

NATIONAL REPORT OF PORTUGAL

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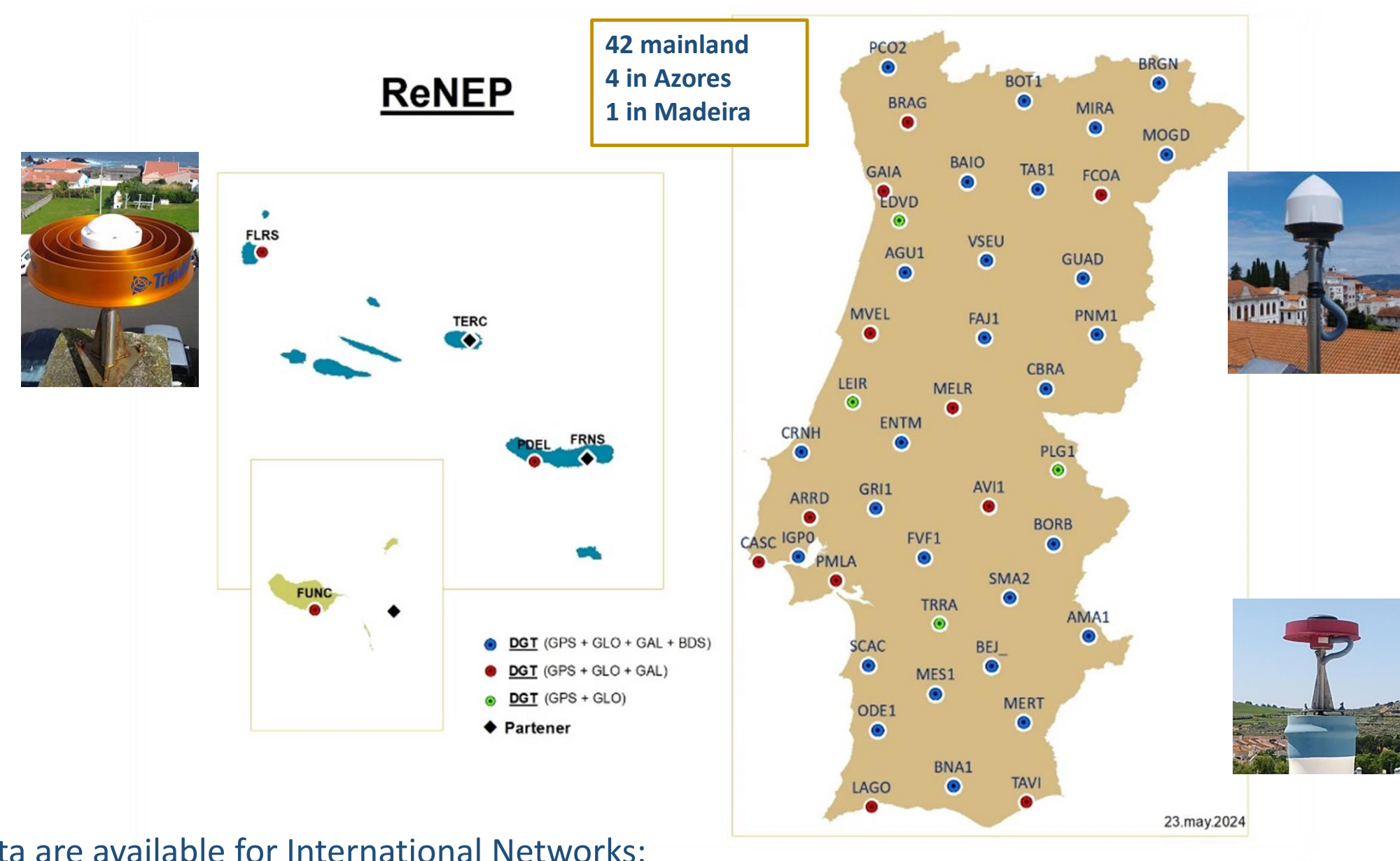
Abstract

