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The environmental changes during the Holocene at inland saline lakes in Turkey, Syria, and Egypt

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In 1991 a geo-archaeological research project in Turkey, Syria and Egypt was started. The project is part of the excavation of Kaman-Kalehoyuk by the Japanese Institute of Anatolian Archaeology, the excavation of Tel Seker al-Aheimar by the University of Tokyo, and the joint research project with Menoufia University in Egypt. The project is a multidisciplinary research program, focused on the environmental history of the Neolithic and later periods in this region. More in detail, our research is aimed at a high resolution environmental reconstruction in order to make clear the climatic development during the Holocene, and its impact on human societies. We undertook field surveys at inland lakes and marshes surrounding archaeological sites in the Konya basin in Central Turkey (Lake Tuz, Lake Seyfe, Kayseri and Kaman Kalehoyuk), Lake Khatouniyeh in northeastern Syria, and Lake Qarun and Wadi Natrun in northern Egypt.

The warming and very dry climate could be observed in the data from all our drillings in the early Holocene in Egypt and Turkey. The humid climate during the Holocene recovered at first in the northern part of Syria at 8500 years BP. in the drillings from Lake Khatouniyeh. At 6500 years BP, about 2000 years later than Syria, the Holocene humidity started at the northern part of the central Turkey, at Lake Seyfe and Kultepe, Kayseri. The three times of fluctuation between arid ? humid environment have occurred after then. The cyclic fluctuation of humidity was also observed in Lake Qarun in Egypt. The lake level of the lake was fell down after the 2200 years BP in the Ptolemaios period , and fluctuated its level with hundreds years intervals.

The above-noted recovery of humidity and its regional variability in the Holocene presumably was one of the major causes for the archaeological events, especially with regard to water availability.

Keywords: Archeological events, Climatic change, Lake sediment, Holocene, Egypt, Turkey