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Real-time Flood Forecasting in China Using TOPKAPI

E. Todini (1) and C. Mazzetti ()

(1) University of Bologna, Earth and Geo Environmental Sciences, Bologna, Italy (ezio.todini@unibo.it), (2) ProGeA Srl, Bologna, Italy (cinzia.mazzetti@progea.net)

The early development of real time flood forecasting in China can be dated at the beginning of the ‘80s of last century. It was at that time that a group of researchers, lead by Prof. Wang Juemou, set up a quasi real-time system at the Ministry of Water Resources, based on a 6 hour collection of data dispatched to Bei Jing via telegraph from all parts of China. Forecasts were then available for the major rivers, such as the Yellow River, the Yangtze River, the Huai He River and the Pearl River. Models were based on the Xinan Jiang model developed by Prof. Zhao and on the S-CLS, namely the combination of the Xinan Jiang model with the CLS, developed by Todini.
Later on, other models were also introduced, such as the Sacramento model on the Yellow River on behalf of the Yellow River Conservancy Commission, the Arno model on the Fuchun River, within the frame of a EU funded project and the Mike 11 model on the Yangtze.
More recently the distributed hydrological model TOPKAPI, developed at the University of Bologna, was introduced in China as part of the renewal and upgrade of the real time flood forecasting systems in the of Sanmenxia to Huayuankou reach of the Yellow River as well as on the Fuchun River from the outlet of the Xinan Jiang reservoir to Hangzhou.
The paper will describe the new real-time flood forecasting systems and their extended performances in the light of the historical development that has taken place during more than 30 years in China,