Geophysical Research Abstracts Vol. 19, EGU2017-152, 2017 EGU General Assembly 2017 © Author(s) 2016. CC Attribution 3.0 License.



Effective Two-way Communication of Environmental Hazards: Understanding Public Perception in the UK

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Climate change intensified hazards, such as floods and landslides, require exploring renewed ways of protecting at-risk communities (World Economic Forum 2016). Scientists are being encouraged to explore new pathways to work closely with affected communities in search of experiential knowledge that is able to complement and extend scientific knowledge (see for instance Whatmore and Landström 2011 and Höpner et al. 2010).

Effective two-way communication of environmental hazards is, however, a challenge. Besides considering factors such as the purpose of communication, or the characteristics of the different formats; effective communication has to carefully acknowledge the personal framework of the individuals involved. Existing experiences, values, beliefs, and needs are critical determinants of the way they perceive and relate to these hazards, and in turn, of the communication process in which they are involved (Longnecker 2016 and Gibson et al. 2016).

Our study builds on the need to analyze how the public perceives environmental hazards in order to establish forms of communication that work. Here we present early findings of a survey analysing the UK public's perception and outline how survey results can guide more effective two-way communication practices between scientists and affected communities.

We explore the perception of environmental hazards in terms of how informed and concerned the public is, as well as how much ownership they claim over these phenomena. In order to gain a more accurate image, we study environmental hazards in relation to other risks threatening the UK, such as large-scale involuntary migration or unemployment (World Economic Forum 2016, Bord et al. 1998). We also explore information consumption in relation to environmental hazards and the public's involvement in advancing knowledge. All these questions are accompanied by an extensive demographics section that allows us to ascertain how the context or environment in which an individual is embedded influences perception (Longnecker 2016). This study also explores survey responses of geoscientists, or scientists working within the field of environmental hazards, as the baseline with which to compare public perception. In doing this, we aim to push for new formats of communication that are able to encompass knowledge and perception differences, as well as to draw attention to the need for a redistribution of expertise.

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