



RACCE project: Newsletter #1



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NATURAL HISTORY MUSEUM OF
CRETE – UNIVERSITY OF CRETE

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What RACCE stands for

RACCE is the acronym of the project titled "Raising earthquake Awareness and Coping Children's Emotions" funded by the Civil protection 2010 call of EU.

The project is addressed to children, including those with movement disorders aiming to palliate the emotional burden and help them cope in case of a serious natural hazard (primarily seismic and secondary volcanic) by raising awareness, improving knowledge on earthquakes and simultaneously, educating relative groups (teachers, parents, volunteers and civil protection operators) on the best practices and state of the art responses.

Project's Objectives

Seismic hazards and related phenomena, as well as volcanic eruptions, in some areas, are the most common natural disasters for the Mediterranean countries. Recent earthquakes in Italy, Greece, and Turkey have proven how vulnerable, in such events, the modern cities are, while the tragedies in Sumatra, Haiti and recently Japan have shown dramatically their great impact in human lives and resources. As a consequence seismic risk is a high priority for Civil Protection worldwide. Despite other natural disasters, earthquakes are totally unpredictable making the role of prevention more important than any other case.

In EU, a huge amount of resources, efforts and actions have been dedicated to the prevention and raising of awareness for the seismic risk, as well as for the elaboration of projects and initiatives to minimize the risks for humans and economy. However, gained experience from Italy and Haiti, as well as results of other studies worldwide (Armenian experience etc.) have shown that Civil Protection was not prepared enough to palliate the emotional shock and burden that such events can cause to children. The problem appears more intense when referring to disabled children for which less attention has been paid.

The natural risk assessment and its further step in finding how to mitigate these risks, give to education and outreach activities an important and peculiar role. A long term effort in implementing innovative educational activities is essential to convey information able to contribute for a better understanding of peculiar territorial features and related hazard and risk.

The main objectives of the project are:

- ✚ to identify, share and implement best practices and methodologies gained from previous EU projects and partners activities,
- ✚ to study and analyse the needs in each participating country,
- ✚ to develop and realise innovative initiatives and actions aiming to raise awareness and increase knowledge of pupils on earthquake and volcanic hazards, including those with movement disorders,
- ✚ to train teachers, parents or other relative groups to be able to contribute to children palliation in case of seismic hazard,
- ✚ to disseminate and share project's results and outcomes to potential beneficiaries and broader audience on a constant base.

Partnership

In order to support a culture of prevention, focusing on a project in the Mediterranean area, some European Research and Educational Institutions and Museums are proposing a new approach to the intervention in case of an Earthquake to inform, protect and prevent, when possible, any irreversible situation. Three Partners from Greece, the Natural History Museum of Crete which is the coordinator, Lesvos Petrified Forest and the Greek National Earthquake Planning and Protection Organisation, as well as, four partners from Europe, the Villa Montesca and the Vesuvius Observatory from Italy, CEI from Bulgaria and Reserve Geologique de Haute Provence from France, met together to implement this project.

Natural History Museum of Crete, University of Crete, Greece:

The Natural History Museum of Crete has been functioning and operates under the framework of the University of Crete since 1980, being a pioneer institute at national and European level in the following activities:

- Study and Management of the Natural Environment of eastern Mediterranean,
- Public awareness, education and sensitization of local people as well as the visitors of the area
- Link University activities with society
- Set up a network of Ecological Museums in Greece and throughout the Eastern Mediterranean

Eastern Mediterranean is unique at a global level due to the great ecological and cultural complexity. The evenness as well as the contrast, the stability, many affinities and the special features characterizes the area.

The aim of the Natural History Museum of Crete is to study, protect and promote the special features of the Eastern Mediterranean area.

The foundation and the development of NHMC were favored by the following conditions:

- The potential of the University of Crete and its ability to promote modern technologies on the environmental field
- The geographical position of Crete, lying in the center of Eastern Mediterranean and

the southernmost part of the European Union

- The warm acceptance and support of the local society

The NHMC as a coordinating organization of RACCE program is obliged to contact management and financial activities and to communicate with EU. Additionally it will also develop a temporary exhibition, a mobile educational kit (suitcase) and provide an experiential education program tailored to the seismic simulator of the museum and the seismic simulators that other participants museums have. Furthermore, the Museum will contact local workshops and training activities addressed to teachers, parents and other groups that deal with the emotional burden on children in case of a serious natural hazard and will support volunteering in this direction through information campaigns and web dissemination of project products. (www.nhmc.uoc.gr)



Natural History Museum of Lesvos Petrified Forest, Greece:

The Natural History Museum of the Lesvos Petrified Forest was established in 1994 aiming to the study, research, promotion, preservation and protection of the Lesvos Petrified Forest, a Unique Natural Monument.

