

Valdez-Zamudio, D. 1994. Land cover and land use change detection in northwestern Sonora, Mexico using geographic information system and remote sensing techniques. M.S. thesis. University of Arizona. 83 pp.

Remote sensing and geographic information system techniques have proved to be effective tools to detect, analyze, and evaluate land cover and land use changes over time. In this research project, changes in land cover and land use were detected in northwestern Sonora, Mexico between 1972 and 1992 using Landsat MSS imagery. About 40% of the entire land cover in the study area changed during that period of time. Of the six classes assigned to the imagery, cropland had the highest rate of change being modified into riparian areas by more than 60%, more than 20% into plains vegetation, and about 8% into bajadas with vegetation. From the two classification methods utilized in this study, the seeding pixels method yielded an over all accuracy over 96%, while the seeking polygons method generated overall accuracy values smaller than 82% probably to user's error.