

## **FLOOD FREQUENCY ANALYSIS FOR BARAK VALLEY IN SOUTH ASSAM**

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### **ABSTRACT**

Flood frequency analysis for gauged and ungauged sites in Barak river basin in south Assam are conducted using peak discharge and peak gauge level for the sites. The best fit distribution for the regions were selected based on the results of  $Z^{\text{DIST}}$  statistics and L-moments ratio diagram from the five extreme value distributions GPD, GLO, GEV, P3 and LP3. Regional flood frequency relationships were established using the selected distribution along with development of growth factors for the sites. A regional flood relationship with the physical characteristics for the sites was established using multiple regressions for the estimation of flood at the ungauged sites with the validity testing of the developed equation.

**KEYWORDS:** Growth Factors, L-Moments, L-Moments Ratio Diagram,  $Z^{\text{DIST}}$  Statistics