

Characteristics of sediment distribution at Gorai offtake in Bangladesh

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ABSTRACT:

Sediment distribution at offtake is not yet a properly understood phenomenon. The complexity of the problem lies in the determination of the distribution of sediments at the downstream branches. In this study, sediment distribution at Gorai offtake has been studied based on observed data. The distribution of sediment at a channel bifurcation is determined by nodal point relation. Nodal point relations of the Gorai offtake have been developed by fitting discharges and sediment transports data of the Gorai river and Ganges river downstream of the Gorai offtake. The Gorai river carries more sediments as compared to its discharge. The distribution of sediment to the offtake overwhelmingly depends on time. The nodal point relations developed for the Gorai offtake have been compared with the existing models. It has been found that Gorai river is unstable and leads to the eventual closure from its offtake unless intervention is made.

Keywords: Sediment, distribution, Gorai river, offtake, nodal point.