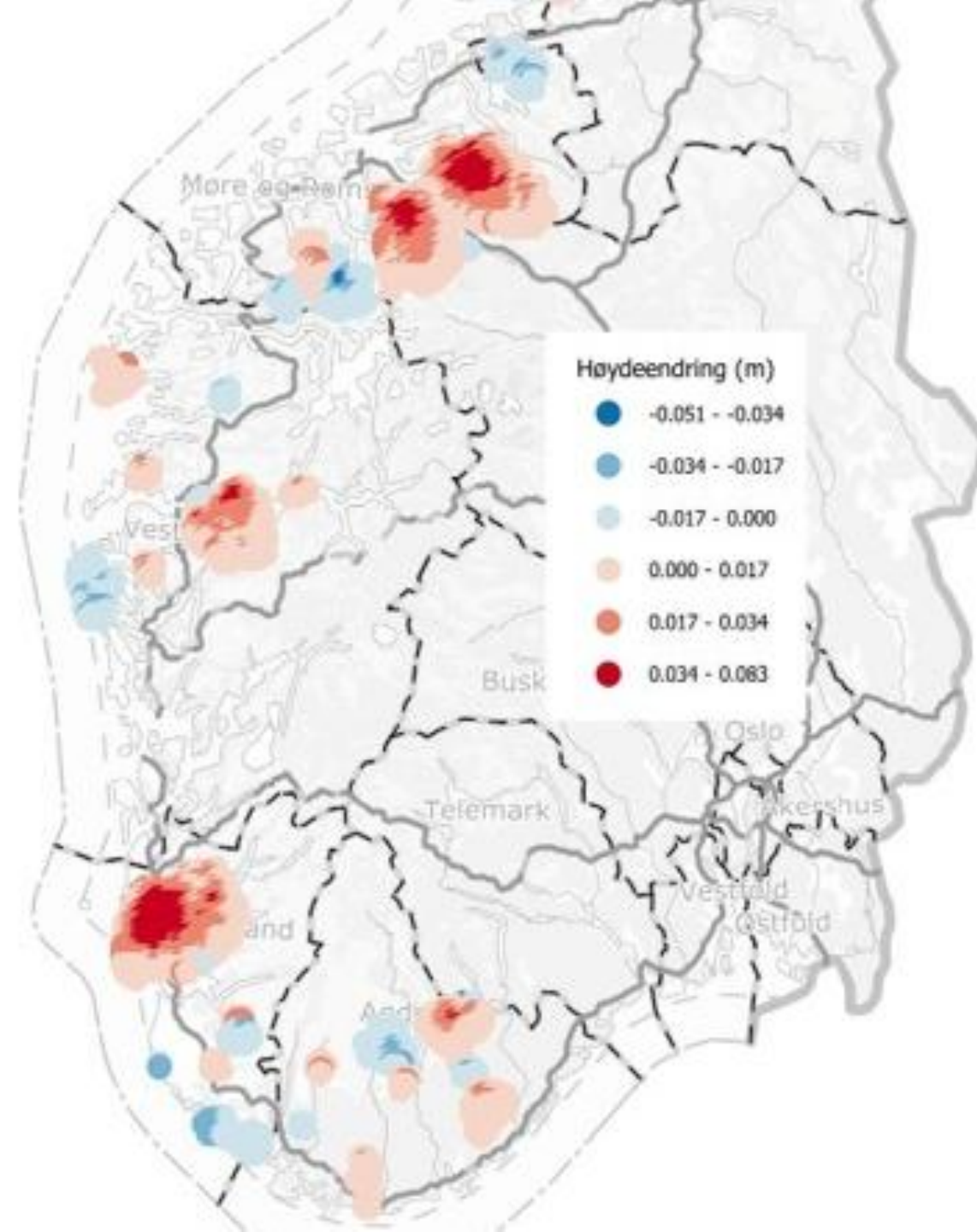
# Levelling

- Levelling activity at the Norwegian Mapping Authority has declined over several years.
- In 2025, a new plan was introduced to engage the field team more directly in levelling work.
- This reflects a shift away from the team's previous focus on establishing new PGS.
- Levelling production regained a slight momentum in 2025.
- Competence transfer for tasks such as calibration is ongoing, together with continued skills development.

