

REMOTELY SENSED DATA AND GIS IN LAND RESOURCES MANAGEMENT FOR REGIONAL PLANNING OVER SEMI-ARID PARTS OF NE BRAZIL

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ABSTRACT:

The present study was carried out by digital interpretation (Supervised Classification-MAXCLAS), which is based on the methodology utilized by Kennard et al (The research work of our project was carried out through the 1988). The Satellite Data were received from the Aero Space Research Establishment of Germany (DLR-Oberpfaffenhofen). The LANDSAT and SPOT data were processed with ERDAS Software, operating on a high performance micro-computer. The digital interpretation was applied to one million pixels in each area of each State (Paraiba, Ceará and Piauí) to derive land use/land cover and major soil associations information. In the digital image classification, based on the field observations and using interactive capabilities of ERDAS, total 120 observations (40 observation in each area), were selected for land use/land cover classes. The digital interpretation was modified and corrected in accordance with the conditions of the area. By using RECODE program of ERDAS Software for land use/land cover classes, two maps, such as, land use/land cover map at the Level-II and major soil associations map for each area were generated. The comparison of digital interpretation with reference information indicated that the digital interpretation is closely resembled field observation and the overall classification accuracy was observed more than 85% in all the three areas of three States. The results of our study were found very beneficial for land development, natural resources management, land evaluation, soil conservation and land reforms programs of the Federal Government in the semi-arid region of northeastern Brazil.

TOPIC: Remote sensing applications

ALTERNATIVE TOPIC: Remote sensing applications