Guj Harappans were first climate change refugees: Study

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Ahmedabad:

The latest excavations at the Karim Shahi and Vigakot sites in Gujarat, dating back to 2,100 BCE and 5th century CE, respectively, right on the Kutch-Pakistan international border, have shed light on how climate change in the post-Harappan period in the Kutch region affected ancient human settlements.

A team of scientists from IIT-Kharagpur, Deccan College, PRL Ahmedabad, University of Calcutta, and Kachchh University, said the sites may help narrate the story of one of the first climate refugees following decline in rainfall, drying up of local rivers, and changing weather patterns, which probably led to migration of entire settlements.

The team published findings of their excavations at Karim Shahi and Vigakot over past three years – estimating the age of the settlements in the range of 3,100-2,300 years before present time (BP) and 1,500-1,900 BP respectively.

“The natural climate change drove out people from their original places. The UN today calls them ‘climate refugees’. We think that the excavations points towards a huge migration that may have begun towards the end of mature Harappan era up till the medieval period,” Anindya Sarkar, professor at the Department of Geology and Geophysics, IIT-Kharagpur, said.

Gujarat has some of the prominent Harappan sites in India including Dholavira and Lothal, which are nearly 350km from Karim Shahi and Vigakot, which represent the zenith of the Harappan culture. But few sites have depicted cultural continuation after the late Harappan period (1,300 BCE) in the region.

Sarkar is among the 13 authors of the research paper on new evidence of early Iron Age to Medieval settlements from the southern fringe of Thar desert and implications to climate-culture co-evolution, which was recently published in Elsevier journal “Archaeological Research in Asia”.

The paper argues that reduction in south Asian monsoon is long held responsible for demise of the Harappan settlements or relocation of settlement thereafter.

“…aridification occurred in two steps, one after 4,000 years and the other after 1,700 years BP,” the paper says. The researchers added that up to the 4th century CE, old local river system at Vigakot was present before it completely turned into a desert in medieval period.
“It is tempting to speculate that the early disintegration of the settlements in the western domain was a result of the early withdrawal of Intertropical Convergence Zone (ITCZ), monsoon decline and drying up of river channels,” the paper says, adding that the increased concentration of settlements in the eastern domain during this period was possibly parallel to today’s “climate refugee and refugia” induced by anthropogenic climate change.

Sarkar said that if one observes Harappan sites like Dholavira, one can find excellent water conservation and management system, pointing towards start of the monsoonal decline.

The discovery, complete with ceramics, artefacts and animal remains, has also established the site at Karim Shahi as an Iron Age settlement.

“It is the first such archaeological evidence found from Kutch region, filling in the gap after Harappan period. Carbon dating of the artefacts has firmly established the site as the one in Iron Age,” MG Thakkar, professor and head of department of Earth and Environmental Science, KSKV Kachchh University, said.