

**IDENTIFICATION OF HOLOCENE GEOMORPHIC SURFACES FROM REMOTE SENSING DATA  
ON THE BRAHMAPUTRA FLOODPLAIN, BANGLADESH**

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**ABSTRACT:**

Four geomorphic surfaces have been identified on the Brahmaputra Floodplain in the northern part of Bangladesh from the SPOT Panchromatic data. Standard visual image-interpretation techniques have been applied for the study. Hard copy images of the same area at the scales of 1:50,000 and 1:100,000 have been used. These surfaces show unique image characteristics and geomorphic features. Later, the results of the interpretation have been compared with ground truth like topographic data and sediment properties of the area, and other information of the region. Relationship between the different geomorphic surfaces and the Holocene floodplain deposits has been found from ground truth data. These surfaces lie at different topographic levels, and the sediments of each surface are also different in terms of development of soil profile. The later indicates that all these sediments are not of the same age, although these are of Holocene age. These geomorphic surfaces are not only the result of the river dynamics but also the impact of the Holocene tectonics playing in the region. From the study, it can be concluded that SPOT Panchromatic image can help in identifying Holocene geomorphic surfaces of fluvial origin. Moreover, no difference in information extraction due to scale variation has been observed.