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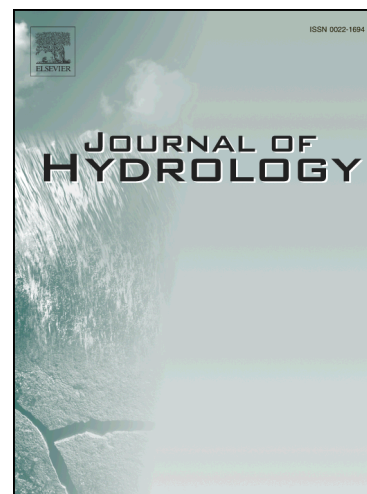
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Morphological variability of the active Yellow River mouth under the new regime of riverine delivery

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Abstract: The Yellow River subaqueous delta (YRSD), once the most rapid depo-center among river deltas worldwide, has been under the risks of subsidence and degradation due to the new regime of riverine delivery affected by human interventions. Utilizing hydrologic and bathymetric surveying datasets, we examined the latest regime of river input from the perspective of water-sediment relationship, and the responding morphological evolutionary processes of active YRSD over a period of 20 years between 1996 and 2016. Results show that new discharge regime is strongly interfered by the Water-Sediment Regulation Scheme (WSRS), characterized by a more drastic decline of sediment load than that of water discharge; more harmonious relationship between water and sediment discharges in the lower reach of the river to the sea; coarser sediment delivery and low suspended sediment concentration (SSC). We identified inverse erosion-accretion trends in the subaqueous region: net accretion of 0.15 m/yr in the active Yellow River mouth (AYRM) and severe erosion of -0.1 m/yr in the Gudong littoral zone (GDLZ). As the primary sink for sediment delivery, AYRM received approximately 68% of sediment delivery during the study period and sedimentation was

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