عنوان مقاله:

IRS-۱C image data applications for land use/land cover mapping in Zagros region, Case study : Ilam watershed, West of Iran

محل انتشار:

مجله علوم زیستی خاورمیانه, دوره 8, شماره 1 (سال: 1389)

تعداد صفحات اصل مقاله: 7

نویسنده:

.A. Mahdavi - Department of Forestry, Faculty of Agriculture, University of Ilam, Ilam, Iran

خلاصه مقاله:

In land use planning, mapping the present land use / land cover situation is a necessary tool for determining the current condition and for identifying land use trends. In this study, in order to provide a land use/ land cover map for Ilam watershed, the IRS-۱C image data from ۲۵th April ۲۰۰۶ were used. Initial qualitative evaluation on data showed no significant radiometric error. Ortho-rectification of imagery was accomplished using ephemeris data, digital maps of topography and ۴۵ ground control points with RMSe less than ۰.۷ pixels. Different suitable spectral transformations such as rationing, PCA, Tasseled Cap transformation were performed on the images in ILWIS software to enhance and produce new artificial images. Image classification was done using supervised classification maximum likelihood and minimum distance classifier utilizing original and synthetic bands resulted from diverse spectral transformation. Unsupervised classification was used to determine strata for ground truth. The results were assessed using a sample ground truth map through systematic random sampling and samples were designed in circle form and ۱۰۰۰m? area. Finally, nine main classes of land use / land cover (Rangeland, Forest (dense, semi-dense, sparse, very sparse), Agriculture, gardens, settlements and bare lands) could be determined. For representing accuracy, the rate was used from some criteria of accuracy such as overall accuracy and Kappa coefficient with ۸۳% overall accuracy and ۰.۷۸ kappa coefficient. REFERENCES Amin, M.R., Shataee, Sh., Ghazanfari, H.O., Moaieri, M.H. (۲۰۰۸) Changes in Zagros's forests extention using aerial photos and satellite imagery (Case study, Armerdeh forests of Baneh). J. Agric. Sci. Natur. Resour. ۱۵: ۱-۱۲. Cautam N. C, Narayan. L. R. A, (۱۹۸۵) Land use and land cover mapping and change detection in Tripura using Land Sat satellite data, J. Indian Soc., of R.S. ۶: ۵۱۷-۵۲۸. Congalton, R. G. (۱۹۹۶) Accuracy assessment : A critical component of land cover mapping. Gap. Analysis ۲: ۱۱۹-۱۳۱. Daryokvandy, A., Babaii, S., Sosani, J., Adeli, E. (۲۰۰۹) the survey of forest area and density alterations in middle Zagros by using of Aerial photographs interpretation and GIS, Case study : Kakarezay region, Lorestan province. The third national forest conference, Tehran, ۱۲-۱۴ may, ۲۰۰۹, pp. ۱-۹. Gautam N.C and C.H Channiah. (۱۹۸۵) Land use and land cover Mapping and change detection in Tripura using satellite Landsat data. J. Indian Soc. of R.S., ۶: ۵۱۷-۵۲۸ ISRO (۲۰۰۷) Indian Space Research Organisation (ISRO). ... http://www.isro.org/. Accessed ۱۵ June

کلمات کلیدی:

IRS, ۱C, Land use / land cover maps, Zagros, Ilam

لینک ثابت مقاله در پایگاه سیویلیکا: