Regional flood frequency analysis in Australia: RFFE Model and beyond

Ataur Rahman
Western Sydney University, Civil Engineering, Australia (ataur38@yahoo.com.au)

Regional flood methods are widely used in hydrologic design and practice. In Australian Rainfall and Runoff (ARR), a regional flood estimation model has been included, which is based on a regional log-Pearson type 3 (LP3) distribution. The three parameters of the LP3 distribution was regionalised using Bayesian GLS regression. A region-of-influence approach was adopted to form local regions. The RFFE model has been made available through a website hosted by GeoScience Australia. In an attempt to enhance the RFFE model in Australia, a number of research projects is being examined by the water research group in Western Sydney University. This paper presents the opportunities and limitations of these new techniques (kriging and regional GEV distribution).