

## **Response to Flash Flood Warnings: State of our Knowledge**

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Even while advances in meteorological and hydrological sciences are allowing for more accurate and more timely warnings for flash floods, losses are not decreasing. While efforts to improve accuracy and to increase lead times should continue, so too should work on understanding responses to warnings that are issued. On one hand, we know that vulnerable populations may be unable to take appropriate action, and we know that some will simply make the wrong decision, sometimes for what are good reasons at the time and sometimes for not such good reasons. How people make decisions under conditions of uncertainty and how and why these decisions differ among various groups, based on such factors as local circumstances, location, age, culture, race, and ethnicity are issues social scientists have addressed. Part of this involves people's perceptions, but it also involves how uncertainty is communicated. Critical to this is how various actors in the process recognize this and incorporate it into what they do (with respect to forecasts and warnings, for example). We do not have all of the answers, but an overview of what we know can begin to move us toward focusing on those aspects of warning and warning response that are most salient to both forecasters and emergency managers.