Change Detection of Vegetative Areas Using Land Use Land Cover Derived from NDVI of Desert Encroached Areas

Authors : T. Garba, T. O. Quddus, Y. Y. Babanyara, M. A. Modibbo

Abstract : Desertification is define as the changing of productive land into a desert as the result of ruination of land by man-induced soil erosion, which forces famers in the affected areas to move migrate or encourage into reserved areas in search of a fertile land for their farming activities. This study therefore used remote sensing imageries to determine the level of changes in the vegetative areas. To achieve that Normalized Difference of the Vegetative Index (NDVI), classified imageries and image slicing derived from landsat TM 1986, land sat ETM 1999 and Nigeria sat 1 2007 were used to determine changes in vegetations. From the Classified imageries it was discovered that there a more natural vegetation in classified images of 1986 than that of 1999 and 2007. This finding is also future in the three NDVI imageries, it was discovered that there is increased in high positive pixel value from 0.04 in 1986 to 0.22 in 1999 and to 0.32 in 2007. The figures in the three histogram also indicted that there is increased in vegetative areas from 29.15 Km2 in 1986, to 60.58 Km2 in 1999 and then to 109 Km2 in 2007. The study recommends among other things that there is need to restore natural vegetation through discouraging of farming activities in and around the natural vegetation in the study area.

Keywords : vegetative index, classified imageries, change detection, landsat, vegetation

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