

Local understanding of hydro-climatic changes in Mongolia

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Abstract Air temperatures in semi-arid regions have increased more over the past few decades than those in many other parts of the world. Mongolia has an arid/semi-arid climate where large portions of the population are herders whose livelihood depends upon limited water resources. This paper combines local knowledge and understanding of recent changes in water availability in streams, springs and wells, with an analysis of climatic and hydrological change from meteorological station data to illustrate the degree of change among Mongolian water resources. We find that herders' perceptions of hydro-climatic change are very similar to the results of the station-based analysis. Additionally, since station data are spatially limited, local knowledge can emphasize smaller-scale variability in changes to climate and hydrology. For this paper, we focus on a site in the Khangai Mountains and another in the Gobi desert-steppe, both in Central Mongolia.

Key words Mongolia; perceptions of hydro-climatic change; local knowledge; climate change