Managing Flash Floods: Risk Perception from a Cultural Perspective

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Risk perception research has been used in natural hazards mitigation by investigating how people might respond to hazard information, and how risk managers might alter warnings or dissemination methods to stimulate a wider practice of what they consider the "appropriate" response. These studies often assume that actions result from either universal human nature or from psychological traits unique to each individual. In most cases, risk managers attribute failure to respond appropriately to irrationality or lack of information (Douglas, 1992; Jasanoff, 1998; Slovic, 1999; Frewer, 2004). Thus, risk communication research and practice have focused on tailoring the message until people understand and cease engagement in risk-taking behaviors (Douglas, 1992; Kasperson & Kasperson, 2005). However, risk perception studies often fail to include the assessment of how factors such as cultural context and social networks may affect how people perceive threats and respond to warnings, not to mention how cultural norms may influence the distribution of vulnerability. The studies that do consider the effects of culture tend to focus on a singular aspect, and many do not contain information that risk managers may utilize in practical application.

This study aims to fill this research gap by working directly with risk managers to create a comprehensive understanding of how several cultural factors affect propensity to engage in risk-taking behavior, using the example of crossing a flooded roadway or wash. A workshop was held to introduce flood risk managers to the theoretical framework and literature behind this project, to inform the primary investigator about the issues that flood risk managers face in decision-making and flood mitigation implementation, and to collaboratively design a survey questionnaire. Citizens of Tucson, Arizona filled out surveys assessing cultural characteristics as well as historical and hypothetical behavior during flash flood scenarios. The cultural factors explored here include trust, social incorporation, self- and community-efficacy, social autonomy, and time orientation. If cultural variation appears to predict stated behavior, this study confirms that risk managers may benefit from considering cultural variation in order to effectively execute hazard mitigation.