Monitoring Spatio-temporal Changes of Kiakallayeh Wetland in Langeroud for Investigating its Damages using Remote Sensing

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Abstract
With increasing human's knowledge about the importance of ecosystems especially wetland, the lack of complete and effective perception about them is an important issue that can damage them. To protect wetlands, it is necessary to have information about their changes over the time. Kiakallayeh wetland in Langeroud city, Gilan province was damaged due to human activities and it is necessary to monitor its changes. In this study, which was done in 2019, in order to investigate spatio-temporal changes of the mentioned wetland, Landsat remote sensing images of 1995, 2007, 2013, and 2019 years were employed. Vegetation, water, and build-up indexes of the images were extracted and used to analysis the condition of the wetland. Results show that during previous 24 years, vegetation and water covers were decreasing and build-up area is increasing. Therefore, a huge pressure is entered into the wetland, which would be a reason to damage human, vegetation, animals in the ecosystem.

Keywords: Remote sensing, Geographical information system, Kiakallayeh wetland, Spatio-temporal changes.