



Grant Agreement no. 226967
Seismic Hazard Harmonization in Europe
Project Acronym: SHARE

SP 1-Cooperation

Collaborative project: Small or medium-scale focused research project

THEME 6: Environment

Call: ENV.2008.1.3.1.1 Development of a common methodology and tools to evaluate earthquake hazard in Europe

D7.1a – Dissemination e-newsletter

Due date of deliverable: 31.07.2010

Actual submission date: 16.08.2010

Start date of project: 2009-06-01

Duration: 36

University of Pavia (UPAV)

N. Keller

Swiss Seismological Service, Eidgenössisch Technische Hochschule Zürich (SED-ETHZ)

J. Woessner

Revision: 1

Dissemination Level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Summary

Effective dissemination is a declared key objective of SHARE and various activities are described in the Document of Work to promote awareness 1) in the extended scientific and earthquake engineering community, 2) the wider engineering and industry community, and 3) in the general public. In addition, particular actions will be taken to appropriately present results and recommendation to policymakers and stakeholders and to disseminate tools and results that can be used in developing countries.

The periodic electronic newsletters (e-newsletters – 3 planned) are intended to give an easily understandable overview of the project process for a defined period of the project. The e-newsletters are intended to be short and concise and are sent via email. The e-newsletter contains links to the SHARE homepage at www.share-eu.org and other websites that can be used by the newsletter client to gain more detailed information on a particular topic.

Goal and Content of the First E-newsletter

The 1st e-newsletter intends to inform about the first year of the project. The newsletter addresses mainly the wider scientific and earthquake engineering community as the project overall is in a status of building the Euro-Mediterranean hazard model, still sampling data and debating methodological details.

The first e-newsletter provides a summary for the first 12 months of the SHARE project. The e-newsletter contains an introduction section, a section on the first annual meeting of SHARE and summaries of the achievements and future tasks of each work package. Links to more detailed information are available from the figures and the text.

The e-newsletter was sent on July 28, 2010, to about 250 email addresses, including aliases of email-lists, which implies a total number of recipients that is much larger.

The printout of the newsletter-email as received by a newsletter client is attached.

Short Technical Background

The e-newsletter is created in the content management system Drupal (<http://drupal.org/>) within which the SHARE homepage is generated. The system allows periodic newsletter creation and flexible management of newsletter clients. Interested clients can subscribe (and unsubscribe) via the SHARE homepage or can be introduced by the system manager. Details on the system can be found in dedicated Drupal documentation.

Outlook

Two more e-newsletters are planned during the project. For the upcoming newsletters it will be important to 1) increase the number of clients, 2) reach out further to the wider seismological and earthquake engineering community as well as non-expert communities, 3) increase visibility within other related EU-projects.

Subject: Newsletter - July 2010
From: SHARE <newsletter@share-eu.org>
Date: Wed, 28 Jul 2010 10:22:02 +0200
To: <j.woessner@sed.ethz.ch>



Seismic Hazard Harmonization in Europe

newsletter

From the SHARE consortium

SHARE is now entering its second year, having successfully accomplished several key results in year 1, which were presented during the First Annual Meeting in Rome (June 2010, see below). With this first issue of the SHARE digital newsletter, we take the opportunity to inform you of our activities and progress on various aspects of harmonizing seismic hazard assessment tools for the Euro-Mediterranean region. We highlight the main developments from each of SHARE's various work packages. Stay informed and do your SHARE in disseminating our message by encouraging colleagues to subscribe to the newsletter. Happy reading!

First Annual Meeting, 15-16 June 2010, Rome, Italy

SHARE's First Annual Meeting (15-16 June 2010, Rome) brought together over 60 dedicated scientists and invited experts from all over Europe. The meeting featured presentations from all work packages, several focused discussions selected on 'hot topics', and the General Assembly. SHARE's first year was focused on implementing a management and communication structure, as well as assembling an impressive amount of base data for probabilistic seismic hazard assessment, leveraging from past projects as well as state-of-the-art research. SHARE's year 1 highlights include the generation of a consensus earthquake catalogue, the compilation of seismic source and fault data across the Euro-Mediterranean region, and the compilation of an updated global strong-motion database. In addition, a preliminary version of the SHARE computational engine, developed in cooperation with the GEM1 project, was successfully used for proof-of-concept computations. SHARE is well on time with these various objectives. The meeting furthermore provided a valuable forum for all collaborators to update each other with their respective activities and progress and an opportunity to foster the steps for year two. The website features a detailed [report of the meeting](#), as well as a number of photos.



WP2: Engineering requirements and applications

To foster closer links between the seismological and engineering communities, SHARE involved representatives from the Eurocode 8 drafting committee (CEN/TC250/SC8) in the definition of engineering requirements for Probabilistic Seismic Hazard Assessment (PSHA), considering both the current needs of Eurocode 8 and future possible revisions. Consequently, in March 2010, WP2 delivered a PSHA output specification document, communicating end-user needs and requirements to the hazard modelling groups of SHARE. To further support these requirements, WP2 has also been studying seismic design codes and publications from around the world in order to identify the likely future direction that Eurocode 8 will take for what concerns issues such as performance-based design, site classification and amplification, and design spectra; a report on these issues has been drafted and is currently being reviewed.

