CLASSIFICATION OF LAND USE AND VEGETATION USING LANDSAT IMAGES FOR THE STATE OF SINALOA MEXICO.

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ABSTRACT

The information on Land Use and Vegetation meets the demands of geo-referenced information on land cover and land use: vegetation types by affinity ecological and floristic composition, vegetation status depending on the size of the species, types of agriculture and crops, and timely information on plant species representative of the cover and on specific crops found in agricultural areas.

In remote sensing, multispectral image classification refers to the allocation to each pixel of a thematic or qualitative value associated with the type of ground cover (soil type, vegetation, cropping, etc.) (Campbell,J.B., 1997). For this purpose, part of the intensity values of each pixel in the set of available bands, which are related to the spectral response of the ground. Thus, using different methods, usually statistical functions can be obtained decision to classify all image pixels according to their intensity values in the respective bands. (Congalton, R.G., 1991). This set of functions generated by a particular method of classification and valid for a specific problem or multispectral image classifier is called. If each output class (coniferous, scrub, urban, ...) is made to correspond to a different color, the end result is an image issue in which the value of each pixel is defined as a qualitative characteristic represented by a color . (Schowengerdt, R.A. 1997).

The aim of this study is to obtain a scene of vegetation classification in the state of Sinaloa for a current period (2006-2007) using Landsat satellite images, to quantify the vegetative surfaces of these classes, and perform a comparative with the map series I, II and III of INEGI.