



Lessons learnt from Volcanoes' Night I-II-III - a Marie Curie Researchers' Night project series dedicated to geosciences

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European Researchers' Nights (ERNs) are a pan-European series of events funded by the European Commission, organised on the last Friday of every September since 2005. ERNs mobilise scientific, academic and research organisations with the aim of giving the public the opportunity to meet researchers in an informal setting. The overall objective of ERNs is to achieve better awareness among the general public concerning the importance of science in everyday life and to combat stereotypes about researchers. The longer-term strategic objective of ERNs is to encourage young people to embark on a scientific career.

Volcanoes' Night I-II-III has been an ERN project series funded by the EC FP7 and H2020 programmes between 2012-2015 (EC contract No. 316558, 610050, 633310, www.nochedevolcanes.es). The concept of Volcanoes' Night was created by researchers from the Canary Islands, Spain, where both the researchers and the public live in the close vicinity of volcanoes. The objective of the project was to use volcanoes as a background against which the role of geoscientists could be explained to the public. The scope of Volcanoes' Night was exclusively dedicated to geoscience, and in this respect it stands out among all other ERN projects, which are always more general in scope.

During its four years of EC funding, the geographical coverage of Volcanoes' Night expanded substantially from a single location in 2012 (Fuencaliente de La Palma, Spain) to a dozen locations in 2015, mobilising multiple scientific organisations, researchers, and public authorities for engagement with the public. The last EC-funded project, Volcanoes' Night III, which was organised in 2014 and 2015, engaged approximately 21,000 visitors through its outreach activities, which included experiments, science cafés, volcano movies, My Day presentations, excursions, science workshops and more.

The impact of the project was carefully assessed via surveys and social studies during its lifetime, and an Impact Assessment Report was submitted to the EC after the conclusion of each of the three projects. According to an on-site survey undertaken in 2015, 78.5% of responders reported that their initial understanding of the work of geoscientists improved as a result of the activities organised during the event. The conclusions from the Impact Assessment studies can be used to synthesise methodological recommendations for other organisations that may consider the organisation of similar public outreach actions for geosciences in the future.

Scientific experiments are most efficient to raise interest if they are designed for direct engagement with the public so participants can participate in the experiments themselves as opposed to being simple observers. Scientific talks should always include a good level of interaction with the public, for example integrated experiments, quizzes, and real-time surveys. Edutainment options should be finalised in agreement with the audience so that the most interesting ones are selected - this is especially important to create meaningful engagement with young people. The definition of the scope of activities in a way that allows for the inclusion of interdisciplinary subjects (e.g. the intersection of geoscience and robotics) can raise the interest of an even greater public community.