The Directorate-General for the Territory (DGT) is the entity responsible for establishing and maintaining the National Geodetic Infrastructure. The GNSS CORS Network of DGT – ReNEP, already complete, consists of 42 stations on Portugal mainland, 2 in the Autonomous Region of Azores and one in the Autonomous Region of Madeira, being enough for an effective coverage of the national territory. In the continuous improvement of the service provided to the community, DGT acquired 28 multi-constellation GNSS stations (receiver and antenna) which allow the reception of signals from GPS, GLONASS, GALILEO and BEIDOU constellations. The installation of the new stations also involved the maintenance of the antenna supports and the change of the respective antenna cable. In some stations, the fixing of these structures did not guarantee the necessary and expected stability, so there was a need to replace and/or relocate them. DGT continues to invest in the maintenance of Cascais and Lagos tide gauges, in order to maintain the definition of the vertical reference frame and to keep registering the sea level.

National Permanent GNSS Stations Network (ReNEP)

- Materialization of the national reference system
- Allows an accurate positioning

- RTK Network Coverage
- Continuous Streaming
- RTCM over NTRIP
- Hourly RINEX files at 5 seconds rate

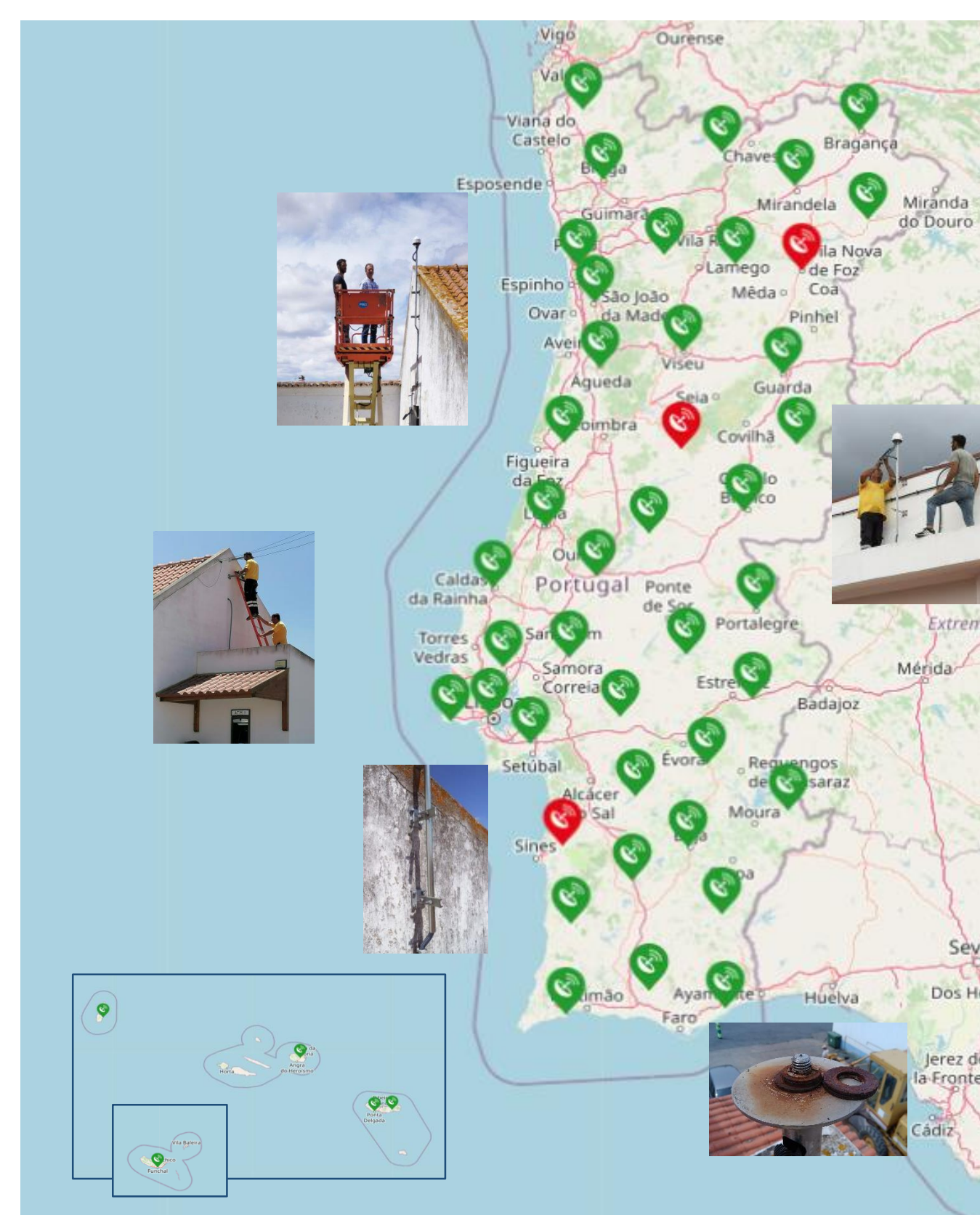


ReNEP data are available for International Networks:

- 3 for the International GNSS Service (IGS)
- 7 for the European Permanent Network (EPN)
- 47 for European Plate Observation System (EPOS)
- 47 for the EPN densification network

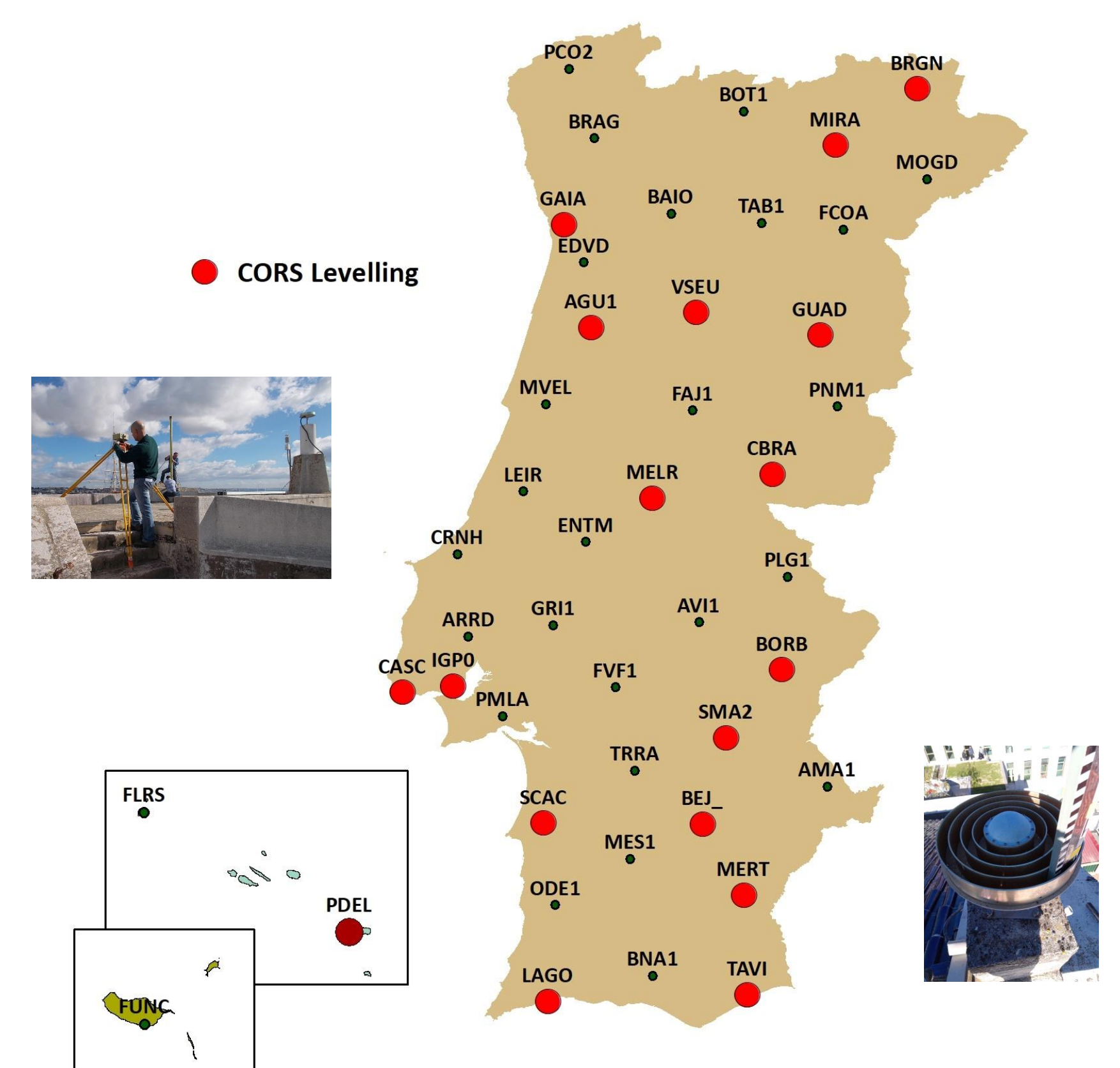
Coordinate Systems:
Mainland: ETRF97 at epoch 1995.4
Azores and Madeira Islands: ITRF93 at epoch 1994.0

