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Impact of Bank Erosion on the Socio-economic Condition of the People: A Case Study of Ganga from Rajmahal to Dhulian Town

Summary of the abstract of the Ph.D. Thesis submitted by-Md Nawaj Sarif

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In a flood plain, river bank erosion is one of the frequent natural hazards. River bank erosion is a common process shaping river courses that involves various mechanisms prevailing at different scales. The concerned area of the study extends between latitude from 24°37′ N to 25°13′30″ N and longitude from 87°44′ E to 88°0′32″ E which covers part of West Bengal and Jharkhand.

The historical analysis of river course for two hundred twenty three years was studied from the year 1794 to 2017 that revealed a drastic change in the river course. In the study area, both the west and east bank of the river have experienced river bank erosion as well as accretion. LRR analysis results revealed that 90.54 % (785 transects) of the 867 transects in the east bank were affected by erosion in the study area between 1965 and 2017 while average EPR and LRR recorded were -40.17 and -40.21 meters/year respectively. The result showed that 10 %-30 % of Mouzas were in the low to moderate Socio-economic vulnerability index (SeVI) range respectively while 3.33 % of Mouzas had high (.5-.75) SeVI range. Most of the Mouzas (56.66 %) were in a very high (>.75) SeVI zone.