

Dynamics of Built-Up Areas over The Past 30 Years According to Remote Sensing Data in the City of Valdivia, Chile

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Abstract

The dynamics of built-up areas over the last 30 years in the city of Valdivia was analyzed according to Landsat satellite imagery data. For ETM+/Landsat-7 and OLI/Landsat-8 instrumentation systems, method of automatic satellite image interpretation of build-up areas showed inaccuracy, less than 1%, compared to visual method. For TM/Landsat-5 instrumentation system, method of automatic satellite image interpretation of build-up areas demonstrated unsatisfactory results. Since 1987 and by the year 2017 the city's built-up areas increased by 61% with the population growth of 66% within the same time period.

Keywords

Urban areas, Remote sensing, Earth, Artificial satellites, Satellites, Visualization, Sociology.