About 20 million years ago intense volcanic activity in the northern Aegean resulted in immense volcanic structures. Major craters are located in central Lesvos in the regions of Vatoussa, Agra, Anemotia, Mesotopos and Lepetymnos with impressive volcanic chambers and numerous exit points of volcanic material. Today, two thirds of Lesvos is covered by volcanic rocks. These volcanic eruptions covered a dense rich forest which existed on the western part of the island. With considerable speed, the pyroclastic material covered the trunks, branches, fruits and foliage of the forest trees. The isolation of the plant tissue from the external conditions and intense hydrothermal circulation of fluids rich in silica allowed for the perfect petrification of plant tissue under optimal conditions. These procedures led to the creation of the Lesvos Petrified Forest.

The Lesvos Petrified Forest is a founding member of the European Geoparks Network while, in 2001, the Natural History Museum of the Lesvos Petrified Forest was awarded the Eurosite Management Award for its effective management of the Lesvos

Earthquake Planning and Protection Organisation (EPPO), Greece:

The Earthquake Planning and Protection Organization (E.P.P.O.) is a Legal Entity of Public Law under the supervision of the Ministry of Infrastructure, Transport and Networks. From its foundation in 1983 and up to now, the E.P.P.O. has contributed substantially towards the formulation of the national earthquake policy and consequently the reduction of seismic risk.

Petrified Forest. In February 2004, the Petrified Forest of Lesvos was inducted into the Global Geoparks Network of UNESCO and in 2009 Lesvos took the European Destinations of Excellence award for the top sustainable tourism destination in Greece.

The Natural History Museum of Lesvos with its participation in the RACCE program offers the exchange of experiences and pilot interventions for the promotion of public protection from the seismic activity. The museum as an organization can demonstrate the results and immediately implement new educational practices that arise in educational programs conducted for children. In addition, they can also inform the citizens of the area for the new data on the seismic phenomenon.

(www.petrifiedforest.gr)



According to its founding law 1349/83, the Organization is directed by the Chairman and the Administration Board, which exercises every administration and management act, as well as by the General Manager, who supervises the three directorates.

The Directorates of the Organization are: the Directorate of Seismic Design, the Directorate of Social Seismic Design and the Economic – Administrative Directorate.



The objective of E.P.P.O. is supported by Permanent Scientific Committees and Working Groups with consultation character that consists of reputed scientists and specialists.

The objective of EPPO:

E.P.P.O. is the competent body to plan and implement effectively the national policy for earthquake protection. E.P.P.O.'s Actions are focused on the following subjects:

- **Strengthening seismic capacity of structures** through seismic design codes
- **Educating and training of officials and the population** at seismic risk (implementation of lectures and seminars for different target groups, composition and publication of informative material, etc)
- **Providing knowledge on the earthquake risk** (development of the National Network of Seismographs, editing of the Neotectonic Maps etc)

- **Planning preparedness measures** (participation on the planning of the State readiness measures, and collaboration with the involved parts)
- **Supporting applied research** (funding scientific projects with subjects relevant to the earthquake risk, participation in projects, etc)
- **Contributing in case of destructive earthquake** (activation immediately after the seismic event and collaboration with other involved parts).

The contribution of EPPO to the RACCE project is to identify and share practices and methodologies on earthquake protection issues, to study and analyse the related needs in Greece, to develop specific material in order to build up a culture of safety and resilience of the children, using knowledge and education, to evaluate the outcomes of the project and to disseminate the project's results. (www.oasp.gr)

Centro Studi e Formazione Villa Montesca, Italy:

Non-profit organization founded in February 2001, Centro Studi Villa Montesca develops innovative educational initiatives and offers a broad spectrum of multi-disciplinary research expertise and training activities, closely linked to the dynamics of a European space for professional training, education, cultural and local development.

Centro Studi has its headquarters in Villa Montesca (Città di Castello) where in 1901 Baron Leopoldo Franchetti and his wife Alice opened the first country school and where, in 1905, Baroness Alice called Maria Montessori to organise with her a seminar which gave life to the first publication of the Method for Scientific Pedagogy, universally known as the Montessori Method.

