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## Newsheet #2

SERA already celebrated its first birthday last month! On this occasion, the consortium met in Bucharest for its scientific annual meeting. The partners reviewed the current status of the project, presented achievements, and discussed upcoming issues. Get a sneak peak into this event and many more project highlights in this newsletter - enjoy reading!



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## Highlights

### Scientific annual meeting in Bucharest

From 25 to 26 April 2018, the SERA community met for its first scientific annual meeting in Bucharest. Around 70 project participants took part and presented the status-quo, results and upcoming work for their tasks and work packages. Following the contributions of all SERA participants, the SERA Scientific Advisory Board described its impressions of the tasks accomplished in the first twelve months of the project. Based on those, its members will elaborate a set of recommendations for the attention of the general assembly. In addition, the SERA management board held its third meeting to discuss amongst others, details of the data management plan or measures to ensure a successful outcome of transnational access experiments. Framing the main meeting, numerous work packages took the opportunity to get together in smaller groups and to deepen discussions on specific topics.

Of course, there was also time allocated for informal exchange: Be it at the social dinner in the old town of Bucharest, or during the tour to INFP, which the local SERA team offered.



Find this article also on our website

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## First results published

The first publications in the framework of SERA are published. The study called "[A Python Library for Teaching Computation to Seismology Students](#)" (Aiken et al., 2018) is one of the most downloaded studies with more than 1'000 downloads until today.

Another study (in press) "[Impact of magnitude selection on aleatory variability associated with Ground-Motion Prediction Equations: Part I- Local, energy, and moment magnitude calibration and stress drop variability in central Italy](#)" will be published in the Bulletin of the Seismological Society of America.

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There will be a third and last call for proposals. Dates and deadlines will follow soon on the [SERA website](#) and on [sera-ta.eucentre.it](http://sera-ta.eucentre.it).

## Interview

### Towards a reference earthquake hazard model for Europe



The 2013 European Seismic Hazard Model (ESHM13) was built upon harmonized datasets and state of the art procedures without country border limitations. A goal of the joint research activities within the WP25 is to update and extent this model until 2020 to the so-called ESHM20. WP25 leader Laurentiu Danciu from ETH Zurich is giving an insight in this SERA subproject.

#### **Why does one want to harmonize the seismic hazard models in Europe?**

For various reasons. But one that comes always first, is the need to overcome the cross-border limitations of the earthquake related datasets (i.e. earthquake catalogues, active faulting, ground motion models). Earthquakes do not follow borders. Needless to say, that an earthquake occurring at the border between two countries, will have its effects crossing the political borders. Furthermore, the harmonization means also to bring together the scientific and engineering community as well as the local or national experts to homogenize the state-of-practice in seismic hazard and risk assessment.

#### **How will ESHM20 look like?**

The ESHM20 will follow the same principles as ESHM13, with state-of-the art procedures homogeneously applied for the entire pan-European region. These updates of ESHM13 will include up-to-date instrumental earthquake catalogues, refinements of local magnitude definition and calibration scales, reassessment of historical seismicity, and calibration of ground shaking models with new earthquake recordings. Priority will be given to inherent uncertainties of data, models, and their propagation in the seismic hazard assessment. The ESHM20 will reflect not only the up-to-date datasets but also the state of the art with respect to analyses methods. To this aim, we will collaborate with other joint research activities within SERA.

#### **What is key when harmonizing models across borders?**

Coordinated activities between scientific and engineering communities as well as with stakeholders are essential for the success and acceptance of the updated ESHM. Recently, a meeting was facilitated by the Joint Research Centre (JRC) in Ispra, Italy. The meeting brought together more than 30 experts from whole Europe, representing the SERA working group, [CEN/TC 250/SC 8](#) as main stakeholders of the seismic hazard model, various experts from JRC as well as the representatives of the member states. It is crucial that all involved parties commit to enhance collaboration and achieve further harmonization.

## What are the next steps to be taken?

We will start again from the national models, re-evaluate the new models for every country in Europe, understand the differences and reconcile them. The updating process has already started, with catalogue compilations (earthquake catalogues, active faults) across the entire Euro-Mediterranean region. Four regional workshops to present, discuss and review the key elements of the ESHM20 are yet to be organized, starting by the end of this year.

## A glimpse into...

### ...the virtual access portal for engineering seismology

The SERA WP20/VA3 has recently outlined a [web portal to access data and services for engineering seismology](#). It facilitates the access to the European Strong Motion Database (ESM), the European Archive of Historical Earthquake Data (AHEAD), and the European Database of Seismogenic Faults (EDSF). The portal's aim is to coordinate the currently separated and intrinsically diverse services. In future, it is planned to extend the functionalities of the existing services and provide interactions among the three data sources.



#### SERA project WP 20 - Access to data and services for engineering seismology (VA3)

The access to data and services for engineering seismology include the European Strong Motion Database (ESM), European Archive of Historical Earthquake Data (AHEAD), and the European Database of Seismogenic Faults (EDSF). This work package will strengthen and coordinate the currently separated and intrinsically distinct services to provide optimized access to data and tools for the seismological and the engineering seismology communities. The plan is also to extend the functionalities of the existing services and to provide experimental, integrated services that enable the interaction among the three data sources.



[Click here to visit the portal](#)

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...our brand-new flyers



We are happy to announce two flyers: the official project flyer provides practical information about the project's goals, work packages and partners - you can download it [here](#).

Furthermore, there is a brochure specifying each of the ten research infrastructures to which SERA offers transnational access - have a look at it by clicking [here](#).

## Outlook and events

### **17 - 22 June 2018, Cracow (Poland)**

[Seismix 2018](#) with a deep seismic sounding workshop held by WP5

### **10 July 2018, Guimarães (Portugal)**

Teachers workshop with WP3

### **2 - 7 September 2018, Valetta (Malta)**

36th General Assembly of the European Seismological Commission, with a SERA session dedicated to earthquake early warning. [More information](#)

### **September 2018, Cracow (Poland)\***

JRA1/JRA2 workshop

### **November 2018, Potsdam (Germany)\***

JRA2 workshop

### **2 - 8 November 2018\***

WP7 Community workshop

\* Detailed information will follow on the website.

The next external newsheet will be released in November 2018.

We always appreciate feedback and suggestions - please send them to the SERA communication team ([stephanie.schnydrig@sed.ethz.ch](mailto:stephanie.schnydrig@sed.ethz.ch) or [michele.marti@sed.ethz.ch](mailto:michele.marti@sed.ethz.ch)).

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