World Academy of Science, Engineering and Technology
International Journal of Environmental and Ecological Engineering
Vol:11, No:08, 2017

Greenland Monitoring Using Vegetation Index: A Case Study of Lal Suhanra National Park

Authors : Rabia Munsaf Khan, Eshrat Fatima

Abstract : The analysis of the spatial extent and temporal change of vegetation cover using remotely sensed data is of critical importance to agricultural sciences. Pakistan, being an agricultural country depends on this resource as it makes 70% of the GDP. The case study is of Lal Suhanra National Park, which is not only the biggest forest reserve of Pakistan but also of Asia. The study is performed using different temporal images of Landsat. Also, the results of Landsat are cross-checked by using Sentinel-2 imagery as it has both higher spectral and spatial resolution. Vegetation can easily be detected using NDVI which is a common and widely used index. It is an important vegetation index, widely applied in research on global environmental and climatic change. The images are then classified to observe the change occurred over 15 years. Vegetation cover maps of 2000 and 2016 are used to generate the map of vegetation change detection for the respective years and to find out the changing pattern of vegetation cover. Also, the NDVI values aided in the detection of percentage decrease in vegetation cover. The study reveals that vegetation cover of the area has decreased significantly during the year 2000 and 2016.

Keywords : Landsat, normalized difference vegetation index (NDVI), sentinel 2, Greenland monitoring
Conference Title : ICRSE 2017 : International Conference on Remote Sensing and Environment
Conference Location : Bangkok, Thailand
Conference Dates : August 30-31, 2017