



The European Facility for Earthquake Hazard and Risk (EFEHR): Remote Access to Hazard and Risk Products

Jochen Woessner, Domenico Giardini, and the NERA-EFEHR Team
ETH Zurich, Swiss Seismological Service, Zuerich, Switzerland (j.woessner@sed.ethz.ch)

The European Facility for Earthquake Hazard and Risk (EFEHR) is currently being developed under the FP7 Cooperation Project “Seismic Hazard Harmonization in Europe” (SHARE, www.share-eu.org) and under NERA. EFEHR is build in addition to the already existing infrastructures EMSC and ORFEUS and intends to provide access to community-based, regularly updated seismic hazard and risk models for the Euro-Mediterranean region, to the underlying data and models, and to the software infrastructure for hazard and risk assessment.

EFEHR is designed as a sustainable community resource and constitutes the European component of the hazard model building facility of the OECD-initiated Global Earthquake Model program (GEM, www.globalquakemodel.org). This community resource, located at ETHZ, is built, hosted, maintained and operated jointly by ETHZ and EUCENTRE, as part of the GEM Global Model Facility (GEM GMF). EFEHR will provide access to the computational infrastructure and disseminate hazard and risk related products via web-services and via a single access portal, a dedicated web-front end for interactive access.

Products and services from European FP6 / FP7 projects, such as NERIES, SHARE, NERA and SYNER-G, as well as from future national and regional, will include access to: 1) databases used for hazard and risk modeling, e.g. seismic catalogs, fault compilations, site amplifications, vulnerabilities, inventories, site conditions; 2) pre-computed European and national scale probabilistic seismic hazard and risk (PSHA & PSRA) assessments and documentation; 3) to openGEM system and computers; 4) computational engines that allow the computation regional and site-specific (PSHA & PSRA), including time-dependent hazard and time-dependent risk and the assessment of economical impact; 5) the hazard/risk and IT experts that operate the infrastructure and 6) the portal that provides customized for a wide range of user groups.

The EFEHR portal will serve data tailor-made for various user and consumer groups: scientist from contributing project-partners and those interested in PSHA / PSRA, engineers and practitioners in need of PSHA information, policymakers, media and the general public. The different user-needs will be supplemented by additional documentation, integration of and cross-linking to information from portlets and web-services of other existing infrastructures. EFEHR is currently being build and the first products for Europe will be operational in 2011 and reach full capacity in 2012, when the SHARE contents will be fully delivered.