



## Abstract

*Flooding, a common environmental hazard worldwide, increased as a result of climatic changings, with the effect that is felt more by developing countries. Pakistan is very vulnerable to hydrological hazards. The main purpose of the study was to analyzed return periods in order to check the effect of crops by flood. Water is an influential and predominant agent to bring change in landscape. Sediments deposits from one location to another. Land sat 8 data sets have been utilized to analyze crop pattern and built-up area. Return period of 100,250 and 50 years were taken in order to stimulate the risk zones. The gauges that were under consideration was Jassar, Syphon and Shahdara. Images used were of 1995, 1996 and one recent image was taken to check the crops and built up area. SRTM and Pulsar DEM was used to check water shed. Data was taken from 1991 to 2016 in form of excel and further processed to check impact of riverine flooding. To endure learning, flood hazards mapping can be done by Hec- RAS. Crop pattern were checked by Gumbel Distribution and estimated loss was calculated. Flood damage assessment has been evaluated.*

**Keywords:** Hec-RAS, SRTM, DEM, Flood Damage Assessment