



HELPOS: Hellenic Plate Observing System. The Hellenic Research infrastructure within the EPOS project.

Akis Tselentis (1), George Drakatos (1), Filippos Vallianatos (2), and the HELPOS Research Team

(1) Geodynamic Institute, National Observatory of Athens, Lofos Nymfon Thission, Greece, (2) Technological Educational Institute of Crete, Geophysics and Seismology Laboratory, Crete, Greece

The understanding of the physical processes responsible for earthquakes, volcanic eruptions, surface and tectonic processes, seismic response of engineering structures and tsunamis requires the prompt and long-term availability of high quality data. The accessibility of these data can accelerate the discovery of new earth science and earthquake engineering results and novel uses for societal benefit.

HELPOS is a distributed network of geosciences and earthquake engineering observatories, running by Greek Research Institutions and Universities. The backbone of the project is formed by permanent stations (seismic, GPS, strong motion, etc), which provide high quality data mostly in real time. Permanent observatories are complemented with local stations and networks in selected regions of interest or/and for specific scientific objectives. In addition, the observational system is complemented with high quality laboratories and multiple mobile stations which are deployed for repeated measurements or field experiments.

Open access to the multidisciplinary research infrastructure will not only stimulate innovative research on earth dynamics and processes leading to catastrophic events, but will result to new developments in engineering seismology and earthquake.

EPOS as a RI is therefore, invaluable for improving hazard and risk assessment and forecasting. Understanding the processes as well as forecasting and mitigating the effects of such events require coordination of national facilities and expertise. HELPOS is an initiative responding to the current Greek and European need for a comprehensive and integrated solid Earth and Earthquake Engineering RI within EU –EPOS initiative.

The HELPOS project aims to integrate following the EPOS initiative, the currently scattered, but highly advanced National facilities into one distributed but coherent multidisciplinary RI. The scope is to enable sustainable long-term Earth science and earthquake engineering research strategies and an effective coordinated monitoring facility that will contribute to EPOS efforts. The HELPOS partners list follows:

1. National Observatory of Athens, Institute of Geodynamics
2. Aristotle University of Thessaloniki a) Department of Geophysics, b) Laboratory of Soil Mechanics, Foundations and Geotechnical Earthquake Engineering c) Department of Geodesy and Surveying
3. Earthquake Planning and Protection Organization
4. National Kapodestrian University of Athens, a) Department of Geophysics & Geothermy, b) Department of Informatics & telecommunications
5. Technological Educational Institute of Crete, Laboratory of Geophysics and Seismology
6. University of Patras, a) Laboratory of Seismology b) Laboratory of Geotechnical Engineering
7. National Technical University of Athens a) Department of Geotechnics, Engineering Geology & Rock mechanics Unit b) Laboratory of Geodesy
8. Hellenic Centre for Marine Research

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