

BOUNDARY EVIDENCES FOR "ANTHROPOCENE EPOCH" IN ZAYANDEHROUD BASIN (CENTRAL IRAN)

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INTRODUCTION:

Zayandehroud is an ancient and important water basin in the center of Iran. Since time immemorial this basin has been and is one of the civilization and economic capital of the Iran. The historic authenticity and the stability of the city of Isfahan civilization characterize the basin's specific condition and its uniqueness among the regional basins nationwide.

MATERIALS AND METHODS:

The study methods are based on descriptive, empirical, and content analytic, documentary, historical etc. accompanied with field studies and laboratory examinations. This study concentrate on the natural history and paleogeography of Zayandehroud. This article is derived from PhD Thesis, researched and surveyed in zayandehroud basin in 2011.

RESULTS AND DISCUSSION:

Ecosystem of Zayandehroud is created by climate changes and tectonic activities, and the human culture has improved it. The miss-management of the basin also can ruin and deteriorate it. Zayandehroud is an ancient fresh (non saline) water river, karst originated, continuous, wanderer, tectonized, asymmetric, meandrous, influent, morphogenic, pedogenic, with the capability of unifying the bank soil type, non indigenous to its environment, life giving, civilization promoting and threatened river ecosystem. The soil fertility, fresh water, flatness and the fragmental river wash bed that naturally drain the irrigation and arable land systems are factors for attracting human to make his habitat and improve life prosperity (Fig.2).

The triad river alluvial terraces of Zayandehroud are of Holocene Epoch. In the recent 50-100 years the technology and environmental challenges have directly dominated and influenced the pedogenetic-morphogenetic of the basin; that is, the disturbance of the ecosystem and a big threat to the future of this basin. This chronozone is labeled "Anthropocene" that is being proposed to the Iranian and International Soil and Geomorphology Societies in order to be investigated by Geographers and geomorphologists (Ghaiumi, 2011). Mostly Important evidences that are environmental challenges and are starter for "Anthropocene epoch" are defined by: three recessions of the lakeshore (Gavkhouni Lake), land use changes (Ghaiumi, 2000), Soil and land salinization and degradation, destruction of existing vegetation and gradual soil exhaustion, water extraction (Keshavarz, A. and et al 1999), overgrazing, Subsidence and the lowering of the water table. (Fig.3)

Key words: Zayandehroud Basin, Anthropocene epoch, Isfahan, degradation, Soil, Quaternary.

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