

## **Mitigating Volcanic Crises: Practical Solutions for the 21st Century**

London, U.K., 31 August to 2 September 2004

### **SURVEYING RESIDENTIAL BUILDING STOCK VULNERABILITY TO VOLCANIC HAZARDS.**

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The EU-funded EXPLORIS project (Explosive Eruption Risk and Decision Support for EU Populations Threatened by Volcanoes) focuses on three main areas of enquiry: 1. The quantification of risk in association with various eruption scenarios; 2. the assessment of the impact of such events on the communities living in these high risk areas; and 3. the mitigation of such disaster scenarios. This paper presents work done in the second category, impact assessment, to develop and produce an inventory of the residential building stock in vulnerable areas. The methodology produced for the inventorying and classifying the surveyed building stock aims to aid the assessment of the impacts of four volcanic phenomena: pyroclastic flows, tephra fallout, earthquakes and volcano-induced fires. The vulnerability of the residential buildings in the surveyed areas represents an important factor in the estimation of loss of human life and effects on infrastructure and services as well as insured losses. This paper will discuss these issues as the main purpose for collecting and analysing vulnerability data and will present the methods developed in the process. Four European volcanoes are included in the EXPLORIS project, of which we use La Soufrière, Guadeloupe as a case study.