Information from citizens could improve flood modelling

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With increasing floods and flash floods in recent decades, researchers are working to develop improved methods for flood prevention and warning. A new *Journal of Flood Risk Management* study points to the

potential of an approach that integrates water level data reported by citizens into flood forecasting models.

The study found that although simple, the Hydrological Alert Model with Participatory Basis (HAMPB) model has the capacity to improve forecasting. The case study was carried out in a small, almost fully urbanized catchment called Monjolinho, located in Brazil.

"One important role played by hydrologists is bringing safety and wellbeing to individuals and communities. In this study, we want to engage the local community and their knowledge to better understand and respond to the natural disasters' threats, bringing questions to debate about the effectiveness of citizen science to this end," said lead author Maria Clara Fava, of the University of São Paulo. "In the case of HAMPB model, we propose a methodology to use information about urban rivers collected by citizens considering the increasing availability of smartphones that makes every citizen a 'human sensor,' thus uniting scientists and citizens to produce science for improving flood alerts."