Structures Maintenance during 2023



- 6 stations with GPS & GLONASS
- 14 stations with GPS, GLONASS & GALILEO
- 27 stations with GPS, GLONASS, GALILEO and BEIDOU

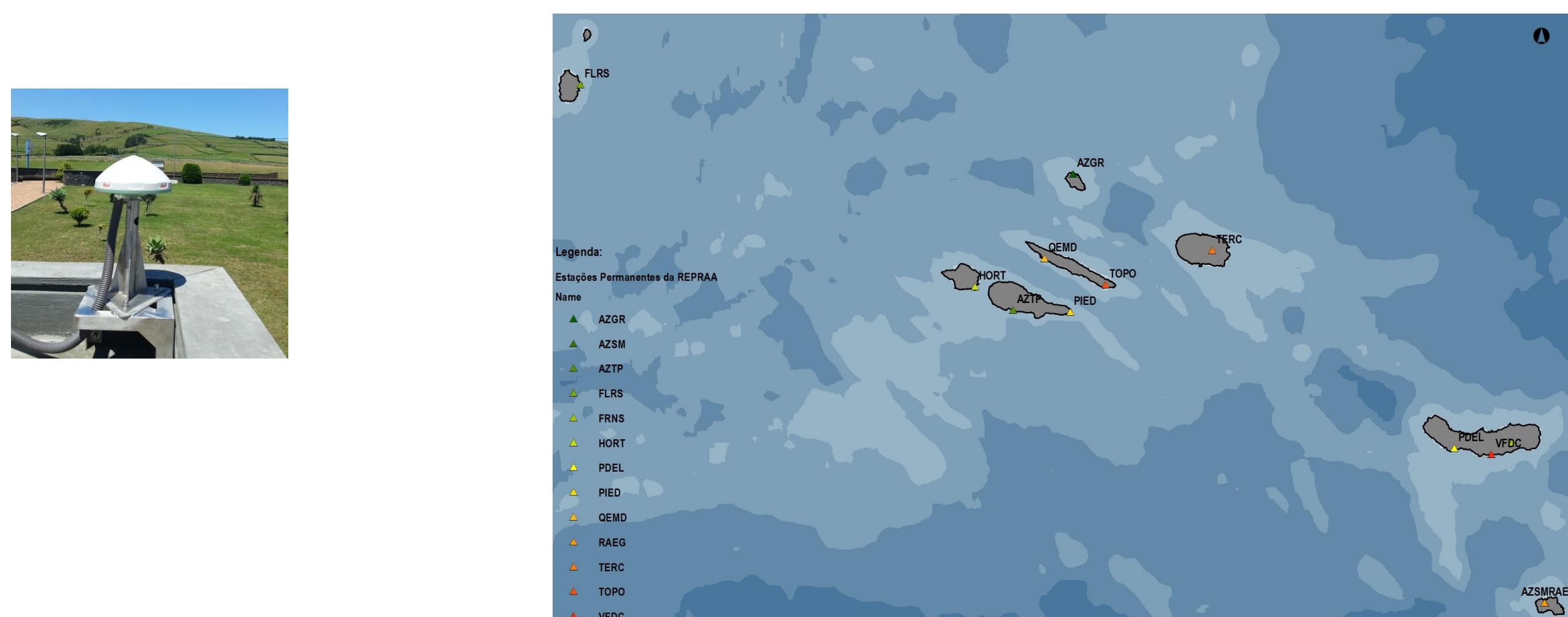
ReNEP Levelling



ReNEP as 18 stations with high precision geometric levelling

Regional Permanent GNSS Stations Networks

REPRAA – Azores CORS Network



Reg. Secretariat for the Environment and Climate Change

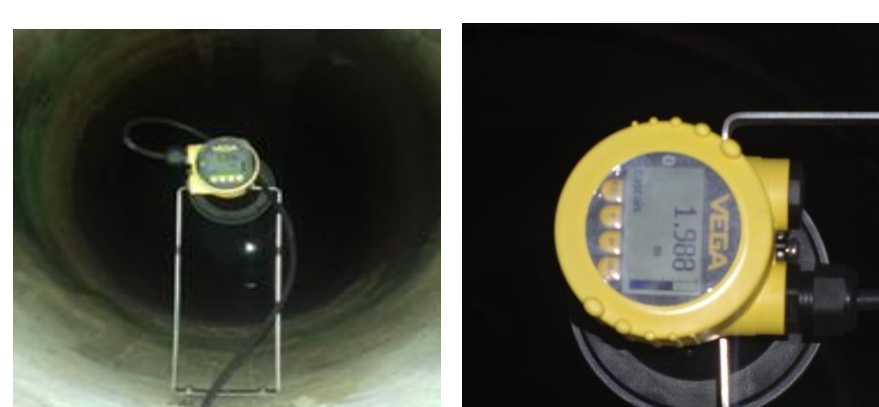
REPGRAM – Madeira CORS Network



