



The U-Geohaz project: Sentinel-1 to support geohazards early warning systems and impact assessment

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A relevant change in the use of SAR interferometry for risk management and reduction has been marked by the launch of the S-1 A and S-1 B, in 2014 and 2016 respectively, which ensure a SAR acquisition every 6 days above the entire Earth and make images available few hours after the acquisition without costs and limitations. S-1 represents a reliable and low cost tool for remote monitoring at both local and national-scale, which can potentially be exploited by administrative entities and Civil Protection authorities involved in risk management activities. “U-Geohaz, Geohazard impact assessment for urban areas” is a two-year project, started the 1st of January 2018, co-funded by the European Commission, Directorate-General Humanitarian Aid and Civil Protection (ECHO). The main aim of the project is to develop a methodology based on the SAR images acquired by Sentinel-1 (S-1) constellation to assess continuously the potential impact of geohazards on urban areas and critical infrastructures. Starting from the experience and the results obtained in the previous ECHO project SAFETY (2016-2017), the aim is to make a step forward, from periodically updated maps to a near-real time geohazards mapping and monitoring. U-Geohaz will provide tools to exploit the 6-days repeatability of S1 to support early warning systems for landslide and volcanic geohazards and to evaluate the expected damage. The consortium of U-Geohaz is composed of 18 partners, from 11 European countries, including 12 Geological Surveys and 3 Civil Protection Authorities that will support the implementation of tools to be operationally useful in risk management. The use of all the developed products will be implemented in the activities of the Civil Protection Authorities involved in the project. All the implemented procedure and tools are tested and will be demonstrated on the real test scenarios of Canary Island (Gran Canaria, Tenerife and El Hierro islands, Spain) and Valle d’Aosta (Italy). The main results achieved over the two test-sites and the future steps of the project will be presented and discussed.