



Networking European Rapid response Networks

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In a framework of the project “Network of European Research Infrastructures for Earthquake Risk Assessment and Mitigation” (NERA), approved by the EEC founding scheme and started in November 2010, a European Rapid response Network (ERN) will be created. Under this umbrella the expertise, people and instruments from four European institutes (GFZ, ETH, INGV and ISTERre-GeoAzur) are being joined in order to address the current lack of rapid response capabilities in Europe and to set up a framework for coordinating future developments in this domain. The goal is to build an open and expanding, sustainable partnership of rapid response teams to seismic crises across Europe. The participating institutions, representing some of the major players in this domain in Europe, will form the core of this network, which is expected to incorporate other rapid response teams. This NERA work package (WP4) includes five integrated tasks:

1 Development of the ERN concept and its action protocol. The protocol will be developed taking advantage of the experience gained during past rapid response actions and taking into account the new needs for real-time information. The ERN will be assembled in a modular way in order to facilitate its sustainability and the addition of new modules.

2 A communication platform will be developed to support the modular network. In particular, updated information about available instruments and crews will allow fast decisions. Afterwards, during the emergency phase, the platform will be continuously updated by the different groups as soon as new information are available.

3 A dedicated tool accessible from the ERN communication platform will allow a virtual design of the network. In particular the tool will suggest the most suitable sites taking into account: network geometry, historical seismicity, main cultural noise sources, topography and building distribution.

4 An inventory of available instruments with the relative metadata files will be created. Communication and storage standards will be evaluated and suggested. Moreover, short tutorials to increase interoperability between the crews in the field will be developed.

5 Integration of ERN data in the European Integrated Data Archive (EIDA). A standard data format will be suggested in order to facilitate the integration of the acquired data in EIDA. As a first step in this direction, old data from rapid response missions are being integrated in EIDA.

The networking being created across the partners will allow achieving a more efficient response to seismic crises while the modular design will facilitate the sustainability of the ERN and the addition of new partners/modules. In particular, the decision making phase will take advantage of the ERN communication platform while the deployment of the network will be supported by a dedicated tool. Last but not least, standards in acquisition and storage will allow a quick exchange and handling of the data.