

## **Onset of farming around Arabian Sea at the dawn of Bronze Age revealed by marine record**

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Rapid sea level rise, variations in the monsoon and important cultural changes occurred on Holocene. Though this period, Harappan civilization appears and collapsed in the Indus Valley. Here, we use the sedimentological and geochemical records of a core drilled close to Kerala coast in the Arabian Sea to address some of the potential factors that may have affected this civilization during the early and middle Bronze Age.

The fourfold increase in sedimentation rate observed at  $5150 \pm 70$  BP suggests a major regional increase in chemical erosion at the beginning of the bronze age. We suggest that this increased erosion around the Arabian Sea may indirectly reflect a human cause of regional significance. Trade between Mesopotamia and India have favored the development of tilling-based agriculture, thereby providing alternatives to rice as a main staple, compounded to an unknown extent by grazing animals. Moreover, introduction of organic fertilizers in the form of animal and human wastes may have increased the impact on erosion and thus, the release of terrigenous input into the Arabian Sea since the Bronze age.

Human activities therefore were the trigger of major changes in the sedimentological and geochemical records at sea at the onset of the Bronze Age.