ROMANIAN EDUCATIONAL SEISMIC NETWORK: EDUCATIONAL TOOL FOR INCREASING AWARENESS OF SEISMIC RISK

Zaharia Bogdan[1], Tataru Dragos[1], Grecu Bogdan[1], Ionescu Constantin[1], Speranta Tibu[1,2], Nicoleta Bican-Brisan[3], Emil-Sever Georgescu[4]

1 National Institute for Earth Physics, Magurele, Romania, bzaharia@infp.ro
2 Institute of Educational Sciences, Bucharest, Romania
3 "Babeş-Bolyai" University, Faculty of Environment Science and Engineering, Cluj-Napoca, Romania
4 National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development "URBAN – INCERC" Bucharest, Romania

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INTRODUCTION

The first initiative of using the seismology as a tool for teaching and learning Earth Sciences in Romania belongs to the "**Romanian Educational Seismic Network**" Project (**ROEDUSEIS-NET**).

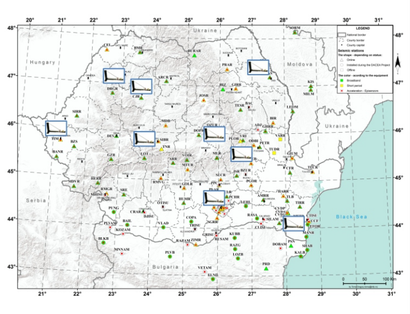
OBJECTIVES

Educational Objectives

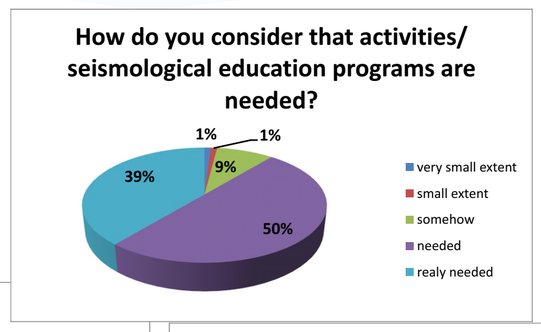
Social Objectives

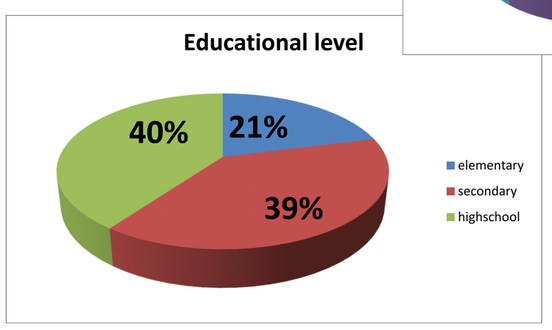
interaction between students, teachers and scientists

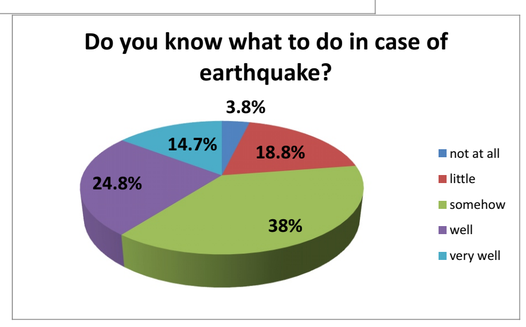
Scientific Objectives



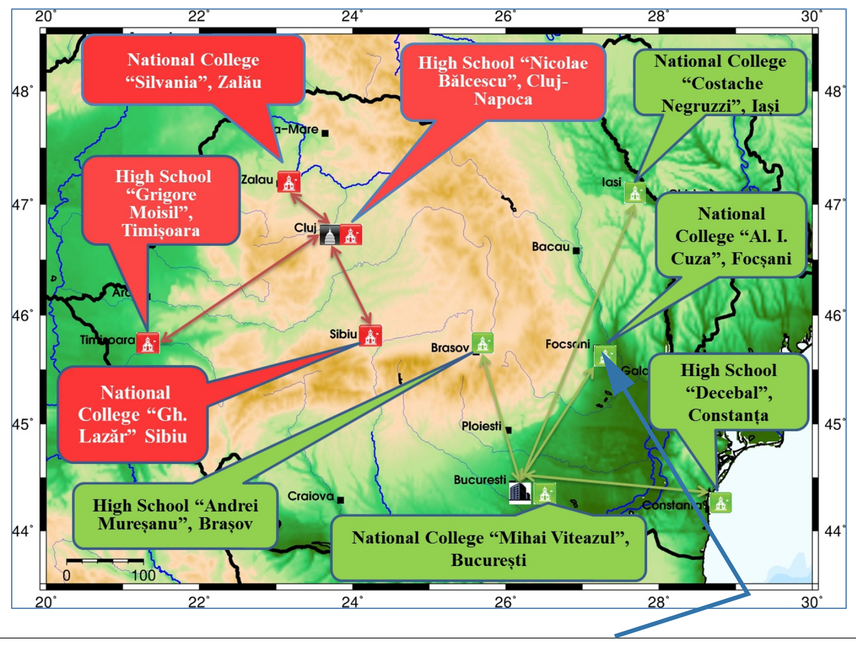
NEEDS ANALYSIS IN PARTICIPATING SCHOOLS







ROEDUSEIS NETWORK



Installing SEP seismometer system at a highschool from Vrancea epicentral area

PROMOTING INITIATIVE AND WORKSHOPS FOR TEACHERS

Project presentation developed in a workshop for teachers and schools managers in each targeted school area

