

Web-based assessment for flood forecasting and warning systems

Boosik Kang^a, Joo Heon Lee^b, Ilpyo Hong^c, Kukryul Oh^d, Sangman Jeong^{d*}

^aDepartment of Civil and Environmental Engineering, Dankook University,
126 Jukjeon-dong, Suji-Gu, Yongin, Gyeonggi-Do 448-701, Korea

^bDepartment of Civil Engineering, Joongbu University, Kumsan-Gun, Chungnam-Do 312-701, Korea

^cKorea Institute of Construction Technology, 2311 Daewha-Dong, Ilsan-Gu, Goyang, Gyeonggi-Do 411-712, Korea

^dDepartment of Civil and Environmental Engineering, Kongju National University,
275 Budae-dong, Cheonan, Chungnam-Do 330-711, Korea
email: smjeong@kongju.ac.kr

Received 16 September 2009; Accepted 22 February 2010

ABSTRACT

The web-based assessment for flood forecasting system (WAFFS) was developed to evaluate the flood forecasting and warning system and to revise the existing management overview for flood forecasting system (MOFFS) Ver. 3 suggested by the World Meteorological Organization (WMO) in early 1990s. The WAFFS is an evaluation system that represents the results of the forecasting and warning system performance for classified flood forecast sites and the flood events of each flood forecast system with a concisely organized evaluation template. Using the developed WAFFS, the flood forecast systems of the four major Korean Rivers including the Han River, the Nakdong River, the Geum River, and the Yeongsan River were evaluated. The data necessary for WAFFS evaluation are provided by the web service, and the evaluation results for the member countries were managed by each country, region, and storm event. Through the web-based system, the more convenient data collection and evaluation system was established and it will lead more efficient decision making for diagnose and improve the current flood defense system.

Keywords: MOFFS; Flood forecast system; Decision support program; Planning and operating system

* Corresponding author.