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The Horst of Sabzevar and regional water resources from the Bronze Age to the present day (Northeastern Iran)

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Abstract: In 2008, the French-Iranian excavation work carried out on the site of Tepe Damghani raised the issue of the evolution of water resources in the area since the Bronze Age. A regional geomorphological survey enabled to show the significant role played by the Miocene Horst of Sabzevar in providing water from the Bronze Age up to now. Indeed, at the back of the horst a graben housing an important water table in its Quaternary alluvium can be found. The localization of the archaeological sites along two main talwegs crossing the horst in gorges until the Iron Age shows that the overflowing of the water table provided a perennial flow. The development of the qanât system then allowed irrigation of the whole hillfoot of the Sabzevar horst but in return provoked a lowering of the water table level which reaches about 150 m today because of massive pumping.

Key words: Water resources, geomorphology, Holocene, qanât system, Iran.