

# **INFRARED AND REAL COLOURS DIGITAL ANALYSIS IN VERY WET TERRAINS USING 123-RGB/457-IR TM LANDSAT BANDS, NORTHEASTERN ARGENTINA**

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The Northeastern Argentine region is characterized by very wet surface and atmospheric conditions. This is common at least ten months a year. Geomorphological studies are very important in order to check out agriculture activities and urban development as well as soil erosion and forestry use. The area suffers many pluvial and fluvial flooding currently.

Landsat TM images are widely used as a tool to study and anticipate natural disasters.

Intensive studies using TM Landsat digital images prove that 457 bands are adequate for mapping wet terrain in this area. However, current experimental practice point out that 123 RGB digital combinations, using specific values of contrast and brightness, before processing images with histogram equalization stretch (for example), give us more powerful results for some routine geomorphologic tasks.

Conclusion is that continuing digital training of previously unconsidered combinations, in some cases, may be useful. For the moment, there are no mathematical or statistics perfect rule in order to fixe the more realistic TM spectral behaviour. This depends on software, terrain and atmospheric conditions. Hyperspectral will be the optimum.