

Sensitivity Analysis on Land Cover Change to Climate Change in Last Ten Years across Xinjiang

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In this paper analysis the sensitivity of land cover to climate change with some RS/GIS techniques based on multi-temporal NOAA/AVHRR NDVI images and regional precipitation annual or seasonally change. From 1992 to 2000, the area that ground vegetation cover trends improved occupy 15.94% and 5.7% improved from barren land among that number. While the are trends degraded regions occupy 10.45%. The degree of land cover trend improvement obviously in the East Xinjiang. The desert vegetation deteriorated seriously in the south Xinjiang. While oasis exterior experience deteriorated and improvement at the same time. The desert vegetation trend improvement obviously in the north Xinjiang. While oasis kept stability basically, and the whole up report to have the improvement. Yili has not changes. Totally Xinjiang ecosystem environment part improvement, the whole depravation. Finally correlation coefficients varieties in different regions and land cover types of Xinjiang. The barren land and sparse vegetation were strongly influenced by the change of air temperature and precipitation, but the influences of climate were relatively small for oasis and forest in Xinjiang.