

TELEDETECTION AND GIS FOR SURVEYING OF NATURAL RESOURCES IN SANTIAGO DEL ESTERO PROVINCE, ARGENTINA

Makowiecki C. *, Calvanese G. *, Castro M. *, Rivera Pinares A. *, Aguilera Y. *

*Direccion de Aplicacion de Images Satelitarias – MOSP.BA-PNUD Arg. 96/006
Av. 7 N° 1267, 2° piso, La Plata (1900), Buenos Aires, Argentina

ISPRS Commission VI - Working Group 3

ABSTRACT:

The Santiago del Estero province (136,351 Km²) is located in the middle-north region of Argentina, embracing an extended plane area with some hills on the west and south.

This region which is covered with forest and bush vegetation is characterized by a subtropical warm climate. The population is about 700,000 people and their economy is based on the generation of row material that is conditioned by the quantity, quality and distribution of the natural resources. The Direccion de Aplicacion de Imagenes Satelitarias (DAIS.) was asked by the Secretaria de Obras Publicas de la Nacion (SOPYT) to update the information about natural resources of the province into the context of the Director Plan of Irrigation.

Trough visual and digital interpretation of twenty-five quarts of LANDSAT TM images, a regional land survey was developed; it involves the road net, urban centers, natural and built drainage net, land use and affected areas by different kind of problems that reduce the production. There were created four thematic maps with their geo - referenced data bases by using a GIS with the purpose to use them to improve the management of natural resources.