Abstract

Drought is climatic phenomenon that periodically in any area and occurs with any weather conditions. The aim of this study was to investigate the effects of drought on the land use change. Based on SPI index and availability of satellite images, the year 1999 was selected as the normal year and the years 2000 and 2013 was selected as the drought years. Using Landsat satellite imagery, land use maps were extracted for three time periods. The NDVI indicator was calculated, and based on NDVI indicator, the impact of drought on land use change was evaluated for 2000 and 2013 in Ekbatan dam catchment located in Hamadan province. The results showed the significant decrease of NDVI indicator value in dry years than the normal year. Range classes showed most changes for both years, So that according to drought severity, from the 0.86 NDVI value in 1999 reached to 0.11 and 0.18 for 2000 and 2013, respectively.

Keywords: Meteorological Drought, Land use change, remote sensing, NDVI, Ekbatan dam catchment.

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