

CLIMATE, A FACTOR IN THE RISE AND FALL OF THE INDUS CIVILIZATION

About 50 years ago, Sir Aurel Stein (1931) and Sir John Marshall (1931), on the basis of their evaluation of the multiple archaeological evidence from Baluchistan and Sind, proposed that climate in these regions during the Indus Civilization period was more wet than it is at present. This theory was accepted and supported by archaeologists like Stuart Piggott (1950) and Mommer Wheeler (1953), and it held unquestioned sway for three decades. Then in the 1950s, American archaeologists began taking an interest in the archaeology of the Indus Valley and neighbouring regions, and they brought the anthropological approach to bear on the archaeological problems of this region. Briefly put, this approach looked at cultural evolution in terms of cultural processes in contrast to the older British historical approach which laid more emphasis on events. The introduction of this new approach led to a questioning of several interpretations previously held more or less as facts.

One of these interpretations was the theory of a more wet climate during the Indus Civilization. Robert L. Raikes, a hydrologist with keen interest in archaeology, and Robert H. Dyson, an archaeologist, teamed up in 1961 to critically examine various kinds of evidence adduced by Stein and Marshall in support of their climatic theory. They came to the conclusion that alternative explanations were possible for each piece of evidence, and therefore, the theory of a more wet climate could not be accepted as proven fact. As an interesting coincidence, another American anthropologist, Walter A. Fairervis, Jr. (1961) also examined the same evidence at the same time and reached a similar conclusion. F.A. Durrani (1965) who did a similar exercise for the lower Indus Valley a few years later also arrived at an identical conclusion.

Except for a weak meteorological defence of the older theory by Ramaswamy (1968), the matter rested there for a decade until, in 1971, Gurdip Singh revived the theory of a more wet climate and rekindled interest in the subject. Singh's theory differed from that of Stein and Marshall in three important respects:

1. The evidence for climatic change was based on palynological rather than on archaeological data.
2. The climatic change consisted of several fluctuations which covered almost the entire Holocene in north-west India and not just the Harappan period.
3. The fluctuations in rainfall were related not only to the growth and decline of the Harappan culture, but also to the origin of agriculture-based life in the eighth millennium BCE and to its expansion in the fourth and third millennia BCE in north-west India.

Decline of Indus Valley Civilization:

It is undeniable that in the eighteenth-nineteenth centuries BCE, Harappan cities declined, and some of them were even abandoned. In the lower Indus valley many causes for this event have been suggested: reduction in rainfall; exhaustion of the economic resources; excessive flooding, and Aryan invasion. Though some of these explanations have been

questioned the fact of decline and abandonment of the cities is accepted by critics. There is also an undeniable decline in material prosperity and in civic standards. But this decline did not lead to a decrease in population. It only forced the population to migrate from the lower Indus valley into Saurashtra and from the Hakra-Ghaggar valley into north Punjab, Haryana, and the upper Yamuna Ganga doab. The sudden proliferation of Late Harappan sites in Saurashtra, north-east Punjab, and Haryana and the upper Yamuna Ganga doab attests to this migration.

At least in the case of north Punjab and the upper Yamuna Ganga doab, rainfall is not significantly higher than in the adjoining parts of Punjab and Haryana which had witnessed dense human settlements during the Early and Mature Harappan times. Therefore, these new regions of colonization could not have conferred any significant advantages to the immigrants. On the other hand, the shift of the courses of the Yamuna and Sutlej to the east and west, respectively, would have considerably reduced the availability of both surface and sub-surface water in the Ghaggar valley. This would, in due course, have adversely affected both natural vegetation and agriculture, and forced the population to shift to areas like north Punjab (Sutlej channel) and the upper Yamuna-Ganga doab where the rivers provided the ecological conditions the Harappans had long been accustomed to exploit. It is, therefore, quite unnecessary to invoke the deterioration of climate to explain this migratory phenomenon. In the case of the lower Indus valley, some or all of the various explanations suggested, could have accounted for the shift of the Harappan population into Gujarat.

The phenomenon of Degenerate Harappan culture represents a continuation of the eastward migration of the Late Harappans. This would appear to be due to excessive population pressure in the limited land available in the upper doab. The density of Late Harappan sites in the districts of Ludhiana and Saharanpur is eloquent proof of this demographic pressure.