SERA and EPOS: a perfect match

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SERA, “Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe”, is a Horizon 2020 supported programme aiming to reduce the risk posed by natural and anthropogenic earthquakes. Running in parallel, SERA and EPOS-IP will offer numerous opportunities to benefit from each other, especially regarding advancements in the data and products offered in EPOS through virtual and physical access.

SERA will contribute to the enlargement of the seismic catalogue of EPOS by adding new components on earthquake engineering at the end of the EPOS implementation phase. In addition, SERA will design new services which could be beneficial to keep the EPOS catalogue services up to date. This is especially relevant for active seismology, site characterization and earthquake engineering.

Further, SERA will validate virtual access to data and products from the EPOS seismology, near-fault observatories and anthropogenic hazards TCS (Thematic Core Services). This means SERA will test EPOS services before their launch, assess their operational level and costs, and evaluate the feedback by users and stakeholder communities. The same is true for physical access. SERA is offering the first large-scale transnational access to a coherent set of big research infrastructures, enabling to test one of the planned service modes of EPOS. In total, SERA will dedicate around 50% of its resources to virtual and transnational access.

These advancements request close collaboration between both projects, therefore EPOS and SERA project members will work together on the management and technical level. This guarantees that services developed, produced and tested within SERA will be compatible with the EPOS framework.

The efforts of SERA in collaboration with EPOS and other partners will lead to a revised European Seismic Hazard reference model for consideration in the ongoing revision of the Eurocode 8 and to a first, comprehensive framework for seismic risk modeling at European scale. SERA will further develop new standards for future experimental observations in earthquake engineering, for the design of instruments and networks for observational seismology, and for reliable methodologies for real-time assessment of shaking and damage. By expanding the access to seismological observations and assisting in connecting infrastructures and communities in the fields of deep seismic sounding, experimental earthquake engineering and
site characterization, SERA facilitates collaboration and innovations in the respective areas. SERA will also effectively communicate its activities and achievements to the relevant stakeholders.

SERA comprises 26 activities, including 5 Networking Activities (NA) to improve the availability and access of data through enhanced community coordination and pooling of resources, 6 Joint Research Activities (JRA) aimed at creating new European standards for the optimal use of the data collected by the European infrastructures, Virtual Access (VA) to the 5 main European services for seismology and engineering seismology, and Transnational Access (TA) to 10 high-class experimental facilities for earthquake engineering and seismology in Europe.

The SERA kick-off was held at ETH-Zurich on May 31st 2017 and the project will run for three years.

Back to newsletter