

# **UNDERSTANDING FLOOD HAZARDS AND VULNERABILITIES: NEW APPROACHES TO COMPREHENSIVE FLOOD RISK ASSESSMENT IN THE U.K.**

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Flood risk assessment in the U.K. has traditionally considered the hazard to be principally flood depth and the vulnerability to be principally damage resulting from water contact with property for a specified but arbitrary duration. Some efforts have factored in velocity and salinity at a superficial level while other research has recently examined the danger of flood hazard parameters to human life. This work is valuable, but it has tended to ignore both the physical and conceptual processes which lead from flood hazards such as rainfall and sewage to a flood disaster with consequences such as property damage, casualties, and societal disruption. The work presented here uses a detailed analysis to propose a framework describing which flood vulnerabilities are susceptible to which flood hazards and how this fundamental knowledge translates into an understanding of the creation of flood risks. A flood damage scale is produced and a conceptual map of flood risk is drawn through categorising flood hazards and vulnerabilities and exploring their interaction. The physical description of flood hazard parameters and the parameters' potential effects form the basis for communication strategies focused on risk and vulnerability reduction.