







# **MARINEGEOHAZARD**

Set-up and implementation of key core components of a regional early-warning system for marine geohazards of risk to the Romanian-Bulgarian Black Sea coastal area





## Newsletter Issue No. 5/July 2012

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### **MARINEGEOHAZARD:** new activities in the project

On June 28, 2012, was organized, at the Headquarters of National Research and Development Institute for Marine Geology and Geoecology - GeoEcoMar, the 4th meeting of the Steering Committee of the MARINEGEOHAZARD Project. The following persons attended the meeting: Gheorghe Oaie, PhD - General Director of NRDI GeoEcoMar, in his capacity as Project manager, Prof. Nicolae Panin, PhD - Technical co-ordinator, Constantin Sava, PhD (for Gy. Ruzsa, the Project officer), Prof. Doncho Karastanev - Director of Geological Institute of the Bulgarian Academy of Sciences, GI-BAS (Bulgaria), Partner no. 2, Asen Stefanov, PhD (for prof. A. Palazov), Partner no. 3 (Bulgaria), Constantin Ionescu, PhD - General Director of National Research and Development Institute for Earth Physics, Partner no.4 (Romania), Orlin Dimitrov, PhD - project responsible from Institute of Oceanology of Bulgarian Academy of Sciences - IO-BAS and Nikolai Dobrev, PhD Project responsible from GI-BAS. The meeting was attended by Mrs. Ana Olteanu -Financial officer, Gabriel Ion, PhD - Responsible of Activity no. 2, Radu Dimitriu, PhD -Responsible of Activity no. 4, PR Madalina Nailia - Responsible of Activity no. 5 and Mrs. Florentina Gheorghita - Legal councelor, as invited persons. Presentations of the WP's leaders showed the evolution of the project from the last six months. Prof. Nicolae Panin, the technical coordinator of the MARINEGEOHAZARD Project, concluded on the evolution of the project. The last part of the meeting was dedicated to the financial analysis of the project. All partners had different proposals for a new Adittional to the Financing Contract. This will be submited to JTS Calarasi by the lead partner (NRDI GeoEcoMar) as soon as possible.

On July 5, 2012 a new tender (Code CPV 38000000-5, SEAP nr. 135650/19.05.2012) was organized by National Research and Development Institute for Marine Geology and Geoecology - GeoEcoMar, as lead partner. The tender has as objective to contract two "turnkey systems", functional and



operational, as structured in the "Contracting Plan" of the project. The product batches, as defined in the Contracting Plan of the Project, are kept entirely at the assignment level in the budget of the project. The first "Turnkey system" can be tendered a regional early-warning system for marine geo-hazards of risk to the Romanian-Bulgarian Black-Sea coastal area (Euxinus network), but will include all necessary adjustments so that Batch 4, already assigned in August, 2011, in the first tender of the project (GeoPontica network).



The second "Turnkey system", is referred to the Batch 3 of the Contracting Plan. This represents a "support system" for the main component of the regional early-warning system and can operate independently of it, the connection of the two turnkey systems being "off-line". The final result of the tender will be know before the end of July, 2012.

#### **NEWSLETTER INTERVIU**

MARINEGEOHAZARD: people behind the project

Interview with Mr. Doncho KARASTANEV PhD, Director of the Geological Institute of Bulgarian Academy of Sciences, GI-BAS, Sofia, Bulgaria.



Question: As a geologist, how do you describe, in terms of geohazard, the Bulgarian Black Sea Coast?

Answer: Briefly, the processes that constitute the geological hazard are those ones that occur in the geological environment and create a potential hazard to people. Especially, the Bulgarian Black Sea coast has



a complex and diverse geological and tectonical structures, different geomorphological types of relief, a lot of fault zones, and various engineering geological and hydrological conditions. There are high seismicity, many landslides, intense abrasion. Also there are historical data about occurrence of tsunami phenomena.

Question: What are the major geohazards, in the territory of Bulgaria?

Answer: In Bulgaria there are over 50 known processes forming geological hazard. These are described in the Map of Geological hazards in Bulgaria, in scale 1: 500,000, issued by the former Geotechnical Laboratory of Bulgarian Academy of Sciences, now a part of Geological Institute. The most serious of them are earthquakes, landslides, loess collapsibility. These phenomena have more or less a sudden action and due to this reason they carry a high risk for the population in urban areas and high economical losses.

Question: Can these geohazards exert any influence on Bulgarian Black Sea Coast?

