



## **ETINDE. Improving the role of a methodological approach and ancillary ethnoarchaeological data application for place vulnerability and resilience to a multi-hazard environment: Mt. Cameroon volcano case study [MIA-VITA project -FP7-ENV-2007-1]**

Maria Ilaria Pannaccione Apa (1), Emmanuel Kouokam (2), Robert Mbe Akoko (3), Silvia Peppoloni (1), Maria Fabrizia Buongiorno (1), and Pierre Thierry (4)

(1) Istituto Nazionale di Geofisica e Vulcanologia (INGV), Rome, Italy (mariailaria.pannaccioneapa@ingv.it, silvia.peppoloni@ingv.it, fabrizia.buongiorno@ingv.it), (2) Ministère de l'Industrie, des Mines et du Développement Technologique (MINIMIDT), Yaounde, Cameroun (e\_kouokam@yahoo.fr), (3) Department of Sociology and Anthropology, University of Buea, Buea, Cameroon (akokorm@yahoo.com), (4) Bureau de Recherches Géologiques et Minières (BRGM), Orleans, France (p.thierry@brgm.fr)

The FP7 MIA-VITA [Mitigate and assess risk from volcanic impact on terrain and human activities] project has been designed to address multidisciplinary aspects of volcanic threat assessment and management from prevention to crisis management recovery.

In the socio-economic analysis carried out at Mt. Cameroon Bakweri and Bakossi ethnic groups, ancillary ethnoarchaeological information has been included to point out the cultural interaction between the volcano and its residents.

In 2009-2011, ethnoanthropological surveys and interviews for data collection were carried out at Buea, Limbe, West Coast, Tiko and Muyuka sub-divisions adjacent to Mt. Cameroon.

One of the outstanding results from the Bakweri and Bakossi cultural tradition study: natural hazards are managed and produced by supernatural forces, as: Epasa Moto, God of the Mountain (Mt. Cameroon volcano) and Nyango Na Nwana, Goddess of the sea (Gulf of Guinea).

In the case of Mount Cameroon, people may seek the spirit or gods of the mountain before farming, hunting and most recently the undertaking of the Mount Cameroon annual race are done.

The spirit of this mountain must be seek to avert or stop a volcanic eruption because the eruption is attributed to the anger of the spirit.

Among the Northern Bakweri, the association of spirits with the mountain could also be explained in terms of the importance of the mountain to the people.

Most of their farming and hunting is done on the Mountain. Some forest products, for instance, wood for building and furniture is obtained from the forest of the mountain; this implies that the people rely on the Mountain for food, game and architecture/furniture etc.

In addition, the eruption of the mountain is something which affects the people. It does not only destroy property, it frustrates people and takes away human lives when it occurs.

Because of this economic importance of the Mountain and its unexpected and unwanted eruption, the tendency is to believe that it has some supernatural force dwelling in it: the god EPASA MOTO. Since social group is forever indebted to the gods because of his deceptive behavior, it must remedy to calm the anger of the gods. Rites are managed by traditional chiefs in the name of the group making offerings and sacrifices, which preciousness is directly proportional to the request; The perception of vulnerability to natural disasters is mitigated by ritual practices devoted to keep under control the Genius Loci (EPASA MOTO) negative reactions as eruptions, tidal waves, etc..

According with landscape evolution, the present work will describe the anthropogenic remodeled space and the related Vulnerability Hazards-of-Place Model elaborated by S. Cutter in 1996.

Results will suggest a good approach to local geo-hazards management through traditional methods. Principles of Geoethics are important tools in managing natural hazards in different cultural contexts. A geoethical approach in risk management guarantees the respect for beliefs and cultural traditions and the development of strategies respectful of values and sensibilities of the involved populations.