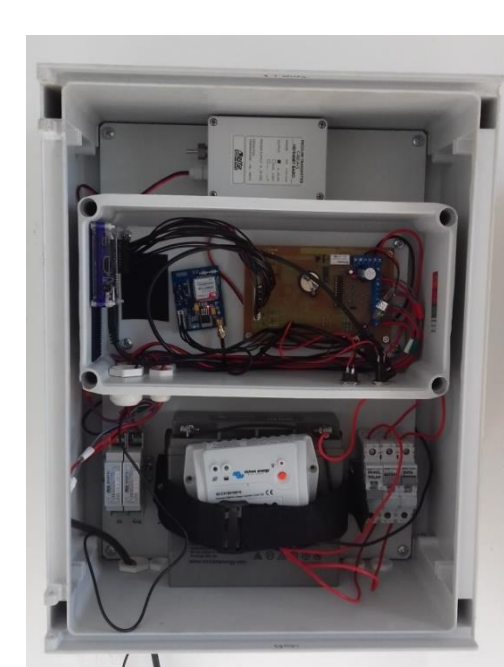
Reg. Directorate for Territory Planning

Tide Gauges

- Definition of the vertical reference
- Determination of mean sea level



Radar sensor



Datalogger



- RADAR technology for water leveling sensors
- Real-time data logging and uploading data to DGT servers and other users
- Sensors for measuring water temperature, air temperature and pressure



EUREF Web Page

- New layout for the EUREF web page
- Area for documents exchange

<http://www.euref.eu>

