Analysis of climate changing trends and vegetation monitoring with NDVI in the north of Loess Plateau conjoined with desertification of China

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The studies of time-series of the climate data 1991-2002 show the trends of the climate changing of intra-annual and inter- annual variabilityJ¬and the behaviour of dry spells representative of the conditions of the north region of Loess Plateau conjoined with desertification of China.The normalized difference vegetation index (NDVI) from TM images are shown to capture essential features of vegetation variability at four distinct vegetation growth period in the semi-arid region. NDVI values tend to follow a uniform order across communities by the landscape,and NDVI variability corresponds to precipitation variability. These circumstances will potentially increase the vulnerability of the region ecosystems located along the gradient that are currently subject to considerable pressure from human activities; this will increase the environmental problems of the similar zones.