Training workshops for teachers in Cluj-Napoca and Bucharest

TEACHING MODULES/ THE LABORATORY EXERCISES

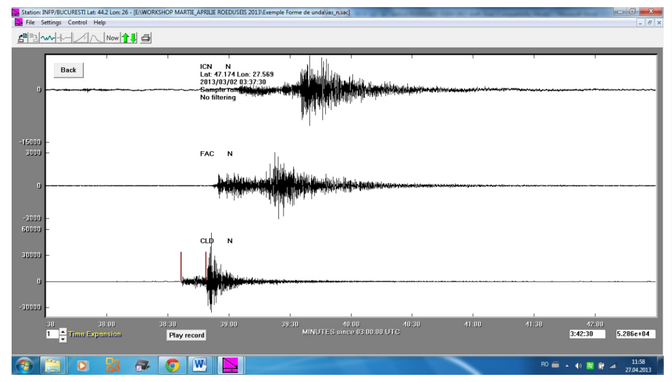
EARTHQUAKE EPICENTER LOCATION AND PHASES IDENTIFICATION

Questions addressed in this exercise:

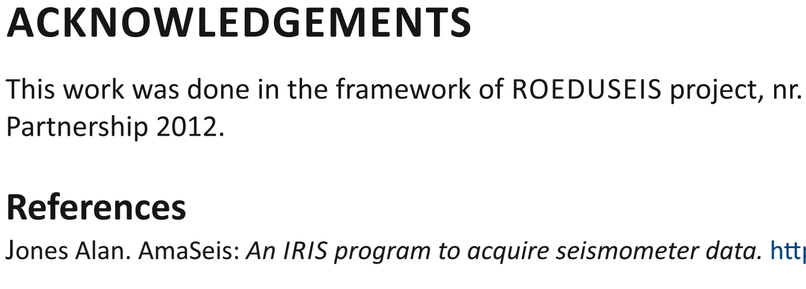
1. "How an earthquake record looks like?"
2. "What is a seismic phase and how can we identify one in the seismic record?"
3. "How can we locate an earthquake using seismic records?"

Answering these questions forms the foundation of understanding earthquake wave and records.

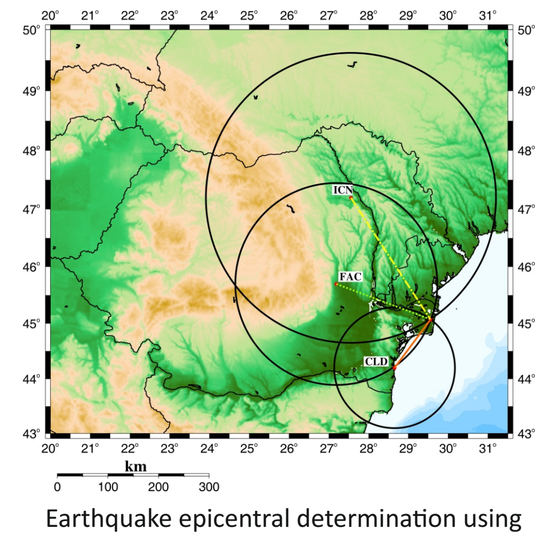
These topics are included in the National high school Physics Education Curricula (level XI) so it will be also good for reloading the information already presented but in an activity guided by the principle "learning by doing".



Seismograms recorded by three SEP seismometers from high schools



Epicentral distance estimation using travel time curves for P and S waves (left) and Amaseis (right)



Earthquake epicentral determination using triangulation method

CONCLUSIONS

- needs analysis study shows that activities/ seismological educational programs are required.
- the visits in schools and the workshops for teachers give us certitude that the use of scientific equipment like seismometer and practical activities from the educational materials will stimulate the interest of students for earth science topics and knowledge in general.
- the program provides opportunities to introduce earthquake, seismology, plate tectonics topics, earthquake effects on surrounding environment and buildings into school curriculum.
- the program can be used for a variety of educational levels from kindergarten to high school.
- the program and associated educational materials represent a wide range of information related to seismology.

ACKNOWLEDGEMENTS

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References

Jones Alan. AmaSeis: *An IRIS program to acquire seismometer data.* http://harvey.binghamton.edu/~ajones/AmaSeis.html