The Centre has an international reputation for excellence for research and training in: environmental economy, management, training for trainers, ICT, civil protection and cultural heritage defence, co-operation in the field of education and culture on local, regional and European level. It plays a key role in the field of education and culture both at national and European level, cooperating with national and foreign researchers and institutions to develop specific methods and tools in education.

Centro Studi Villa Montesca has a wide experience in the management of interdisciplinary, international research and training especially because it has established school and university networks and has advanced partnerships with many institutions to promote and implement European and international projects.

Centro Studi e Formazione Villa Montesca contributed to the start up of the RACCE project and to the first actions foreseen delivering questionnaires to adults and children and singling out their level of awareness about seismic events

and volcanic eruptions and so gathering relevant results to contribute to the needs analysis with specific reference to the Italian situation.

The Centre has also defined a group of experts in the field of education, psychology and civil protection, able to contribute each one with a specialized point of view to the research and identification of the unexpected emotions and behaviors of children in front of seismic events and to the study of specific edutainment activities addressed to the project target groups.

The RACCE project has been introduced to the target groups receiving great adhesion, positive feedbacks and expression of interest to the project content, objectives and to the activities that will be developed in its framework. Within RACCE, Centro Studi e Formazione Villa Montesca is actually and will continue contributing with its wide experience in the Civil Protection field with the rest of the partnership, and share with all project partners their specific and fundamental know-how. The Centre expects to develop, together with the RACCE Partners, innovative methodologies for addressing the problems that occur in case of an earthquake and the devastating effects caused by earthquakes and support children especially. (www.montesca.it)



Istituto Nazionale di Geofisica e Vulcanologia (INGV) – Osservatorio Vesuviano, Italy:

The Istituto Nazionale di Geofisica e Vulcanologia, currently one of the largest European Institute of Research in Geophysics and Volcanology, seismic and volcanoes monitoring, has its headquarters in Rome and other Sections in Milano, Bologna, Pisa, Napoli (Osservatorio Vesuviano), Catania and Palermo. It is funded by the Ministry of Education, University and Scientific Research (MIUR) and the Civil Protection Dept. INGV pays also special attention to Education and Outreach project and activities, mainly through publications, scientific exhibitions and dedicated Internet pages.

The Osservatorio Vesuviano, founded in 1841 as the first volcanological observatory in the World, conducts researches in several fields of Volcanology Geophysics and Geochemistry.

Research activities, developed at the OV Surveillance Centre in Naples, cover the comprehensive monitoring of active Neapolitan volcanoes: Vesuvius, Campi Flegrei and Ischia Island, and the seismic monitoring of Stromboli Island.

Vesuvius Observatory carries out education and outreach projects and activities in order to promote natural hazard awareness and scientific culture, even in collaboration with Italian Civil Protection Dept. The Museum of Osservatorio Vesuviano, located in the historical building on Vesuvius slope, is daily visited by students from primary school to University.

Due to this experience, the participation of Osservatorio Vesuviano to RACCE Project is of great importance, in particular, developing appropriate practices for children and interacting with other European countries educational programs. (www.ov.ingv.it)



Centre for Educational Initiatives (CEI), Bulgaria:

The Center for Educational Initiatives is a non-governmental, non-profit association which aims to improve innovative educational initiatives and facilitating educational reform through collaboration between institutions at regional and European level. The CEI was established as a program of the Balkan Colleges Foundation in January 1999. In October 2000 the CEI was registered as an independent union.

The main objectives of the Centre are:

- ✚ Help improve the quality and cost-effectiveness of reforms in the educational process in Bulgaria in policy and public administration in European integration and regional cooperation initiatives in the region.
- ✚ To support the development of educational institutions to enhance the participants in building social institutions, particularly in relation to democracy, human rights and minority rights,
- ✚ Developing and implementing various initiatives to facilitate the restructuring and modernization of curricula and materials, methodology, school management and evaluation of teaching and learning
- ✚ Facilitate collaboration in education and culture at local, regional and European level, acting as a clearinghouse to provoke dialogue and cooperation between state, citizens, NGOs, institutions and schools at all levels, including determination and expansion of school and university networks.

