



## **Contribution to the public information on seismic and volcanic hazard in the Azores region**

Ana Medeiros, Teresa Ferreira, João Luis Gaspar, and Maria Gabriela Queiroz

Universidade dos Açores, Centro de Vulcanologia e Avaliação de Riscos Geológicos, Ponta Delgada, Portugal  
(ana.ra.medeiros@azores.gov.pt, +351 296 650 142)

Natural disasters such as tsunamis, earthquakes, volcanic eruptions and landslides are major phenomena that witness the power of our planet and are a signal of its constant evolution. Their occurrence is well documented in the evolution of the Azores archipelago and is well recorded in the last hundreds and thousands of years, not only in the islands geological history but also in the submarine environment. So this region has unique characteristics regarding volcanism, seismicity and other geological risks allowing it to be a natural laboratory for the advance of the scientific knowledge in these domains. And the main achievements should be disseminated to the public, using the recent world wide web tools.

The Azores archipelago is located in the North Atlantic in a region dominated by the triple junction between North American, Eurasian, Nubian lithospheric plates, whose boundaries are the Mid-Atlantic Ridge, the Terceira Rift and the Gloria Fault. Besides and is the site of important magmatic processes. This region is also the place where importante magmatic processes are going on.

Due to its geodynamic setting the Azores archipelago has been affected in the past at least by 28 volcanic eruptions and 25 destructive earthquakes.

The main objective of this work is to inform and help the Azorean population to understand their vulnerability to some geological hazards based in what happened in the past and what might happen in the future, providing them the proper awareness about the existing risk in the region.

For this proposal all available information about historic earthquakes and volcanic eruptions was selected and summarized considering its relevance for thematic contents preparation. Predefined templates and content homogeneity were taken into account as well as the use of a rigorous and accessible scientific language for the promotion of a scientific culture and knowledge dissemination.

For destructive earthquakes a database was prepared, containing the characteristics associated to each event, like date, epicentral locations, magnitudes and other elements and it was also included isoseismal maps.

A database with the information relative to each historical eruption, like starting date, location of the eruptive centers, types of eruption, brief description of the eruptive activity, VEI, magnitudes and other elements that characterize and are helpful to understand the eruption and its associated risk.

The Azores active volcanoes were also included in a database where is resumed all the significant information about each volcano or volcanic system such as their location, eruptive activity and a brief reference to its eruptive history.

This information is accessible for all population, including local authorities and public in general in the CVARG website ([www.cvarg.azores.gov.pt](http://www.cvarg.azores.gov.pt)), contributing for the dissemination of volcanic and seismic hazard and risk and turning possible the increase of public awareness and the promotion of a safety education for natural disasters contributing for the risk mitigation.