



Flood Mapping in urban Area: Models Comparison

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Flood inundation map, in terms of water depth and current velocity, can recover a crucial role in the definition of risk areas and the relative mitigation efforts in urban areas as well along flood plain. Discussion is open on the type of hydrological and hydraulic methods adopted in computing the inundation map, often not supported from observed data. Most of academic and commercial mathematical models resolving the De Saint Venant equations in mono or bidimensional approach, have problems for complex boundary condition. Steep slopes, geometric discontinuities, roughness of initially dry areas can be the main problems encountered. The paper present an approach for flood map definition in urban areas, based on the research of the critical hydrograph for the inundation volume and compare bidimensional routing model and channel network scheme in a very urbanized area.