



Simulation of inundation caused by typhoon heavy rainfall using a physically based two-dimensional model

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The heavy rain brought by typhoons frequently causes inundation and results in property damage and loss of life. To mitigate hazards due to typhoons, typhoon events with rainfall data available are also collected. The physically based two-dimensional model, called FLO-2D, is employed to construct an inundation simulation model for evaluating the effect of the inundation hazard. An actual application is conducted to clearly simulate the inundation processes in the downstream of Zhuo-Shui River basin. The result of Manning's n value separated as agricultural land and town is correspond to the actual situation according to land use. Moreover, the inundation situation of 48 h rainfall is the worst in the downstream region. In conclusion, the inundation hazard caused by typhoon heavy rainfall often leads to loss of life and property damage.