Flood Forecast by the Distributed Hydrological Model EasyDHM Coupled with the WRF Model

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In this paper, the Weather Research and Forecasting model WRF was used for the forecasting of precipitation, which is the main driving power for flood events. The distributed hydrologic model EasyDHM with its flood module was presented for hydrological simulation and flood foresting. The above two models were coupled together and were applied to the catchment of the Three Gauges Dam. The results showed that the daily precipitation forecasted by the WRF model was quite satisfactory, especially for the large rain. The flood events at three different hydrological stations showed that, with the introduction of forecasted precipitation, the forecasting precision of the flood processes has been increased obviously, and the foreseeable period is extended as well.