



## **Mid-late Holocene climate variability in the Indian monsoon: Evidence from continental shelf sediments adjacent to Rushikulya river, eastern India**

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We present elemental and grain-size distributions obtained from the sediment core of the continental shelf adjacent to the Rushikulya river mouth, eastern India to quantify the paleoclimatic changes. The retrieved 1.60 m long well-dated core spans the past ca. 6800 cal BP. The modern spatial distribution of grain size and geochemistry of the inner-mid shelf sediments has been carried out to understand the seafloor morphology and sedimentary processes. Based on the modern investigations, the proportion of particle size (clay vs sand) and variation in elemental values ( $\text{TiO}_2$  vs  $\text{Al}_2\text{O}_3$ ) has been used to interpret the changes in terrigenous supply. The grain-size and elemental distribution data from the core sediments indicates a period of enhanced surface water runoff from 6800 to 3100 cal BP followed by a drier condition (3100 cal BP to present) suggesting weakening of monsoon. The weakening of the monsoonal strength is coeval with other records from the Indian sub-continent and suggests response of Indian monsoon to changing solar insolation during late Holocene.