Geophysical Research Abstracts,
Vol. 11, EGU2009-12578, 2009
EGU General Assembly 2009

Municipal Emergency Management System: a strategy towards information and managing resources

J. Pacheco

Centro de Vulcanologia e Avaliação de Riscos Geológicos, Universidade dos Açores, Ponta Delgada, Portugal (josé.mr.pacheco@notes.uac.pt / Fax: +351 296 650 142)

The Azores archipelago is located in the North Atlantic Ocean, on a complex geological setting where the North American, Eurasian and African plates meet. Throughout its history the geological and meteorological hazards have been the most significant and had cause thousands of deaths and extensive damages.
To prepare and mitigate the impact of catastrophic events there are emergency plans to guide the authorities and to instruct the population. However, a key point on the effectiveness of any emergency plan is the efficiency on getting the relevant information from the existing plans and conveying quality information to the operational teams and to the population.
To address this issue the Municipal Emergency Management System was designed as a modular software with a core database and two different applications; one back-office to input and manage data and one front-end to query the database. The database is installed in a server and the system runs over an Intranet or the Internet, allowing its management and query to be done anywhere.
The information on the system comprises two sets of data: (a) static data, regarding guidelines from the official Municipal Emergency Plan and a broad characterization of the county that does not need to be updated frequently (geography, geomorphology, climatology and the main hazards to consider) and (b) dynamic information, concerning data that requires regular updating such as available resources, administrative officials, pertinent private organisations etc..
All dynamic data in the core database is organised in three layers: (1) administrative organisations with geographical expression (such as province or district), (2) entities with capability to provide aid on provisions, accommodations, health, infrastructures, construction, transportation and security (public services, non-governmental organisations, enterprises or individual persons) and (3) operative information (applicable laws, tasks of each operative structure of the emergency plan)
All entities are indexed to a geographic region, corresponding to an administrative organisation, and all the resources available on the county are indexed to an entity and ultimately to one identified person.
The back-office operations are performed through a web browser. In order to ensure the quality of the data, the system requires the operator to register with a valid login and keeps a record of every operation performed by each registered user.
The frontend also runs over a web browser and is the key vector towards an efficient communication with the operative teams and the general public.
Its menu structure was designed to provide direct answers to the main questions raised on emergency situations, such as where dislodged population will be accommodate? How to transport them? How to provide provisions? Who has the provisions? How to contact the pertinent persons?
The front-end, however, has two distinct access levels. The general public access level allows browsing through the structure of the emergency plan the identification of the public officials involved in the plan and their respective roles, and to get logistic information regarding meeting points, resources available, etc...
The unlimited access is restricted to authorized personnel with a valid login and grants the access to report forms to be used during the emergency situations as well as information considered confidential such as providers of the available resources and their contacts.
The outcome of the Municipal Emergency Management System is a light structure, accessible from anywhere and managed at municipal level, but with the potential to develop a network of emergency management nodes that can work cooperatively since each county can provide the surrounding counties with access to its database.