WP3: Earthquake sources and activity rates

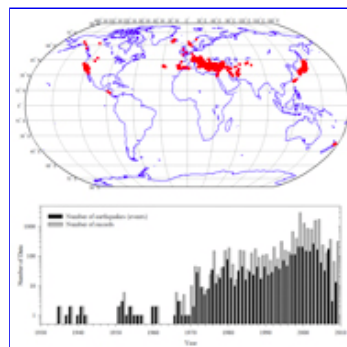
The main goal of WP3 is delivery of harmonized seismic hazard input data covering the Euro-Mediterranean region. Tasks involve 1) generation of a harmonized earthquake catalogue providing a consistently determined moment magnitude M_W , 2) compilation of a unified database of active faults and seismogenic sources, and 3) compilation of seismic source zones. Progress in task 3 has already led to a new harmonized European seismic source zone model, which will be refined in the months to come. Harmonization was achieved through numerous [coordination meetings](#) during the first year that targeted predefined sub-regions. By the end of 2010, a new earthquake catalogue and a pan-European database of active faults/seismogenic sources will be delivered, forming the base for homogeneous determination of maximum magnitude and the assessment of earthquake activity rates.



The SHARE Seismogenic Source Database as of May 2010; click for a larger image.

WP4: Strong ground modeling

WP4's team of scientists and external experts addresses various aspects of strong ground motion modeling. Their tasks include developing methodologies to adjust existing ground motion prediction equations (GMPEs) to regional conditions, as well as extending these GMPEs to take into account various European soil classifications. In addition, efforts are underway to develop extended magnitude range GMPEs using a combination of European weak-motion and global strong motion data. WP4 also faces the challenge of building European-wide consensus around various (and at times, controversial) ground shaking issues. In year 1, WP4 delivered an updated strong ground-motion databank from around the globe. In the next 6 months their work will focus on developing and delivering 1) regionally adjusted GMPEs, 2) a new European site classification scheme and associated site amplification factors, and 3) a European V_s30 map derived from a combination of topographic slope and available site-specific measurements.



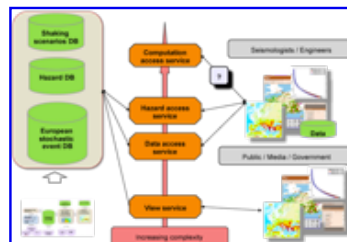
Figures on the unified extended databank that has been prepared; click for larger images.

WP5: Seismic hazard assessment

WP5 is tasked with putting together the components delivered by the previous WPs to build a community-based PSHA model for the entire European-Mediterranean region. WP5's first deliverable, drawn up in collaboration with all other WPs, was to define specifications outlining how regional centers would deliver their data to SHARE. WP5 is currently developing a logic tree design that will accommodate the inclusion of relevant uncertainties; a report on quality assurance and validation tasks for a PSHA on the Euro-Med scale is close to submission. In the upcoming months, the WP5 model building team will assess the input parameters for the Euro-Med hazard model and begin software development tasks necessary for building the hazard computation engine.

WP6: Computational infrastructure

The development of a state-of-the-art and web-portal-based presentation of harmonized and quality controlled hazard results is foreseen to be among SHARE's enduring legacies to the seismic hazard community. Users and consumers will benefit from having convenient access to quality-controlled data and consistently generated results; experts will be able to perform their own advanced, custom calculations via the web-portal. The hazard engine is based on [openSHA](#), an open-source object-oriented Java hazard computational framework that has been successfully used for proof-of-concept calculations. The computational infrastructure incorporates state-of-the-art technologies to support an evolving hazard model with intrinsic update mechanisms. The presentation technology is



The IT architecture of the SHARE model; click to see a larger image.

compatible with portals such as the [Earthquake Data Portal](#) at EMSC or [OneGeology](#), and is capable of displaying various layers of European-wide datasets by means of web-service based technology. Specifications for the IT-infrastructure have been developed, with implementation efforts scheduled in the coming months.

WP7: Dissemination

WP7 is dedicated to spreading the word about SHARE's goals, activities, and products to various potential user and stakeholder groups. In year 1, WP7 focused on developing a corporate identity for SHARE and laying the foundations for an intuitive, user-friendly website. Substantial time was invested in the design of the Graphical User Interface (GUI) for the SHARE hazard portal, which will serve as the single access point to the hazard input and output data. In year 2, WP7 will focus on: 1) spreading the SHARE message to scientific audiences at conferences like the [ESC 2010](#) and the [14th ECEE](#), 2) updating the project documentation, and 3) establishing contacts with SHARE's various stakeholder groups.

SHARE | c/o Swiss Seismological Service ETH | NO H69.1, Sonneggstrasse 5 | CH-8092 Zürich | www.share-eu.org

If you would like to unsubscribe from this newsletter, please click [here](#).