A GIS Application to Spatial Analysis of Forest Burnt Areas in Landsat ETM+ Imagery

Abstract

In this study, the landscape spatial pattern was analyzed and assessed of the forest fire area. The study site was damaged forest fire 1,150 ha in Yesan and Cheungyang Chung cheong nam-do.

Landsat ETM+ imagery acquired on 6th April 2003 was preprocessed geometric correction and atmospheric correction, which was unsupervised classification by 10 classes. Classification image converted coverage. Coverage Vector was calculated Shapes size, Circumference of patches, Patches density, Fractal dimension of patches, diversity, and so on.

The result showed fire damage and bare soil over 1,000 patches, water less 15 number of patches. Patch density detected fire damage and bare soil 0.44 (ha/num). Shape was complicated the water area(3.94) more from bare soil and fire damage (38) it appeared. Fractal dimension more was complicated from the road and damage areas.

Key word : Spatial analysis, Spatial pattern, Patch, Forest Burnt

Topic: GIS Integration of GIS and Remote Sensing

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