



Fluvio-geomorphological changes in the Ganges over past 70 years around Begusarai and Bhagalpur city in Bihar state, India: A remote sensing based assessment

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Abstract: Fluvial landforms are developed due to the river action and various fluvial processes such as erosion, deposition and transportation. Gangetic plain is a vast alluvial tract, which is continuously modified in terms of bank-line shifting and fluvial landforms. These features are developed due to the fluvial processes, climatic changes and tectonic activities during the late Quaternary period. Almost each year this region experiences heavy rainfall resulting in high magnitude flooding which causes abrupt changes in the flow pattern of the river channel. The Ganga river basin shows significant amount of erosion and deposition. The basin is mainly comprised of fine sand, silt, gravel and clay due to which the rocks of these regions are generally very soft and easily broken. Erosion is mainly caused by the rapid flow of water through these soft and disintegrated rocks. High magnitude earthquakes are also responsible for sudden and gradual change in the flow pattern of the Ganges. Use of remote sensing provides authentic information on the fluvio-geomorphological and bankline changes. The present paper deals with the problems like bankline shifting, erosion, deposition etc. caused by the continuous change in the fluvial patterns of the river channels, bank erosion and sedimentation.

Keywords: fluvio-geomorphology, river Ganges, bank-line shifting, erosion, deposition