# NMA launches NN2000:2025

## NN2000:2025

- New levelling lines added after 2018
- Height changes up to 10 cm in south-western Norway
- New heights and **HREF2025a** released in 2026
- New **EPSG code** registered for NN2000:2025
- Aligned with new national **ETRS89** codes





# New national EPSG codes

- NMA is pursuing a long-term strategy to migrate to new national EPSG codes for ETRS89.
- The same approach also applies to the vertical reference frame.
- To date, **146 new EPSG codes** have been introduced as part of this work.
- A new architecture is being established to support agile, robust, and consistent management of reference frames across the full geospatial ecosystem.
- EPSG codes (SRIDs) improve traceability and support reliable geodata sharing.

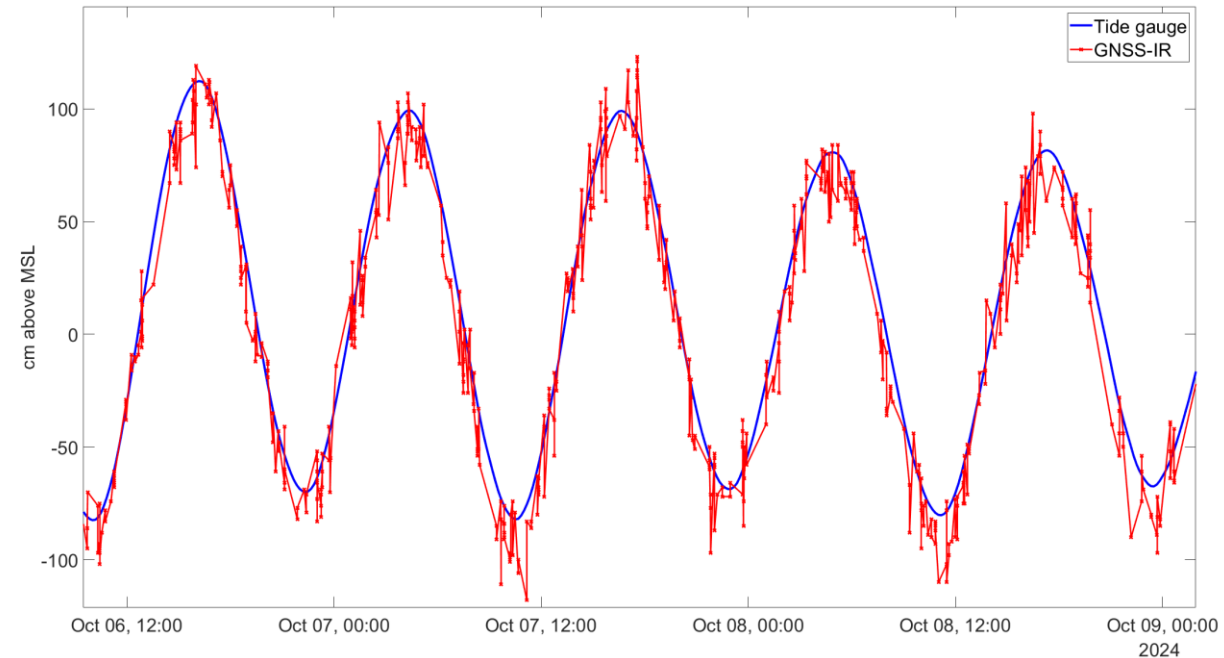
# GNSS IR reflectometry

Investigations are carried out related to the potential of GNSS reflectometry for water level determination

Current GNSS station network established for positioning service is used

GNSS reflectometry can be useful for:

- As secondary sensor beside traditional tide gauges
- Tide prediction
- Improving the Chart Datum separation models (particularly in remote locations)
- Controlling the absolute level of traditional water level sensors (especially for pressure sensors in Arctic regions)





# Svalbard

- Increased Focus on Svalbard.
- User survey completed to identify needs and limitations of the current reference frame.
- Measures for establishing a new reference frame assessed against current user applications.
- Funding applications submitted for co-located tide gauges and GNSS stations.
- New transformations for Svalbard are under development - planned for release in 2026.
- Testing underway for self-sufficient, Arctic-resilient equipment with minimal maintenance requirements.