

ABSTRACT

Due to anthropogenic activities and climatic variability, floods have been raised lately in several regions worldwide. The resulting impact of floods on channel pattern is common. This is particularly applicable to under developed countries like Pakistan, the country which is known for dry climatic conditions, and it became known region for such natural hazards and calamities. The present study showed an effective method of using Geographical Information system (GIS) for generation of expected floodplain areas mapping from the available data sets. The study conducted flood analysis by using Remote Sensing and GIS technique along River Chenab during flood event that occurred in different time periods (27 years data). For this purpose, the satellite data used were two Landsat 8 images. Dem data is use to find the extent and river depth. Annual Peak flow of 27 years is collect from regional office Lahore of PMD. Gumball Frequency Modelling is use to calculate return period and flood frequency. There is a huge change happen in channel pattern that is extracted from Satellite images of different years. This research will further lead researchers to explore fluvial morphology in Pakistan.