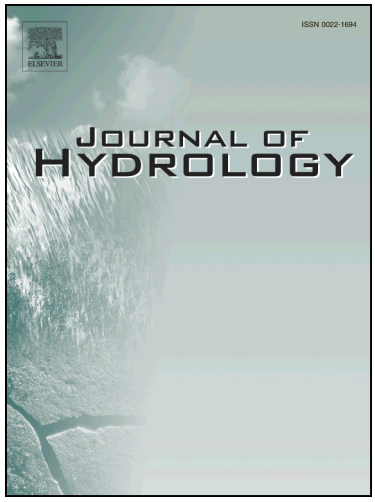

Research papers

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CHARACTERIZING AND QUANTIFYING THE DISCONTINOUS BANK EROSION OF A SMALL LOW ENERGY RIVER USING STRUCTURE-FROM-MOTION PHOTOGRAMMETRY AND EROSION PINS

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Abstract:

River bank erosion is controlled by a complex combination of factors and processes that play a main role in fluvial dynamics. However, the role played by lateral erosion in small low energy rivers functioning still needs to be better understood. This study deals with the characterization and the quantification of the bank erosion of a small low energy river of the Seine Basin (France) in periurban catchment where urbanization had led to an incision and widening of the bed in the past decades, using adapted monitoring surveys: erosion pins and Structure-from-Motion Photogrammetry. The paper provides an opportunity to compare reach-scale flux estimates using both techniques. Spatial and temporal variations in river bank rates were quantified over 16 months and the causes and controls of riverbank erosion