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Enhancing resilience of communities and territories facing natural and na-tech hazards

Hormoz Modaressi (1), Evelyne Foerster (1), Amelie Vagner (1), and the ENSURE Project Team

(1) BRGM, France, (2) Universita degli Studi di Napoli Federico II, Italy, (3) Universiteit Twente, the Netherlands, (4) Université de Genève, Switzerland, (5) Harokopio University of Athens, Greece, (6) Tel Aviv University, Israel, (7) Middlesex Universtiy Higher Education Corporation, UK, (8) T6 Ecosystems srl, Italy, (9) Politecnico di Milano, Italy, (10) Potsdam Institut fur Klimafolgenforschung, Germany

Vulnerability has long been a key concept in disaster literature. However, the majority of studies have focused on research related to the hazard, therefore neglecting the influence of the vulnerability of exposed systems to the consequences of such hazards, such as the death toll and losses from natural or man-made disasters. There is also a need to better identify and measure the ability of 'at risk' and affected communities and territorial systems to respond to such disasters. This is the starting point of the ENSURE project.

The overall objective of ENSURE is to develop a new methodological framework for Integrated Multi-Scale Vulnerability Assessment.
More precisely, ENSURE aims at achieving the following main objectives:
• to improve the understanding of the articulated nature of the concept of vulnerability at different spatial scales;
• to analyze the relationship between the concept of vulnerability and other concepts such as "risk", "damage", "exposure", "resilience" and "adaptation";
• to develop the integration and connection of different types of vulnerability;
• to investigate the temporal and spatial variability of the relations between different types of vulnerability and different types of damage;
• to propose new, and improve existing vulnerability assessment models and parameters.

This paper presents the general approach of the ENSURE project. The framework is based on a comprehensive, integrated and inter-disciplinary understanding of how mitigation strategies can be improved in the future. Such a framework should contribute to the reduction of human losses, economic damage and social disruption due to extreme events striking communities exposed to a variety of natural hazards, as well as to the potential consequences of Climate Change.

The application of the Integrated conceptual model is done on three case studies (Western Peloponese, Greece; Northern Negev, Israel; Vulcano Island, Italy).

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