

## **Remote Sensing and GIS applied to urban planning in the municipal district of Acari, Northeast of Brazil.**

<sup>1</sup>IVO, P. S.; <sup>1</sup>PETTA, R. A. – <sup>1</sup>Programa de Pós-graduação em Geociências – Universidade Federal do Rio Grande do Norte-Brazil.

The present work focus on the use of Remote Sensing and GIS and the study, diagnosis and elaboration of multidata models (database and maps) in a pilot area. The main objective is to help the municipal authorities in their urban planning.

In the first phase of the investigation, data of different nature like satellite images, aerial photograph, topographical maps in different scales, geological maps are collected and was established a database. In the following phase the information are processed in digital media database and in software, observing the measuring criteria, statistical interpolation, neighborhood analysis, three-dimensional and thematic modeling, and applying different interfaces of software, principal based on GIS and S.R., to maintain the uniformity of formats.

The information layers are based on geological, geochemical and geophysical data, geomorphological, environmental analysis and catalogues of mineral occurrences.

The application of this methodology have supplied qualitative and quantitative georeferenced information, making possible the access of the information of the spatial phenomenas on regional and detail level, qualifying the generation of isolated or related reports and helping to take decision at low costs.

The purpose is to dispose of this digital database as a first steep, and always keeping the possibility to update. Thata will make it possible and easy to handle the information contained in the GIS and to renovate constantly the cadaster.