



Romanian Educational Seismic Network Project

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Romania is one of the most active seismic countries in Europe, with more than 500 earthquakes occurring every year. The seismic hazard of Romania is relatively high and thus understanding the earthquake phenomena and their effects at the earth surface represents an important step toward the education of population in earthquake affected regions of the country and aims to raise the awareness about the earthquake risk and possible mitigation actions. In this direction, the first national educational project in the field of seismology has recently started in Romania: the ROmanian EDUcational SEISmic NETwork (ROEDUSEIS-NET) project. It involves four partners: the National Institute for Earth Physics as coordinator, the National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development “URBAN – INCERC” Bucharest, the Babeş-Bolyai University (Faculty of Environmental Sciences and Engineering) and the software firm “BETA Software”.

The project has many educational, scientific and social goals. The main educational objectives are: training students and teachers in the analysis and interpretation of seismological data, preparing of several comprehensive educational materials, designing and testing didactic activities using informatics and web-oriented tools. The scientific objective is to introduce into schools the use of advanced instruments and experimental methods that are usually restricted to research laboratories, with the main product being the creation of an earthquake waveform archive. Thus a large amount of such data will be used by students and teachers for educational purposes. For the social objectives, the project represents an effective instrument for informing and creating an awareness of the seismic risk, for experimentation into the efficacy of scientific communication, and for an increase in the direct involvement of schools and the general public.

A network of nine seismic stations with SEP seismometers will be installed in several schools in the most important seismic areas (Vrancea, Dobrogea), vulnerable cities (Bucharest, Ploiesti, Iasi) or high populated places (Cluj, Sibiu, Timisoara, Zalău). All the elements of the seismic station are especially designed for educational purposes and can be operated independently by the students and teachers themselves.

The first stage of ROEDUSEIS project was centered on the work of achievement of educational materials for all levels of pre-university education (kindergarten, primary, secondary and high school). A study of necessity preceded the achievement of educational materials. This was done through a set of questionnaires for teachers and students sent to participating schools. Their responses formed a feedback instrument for properly materials editing. The topics covered within educational materials include: seismicity (general principles, characteristics of Romanian seismicity, historical local events), structure of the Earth, measuring of earthquakes, seismic hazard and risk.