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Variation of Precipitation and Runoff in Typical Grassland Area

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Abstract: It is important to analyze the variation of the precipitation and runoff in the typical grassland for the rational allocation and utilization of water resources. According to the data from the Xilinhot Meteorology Station and Xilinhe Hydrometry Station, the Mann–Kendall rank correlation method and linear regression method were used to analyze the variation of the precipitation and runoff in the typical grassland area of the Xilinhe River Basin over 40 years. Meanwhile, the correlation between precipitation and runoff was analyzed. The results show that there is a non–obvious decreasing trend of the precipitation, and an obvious decreasing trend of the runoff. In addition, with precipitation increasing, the rate of runoff increase shows that normal year > wet year > dry year.

Key words: precipitation; runoff; Mann–Kendall; linear regression;typical grassland

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