



Paleoclimatic changes and human cultural evolution in and around the Arabian Peninsula

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Recent studies of paleoenvironmental changes in and around the Arabian Peninsula have suggested that extremely wet periods occurred during the late Pleistocene and early Holocene; these periods started around the termination of glacial periods and continued during the initial rapid warming that followed. During these periods, flood waters transported enormous amounts of sediments from mountains to plains. Once the thermal maximum was reached and temperature stabilized at a high level, the water environment also stabilized and the climate became dryer. Although gradual changes in atmospheric temperature may have had only a minor direct influence on human activities, drastic changes in the water environment in responses to changes in the average atmospheric and surface water temperatures of just a few degrees had a stronger influence on human culture, possibly leading to the development of agriculture and civilizations. Domestication of animals started at the beginning of a wet period in the early Holocene, whereas the first cities were constructed during its latest stage. The need to control flooding may have led humans to build cities and, thus, to the development of early civilizations.