



The Hellenic Seismic Network (HL): Recent Upgrades and Developments

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The Institute of Geodynamics, National Observatory of Athens (NOA-IG) monitors seismicity in Greece since its foundation in 1893. Upgrades with results towards a modernized digital seismic network started back in 2000 and they were continued since then in stages, as national funds were made available as well as more personnel was employed. The most recent upgrade started in 2007, with a dedicated project aiming to establish a Unified National Seismic Network and to link the Hellenic National Seismic Network of NOA-IG with the three Universities: Athens, Thessaloniki and Patras, which also operate local seismic networks. Although the four joining networks are operated independently, with each partner taking responsibility for the operation of its own network, the project upgrade achieved the update - improvement of every network and the seismic waveform data to be made available in near real time amongst the four partners. In parallel, a new upgraded National Strong Motion Network at NOA-IG is under way, giving the opportunity to join the continuous monitored accelerometric data in real time with the available broadband data and furthermore to upgrade existing seismic stations by deploying also an accelerometer next to the broadband sensor.

Experiences through troubleshooting, methodologies and tools used to improve operation and examples of recordings from the new established infrastructure are presented, explaining the developments - improvements achieved at every stage until today. Specific earthquake recorded examples are shown, in order to explain the new possibilities opened for detail investigation and operational preparedness established on line in the 24/7 operational center at NOA-IG in Athens, as well as to other operating as backup centers. Further developments and operations using the present resulted operational - research infrastructure and the databases that are made available are also explained and presented.