

عنوان مقاله:

Comparison of leaf area index parameter processed from satellite images in two different climates

محل انتشار:

هفتمین کنگره سالانه بین المللی توسعه کشاورزی، منابع طبیعی، محیط زیست و گردشگری ایران (سال: 1402)

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خلاصه مقاله:

The importance of LAI lies in its ability to provide information on the status and dynamics of vegetation and its interaction with the environment. LAI can be used to monitor the effects of drought, land degradation, deforestation, afforestation, urbanization, and other human activities on vegetation cover and ecosystem services. LAI can also be used to estimate the carbon sequestration, water balance, and soil erosion of different land use types and management practices. Using data from meteorological stations and satellite images, we apply statistical and geostatistical methods to analyze and interpret the climatic characteristics and LAI values of these cities. The aim of this paper is to provide a comprehensive and scientific perspective on the effects of climatic factors on vegetation cover in this region. The results show that there are significant differences and similarities between the two cities in terms of LAI and its influencing factors such as temperature, precipitation, elevation, slope and aspect. The paper also discusses the implications of the findings for environmental management and planning. Results shows the data related to the variable LAI or leaf area index for two meteorological stations of Ardabil and Orumieh. To analyze this table, descriptive and inferential statistical methods can be used. Some of the notable points in this table are: The average value of LAI for Ardabil station is 0.5 and for Orumieh station is 0.4. This indicates that the vegetation cover in Ardabil station is slightly more than Orumieh station. The minimum value of LAI for Ardabil station is -0.2 and for Orumieh station is -0.3. This indicates that on some days, the vegetation cover was negative. This may be due to measurement errors, land degradation, or the presence of surfaces without plants. The maximum value of LAI for Ardabil station is 1.3 and for Orumieh station is 1.9. This indicates that on some days, the vegetation cover was very high. This may be due to precipitation, season, or the presence of areas with perennial plants

کلمات کلیدی:

Ardabil, Climate, leaf area index, Orumieh, Remote Sensing

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