Answer: Of course. Landslides affect of the northern Bulgarian Black Sea coast - especially in the area between Varna and Kavarna. In the vicinity of the town of Balchik, some of the deepest landslides in the country have developed. It is assumed that tectonic movements and earthquakes are most important destabilizing factors there. In 1901, Northeastern Bulgaria was affected by an earthquake of magnitude 7.2 and its

epicenter was into the sea bottom across from the town of Shabla. There are historical information about catastrophic earthquakes affecting the region. For example, the earthquake from the 3rd century BC destroyed the Greek colony Bizone near Kavarna that sunk into the sea.

Question: How important is, for the institution that you are running, the involvement in the MARINEGEOHAZARD project?

Answer: This is an important and prestigious project. The study of geological hazards is of the highest priority of the Geological Institute. We already have a network of points for extensometric monitoring of hazardous geological processes, such as movements along active faults, landslides and rock deformations. This is our chance the former extensometric monitoring network in North-eastern Bulgarian Black sea coast existed until the end of the 1990's to be recovered. Also it is important for us to create a monitoring network of GPS stations along the coast. We believe that the MARINEGEOHAZARD project provides us a great opportunity for an excellent cooperation with colleagues from Romania, for which there is a substantial potential.

Question: In your opinion, what are the strengths and the weaknesses, in terms of collaboration with the other partners involved in project MARINEGEOHAZARD?

Answer: The fact that we start creation of a common early warning system is a powerful



goal of this project. Of course, this is just the beginning of this system. It is forthcoming to be started, developed and improved. Also we should think about the future of this system. How it will work after the project, how to maintain and how to improve and enlarge. So far it is concentrated in the northern part of the Bulgarian coast, because there the hazards are best studied and densely widespread. But we have to develop gradually the system to South - I think this will be a further objective of a next joint project.

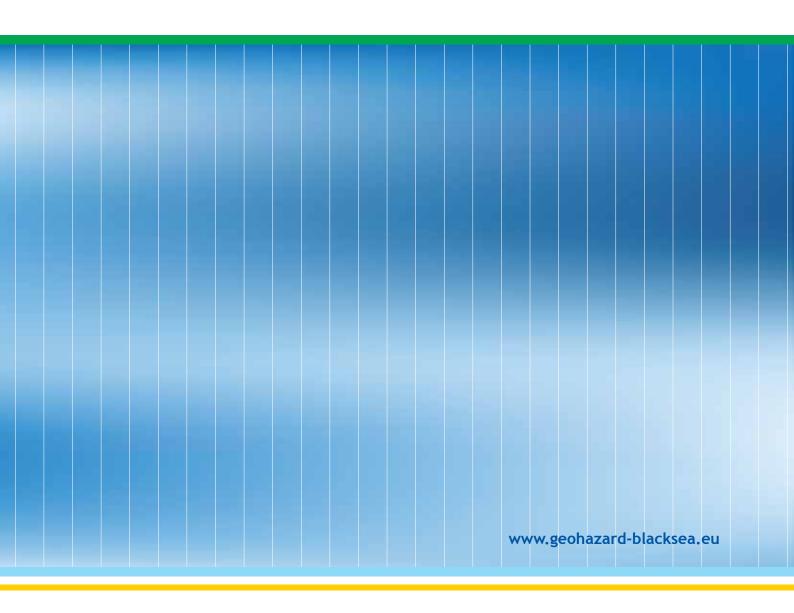
data, in case of a tsunami or other marine catastrophic events. It is studied how far the Sea can induce influence on land, in order to evacuate the population and different social-economic objectives to be protected. The project will end in 2013, when these equipment should be already installed. This action is extremely complicated, because the system will also monitor the quality of water and the various movements of the Earth's crust in the coastal area."

#### MARINEGEOHAZARD in press

REALITATEA.net, 8th of May 2012, "TSU-NAMI in the Black Sea. Research on Board of the Largest Romanian Oceanographic Vessel", interview with prof. Nicolae PANIN PhD

"Early - warning system for marine geohazards. We (editor's note: GeoEcoMar) collaborate with the Bulgarians to install an early-warning system in case of natural geo-hazards occurrence. It will be installed, on the Romanian and Bulgarian coastal areas, if we manage to finish the project, a number of equipment meant to announce some centers of tracking and processing MARINEGEOHAZARD at the 34<sup>th</sup> International Geological Congress, Brisbane, Australia, August 2012

According to the dissemination plan of the information regarding the MARINEGEOHAZARD project within the international scientific community, in the "Geohazards" Theme, related to the 34<sup>th</sup> International Geological Congress, Brisbane, Australia, an oral presentation will be dedicated to the MARINEGEOHAZARD project, according to the abstract already accepted to be published:" "MARINEGEOHAZARD - Implementation of a regional earlywarning system for marine geohazards of risk to the western part of the Black Sea basin", authors - Gheorghe OAIE, Boyko RANGUELOV, Radu DIMITRIU, Orlin DIMITROV, Nikolai DOBREV and Mihai DIACONESCU



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