



Application of DECATASTROPHIZE (UsE of SDSS and MCDA To prepAre for diSasTeRs Or Plan for multplE HaZards) Decision Support Systems (DSS) tool

Christodoulos Mettas (1), Evagorou Evagoras (1), Marinos Papadopoulos (2), Alexia Konstantinou (2), Charalambos Panayiotou (3), Anna Foka (3), Samuel Auclair (4), Daniel Monfort (4), Nikolas Kampanis (5), Katerina Spanoudaki (5), Costas Synolakis (6), Nikos Kalligeris (6), Laszlo Marek (7), Iskender Forioso (8), Simone Giannecchini (9), Christian Iasio (9), Inmaculada Aquado (10), Irene Nunez (10), Andreas Damalas (1), and Diofantos Hadjimitsis (1)

(1) ERATOSTHENES Research Centre, Department of Civil Engineering and Geomatics, School of Engineering and Technology, Cyprus University of Technology, Limassol, Cyprus (christodoulos.mettas@cut.ac.cy), (2) Cyprus Civil Defence, (3) Atlantis Consulting Limited, (4) French Geological Survey / Bureau de Recherches Géologiques et Minières, (5) Foundation for Research and Technology, (6) Technical University of Crete, (7) Geoview Systems Limited, (8) European Research Institute, (9) GeoSolutions, (10) University of Alcalá

DECATASTROPHIZE (UsE of SDSS and MCDA To prepAre for diSasTeRs Or Plan for multplE HaZards) was financed from the European Union's Directorate-General humanitarian aid and civil protection (DG-ECHO) under Grant Agreement ECHO/SUB/2015/713788/PREP02. This project developed tools that can be used effectively in early warning and alert systems ensuring lives and protecting people, properties and the environment from natural/man-made hazards. The aim of the project was to use/adapt existing models, systems or tools in an interactive and synergic capacity to prepare for disasters and plan for multi-hazard incidents. Through DECATASTROPHIZE, a web-based Geo-Spatial Early-warning Decision Support Systems (GE-DSS) platform was developed in combination with Geographic Information Systems (GIS), keeping systems interoperability and organizations cooperation in mind. The software tool integrates and improves Open Geospatial Consortium (OGC) compliant tools, including a number of open standards, and is provided as Open Source code. The GE-DSS platform was tested through Table Top Exercises (TTXs) that took place in each partner country (Cyprus, Greece, France, Hungary, Italy and Spain) supporting decision makers in early warning and emergency management scenarios concerning single and multiple hazards as: floods, wildfires, earthquakes, oil spills and coastal erosion. The project achieved to 1) advance and improve preparedness, as well as enhance awareness of civil protection professionals and volunteers in emergency management, particularly considering early warning, impact assessment and mitigation of impacts, 2) support and complement the efforts of the partner countries for the protection of citizens, environment and property in the event of natural and man-made disasters, by stimulating the systematization of existing and new data useful in emergency management and 3) exchange information, experience, good practice and knowledge aimed at improving the performance of parties involved in civil protection (both private and public professionals and volunteers).