



Problems related to natural drainage channels in urban areas during flash flood events

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The natural hazards are of particular importance in urban areas because of population density and complex territorial structure. The choices of urban planning should take into account the risks associated with extreme natural events in terms of prevention, protection and intervention.

The Department of Environment Engineering and Physics of the University of Basilicata (DIFA) in collaboration with some municipalities of Basilicata, southern Italy, verified the urban vulnerability in relation to the risk of flash flood along natural drainage network in urban areas. This study allowed to emphasize that good governance practices of a territory can become an effective tool to mitigate those risks.

The critical situations verified along rivers, streams and ditches in urban areas, have been studied using models of hydrological and hydrodynamic simulation in order to identify both possible scenarios of flooding resulting from hydrological extreme events and interventions of risk mitigation.