Association pour la gestion de la Réserve Naturelle Géologique de Haute Provence, France:

The "Réserve Géologique de Haute-Provence"

The participation of the CEI in RACCE Project will have an effect in the following areas:

1. Working with institutions: a. Further maintenance and deepening of contacts through the interviews and conversations with experts on Needs Report, b. Possible future joint activities with museum institutions, c. Possibility to force (based on identified needs and surveys) the responsible local and national institutions to take measures to raise awareness about earthquakes,
2. Working with schools (teachers, students): a. Ability to conduct training seminars for teachers involved in preparing them to conduct exercises in preparation for response to and after earthquakes, b. The availability of teaching materials (for teachers and students), providing effective implementation of instructions of classes,
3. Working with parents: Ability to organize interactive events (races, games, contests, etc.) for parents and their children, raising awareness about earthquakes.

(www.cei-bg.org)



which is covering an area of 2300 Km² incorporating 59 communities, is protecting part of the earth memory. Created in 1984, this protected area is situated in south-eastern France, between Mediterranean Sea and alpine mountains.

Founding member of the European Geoparks network, the “Réserve Géologique de Haute-Provence” is today a member of the Global Geoparks network supported by UNESCO.

The Haute-Provence geopark is one of the biggest geological open air museums with numerous fossil-rich sites and fascinating rocks formations. Each year, lots of scientists come from all over the world, to work there. From Primary Era to Quaternary, various geotopes (giant inclined fold, thrust sheet, fossils of Ichtyosaurus, ammonites, dinosaurs, sirenians, plants, bird foot-prints, old mines, huge gorges, moraines...) show us 300 million years of our geological history. Guided tours are provided to discover those Geotopes. The ammonites slab of “Digne-les-Bains” is famous all around the world with more than 1550 ammonites preserved on a limestone wall 350 square meters in size.



The Haute-Provence Geopark works on conservation and valorisation of geological heritage for sustainable territorial development through the development of geotourism, educational and cultural tourism. During discovering tours and educational trips, everyone can understand the meaning of geological heritage and why environmental protection is so important. Information centers and exhibitions also offer guided tours and special publications for all visitors.

The museums in Digne-les-Bains, Sisteron and Castellane are also good places where Sciences and Art meet. Frequent exhibitions are organized illustrating how themes of contemporary art are influenced by the relation the artists have with natural environment.

Different experiences of exchange have been organized through the geoparks network: exchange of exhibitions, meeting of shop managers, workshops on educational activities to increase awareness of children about the environment and improve their behavior of respect, responsibility and desire to protect the geological heritage.

The “Réserve Géologique de Haute-Provence” is situated in a seismic area, even though no important earthquake occurred in the last hundred years. Since May 2011, there is a new zonation for seismic risks in France and the national territory is divided into 5 zones of seismicity. The “Réserve Géologique de Haute-Provence” territory is now classified zone 4 on the National Seismic hazard map, which is an average seismic zone. So, the population has to know what an earthquake is, what is important to do before, during and after an earthquake.

In France, people and children haven't got any culture of seismic hazard or they have lost it because the last important earthquake (estimated magnitude: 6) belongs to the beginning of the XXth century. Its centenary was celebrated in 2009. The response of the people about major seismic risks in France is that it belongs to history.

They don't feel concerned. The first results of the questionnaire that have been prepared with all members of RACCE group will help draw up a kind of inventory of this situation.

The participation to the RACCE program is really helpful for increasing the awareness of children and adults on the topic of seismic hazard with two main goals:

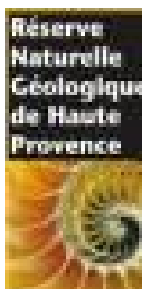
- ✚ To give children and adults a better understanding of seismic risk and the mechanism of earthquakes

- ✚ To inform the public about appropriate behavior before, during and after an earthquake.

A large event is planned for this autumn in Digne les Bains as part of the RACCE project focused on a national exhibit called "Sismo-Tour" with conferences, activities and games for children and adults about seismic risks. This manifestation will allow increasing awareness of the population on this topic. (www.resgeol04.org)

Next steps

- Project implementation is now coming to the finalization of Needs Analysis phase. A study, reporting the present situation in earthquake awareness, prevention status and policies on palliating children emotions in each participating territory, is going to be delivered.
- Next project meeting will take place in Vesuvius Observatory in Naples, from July 1st to 2nd, to discuss future activities and organize the educational projects and deliverables.
- Visit project's webpage (<http://racce.nhmc.uoc.gr>) to keep informed on planning activities and news.



Istituto Nazionale di
Geofisica e Vulcanologia
Osservatorio Vesuviano