



NERA NA4: NETWORKING EUROPEAN RAPID RESPONSE NETWORKS (ERN)

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One of the main goals of project NERA is to integrate the key research infrastructures in Europe to monitor and assess earthquake hazards. The work-package networking European Rapid Response Networks (ERN) aims to achieve a more efficient response to seismic crises within Europe and globally by creating a modular, mobile and sustainable pool for rapid deployments. Currently GFZ (Germany), INGV (Italy), CNRS-ISTerre-GeoAzur (France) and ETH-SED (Switzerland) participate to ERN. In particular this network is expected to (i) facilitate the communication and rapid information exchange between partner institutions; (ii) coordinate rapid deployment of seismological networks; and (iii) harmonize data collection, storage and access.

To establish the ERN we developed a common policy of rapid response deployments. Based on this the main operators of rapid response networks in Europe have started to coordinate their activities. This includes the rapid information exchange between the involved institutions after large earthquakes. An efficient information exchange and communication between the partners is crucial for ERN-missions. Therefore an ERN web-portal has been developed. Test results are currently evaluated and will be used for improvements in the future. A web-tool for guidance of the deployment during an ERN mission has been implemented. Real-time data transmission is challenging for mobile rapid-response networks. Within this project, appropriate methods are tested and applied. A first test had been performed in Emilia Romagna during September 26-30, 2011 by INGV's rapid response seismic network. An additional real-time data communication test has been performed in Berlin by GFZ. The application of UMTS and satellite real-time transmission at some selected sites during the two ERN-missions in Northern and Southern Italy in 2012/2013 was successful. The two missions provide a large amount of data. Integration of ERN data into the European Integrated Data Archive (EIDA) is a fundamental step to share the data within partners and we strive to achieve this not only for emergency seismic deployments but more generally for temporary deployments. This is important to foster international collaboration activities and further integration of research fields in Europe.

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