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Change detection monitoring of Khoramabad Region(IRAN) via remote sensing

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The importance of accurate and timely information describing the nature and extent of land resources and changes over time is increasing, especially in rapidly growing metropolitan areas. Change detection is a technique in remote sensing for detecting the changes which have occurred in the existing phenomena over two or more periods of time in a particular area. In this paper, Khoramabad a city in Lorestan province of Iran, was examined in a case study via three techniques of remote sensing: (1) NDVI comparison, (2) Principle Component Analysis, and (3) the Post Classification. To carry out these three techniques, TM and ETM+ data obtained from Landsat Satellite within the years 1991 to 2002was used to monitor environmental changes especially the physical development of the area and its devastating effects on the green space. In this research, one of the capabilities of Thematic Mapper of Landsat Satellite is presented which is oriented towards determining land use changes and methodology in comparison to the change detection techniques via the standard method.. The result presented here indicates that the farming land area decreased between 1991 and 2002 by 14% from 4975 to 3672 ha. Also the urban and non arable land area increased from 5376 to 6678 ha. We may conclude any land use/land cover change must be permitted by land management expert