

The mission of IG is the study and the promotion of research in the fields of Seismology, Physics of the Earth's interior, Geophysics, Plate Tectonics, Volcanology and Geothermal research, Neotectonics, Seismotectonics and Geophysical Earth Observations. The main task of IG is the acquisition and processing of various seismological – geophysical data, to carry out research projects and to provide training and services to third parties, such as performing seismicity monitoring on a 24/7 basis, 365 days a year. IG employs experienced research, scientific and technical personnel to achieve the aforementioned goals. Furthermore, IG has a crucial mission to inform the Government, the General Secretariat of Civil Protection, the Earthquake Planning and Protection Organization and the general public on a 24/7 basis about the seismic activity in Greece.

The Institute's strategy is based on:

- extending and developing IG's nationwide seismological and geophysical networks and infrastructure.
- developing reliable databases for information and extraction of new knowledge.
- Cooperating internationally to exchange seismological and geophysical data, and develop and incorporate new methods and tools.

NATIONAL OBSERVATORY OF ATHENS  
INSTITUTE OF GEODYNAMICS

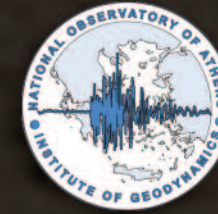
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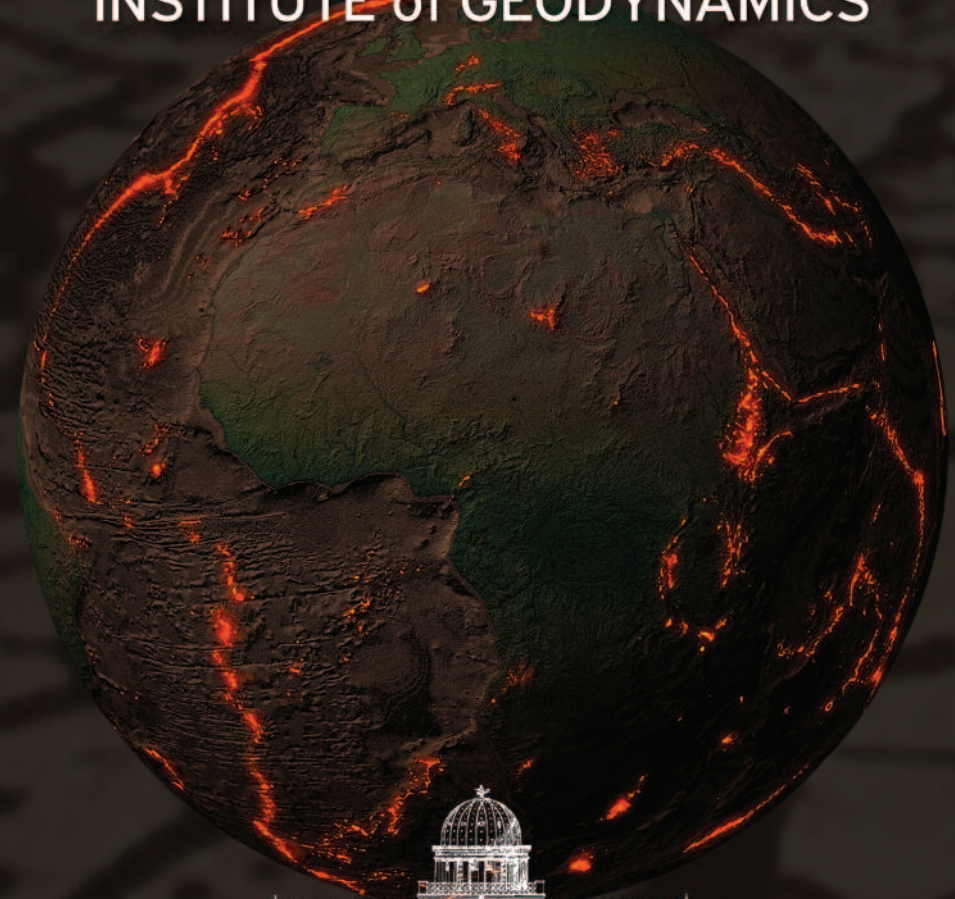


regions at the centre of development

Co - financed by the Hellenic Republic and the European Union - European Regional Development Fund, in the context of the O.P. Competitiveness and Entrepreneurship (OPC II) and the R.O.P. Attica, R.O.P. Macedonia - Thrace



# INSTITUTE of GEODYNAMICS



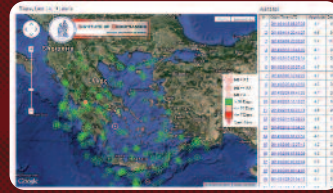
NATIONAL OBSERVATORY OF ATHENS

## Education and Training

- Popularized talks at schools and support of educational projects
- Cooperation with Universities (talks at universities, students practicing, advisory in MSc and PhD theses, participation in educational field trips)
- Dissemination of knowledge (internal seminars, international conferences organization)
- Technicians training on seismographic networks
- Design and development of educational software
- Public outreach through targeted communication to end-users



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## Service to Society

- On a 24/7 basis, information to the Government, the general public, the mass media: Near real-time data processing, preliminary automatic earthquake assessment and revised locations, continuously updated databases, visualization of seismic monitoring, informative webpages.
- Deployment of portable seismic network for monitoring aftershock sequences following strong earthquakes or ongoing felt seismic activity.

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## Earthquake Seismology and Monitoring

The data provided by the dense and modern seismic network are used for: automatic earthquake processing and alert, routine Moment Tensor inversion and development of Moment Tensor database, routine quality control and ambient noise monitoring, source studies after major earthquakes etc.  
<http://bbnet.gein.noa.gr>



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## Engineering Seismology and Seismic Hazard Assessment

The accelerometric recordings provide the necessary information for the strong ground motion prediction, the dynamic response of structure and the improvement of Earthquake Resistant Code. Special interest for monitoring of ground motion at archaeological sites. The macroseismic observation collection and evaluation since the establishment of NOA supports the earthquake hazard assessment.  
<http://accelnet.gein.noa.gr>

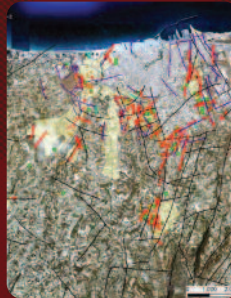


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## Services

### Private Sector Synergy

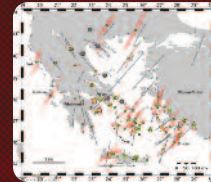
- Deployment of accelerometric networks, maintenance, data processing, development of databases (e.g. Public Power Corporation S.A., Attiko Metro S.A., Acropolis Restoration Service, Cyprus strong motion network, Crete Development Organization S.A.)
- Seismic Hazard Assessment and microzonation studies for urban development or critical structures
- Consulting (e.g. Emergency Control Center of the Public Gas Company S.A.)
- Dissemination of data and short reports (e.g. Technical Chamber of Greece)
- Geothermal prospecting, archaeological prospecting, characterization of foundation soil
- Instrumentation of critical structures for strong ground motion monitoring



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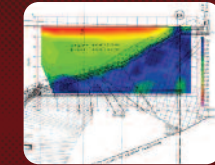
## Geodynamics and Active Tectonics

Monitoring of surface deformation and calculation of permanent ground displacements after major earthquakes using the GPS stations. Strain pattern studies using continuous



GPS measurements from permanent stations and benchmarks. Seismic anisotropy studies. Participation in large scale experiments for the identification of the source properties and kinematics of large subduction earthquakes.  
[www.gein.noa.gr/gps.html](http://www.gein.noa.gr/gps.html)

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## Applied geophysics

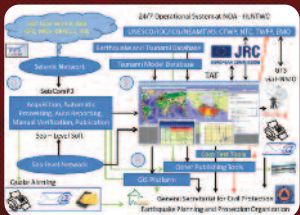
The available geophysical infrastructure supports seismic exploration studies for fault detection, soil characterization, safety assessment of dams and other critical structures, geothermal applications and archaeological prospecting.

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## Services to other International Seismological Institutions

- Exchange of data with other national (e.g. Universities) or international institutions and organizations (e.g. ORFEUS, EMSC, INGV, JRC, IRIS, CTBTO, GFZ).
- Tsunami watch providers (IOC/UNESCO)



## Tsunamis

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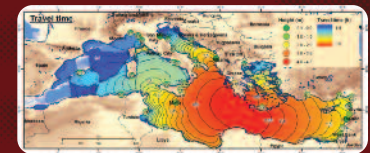


Recent deployment of tide-gauge stations provides sea-level data for the 24/7 operational NTWC alert center. Studies of tsunami catalogs, sources, numerical modeling and paleotsunami investigation are added to the newly established NTWC.  
<http://bbnet.gein.noa.gr/tide-gauge>

## Research

## Early Warning Systems and Forecast

Infrastructure deployment and tools development support the seismic and tsunami alerts and the earthquake forecasting studies through the monitoring of the temporal variation of various seismic parameters.



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