

The Urban Expansion Characterization of the Bir El Djir Municipality using Remote Sensing and GIS

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Abstract : Bir El Djir is an important coastal township in Oran department, located at 450 Km far away from Algiers on northwest of Algeria. In this coastal area, the urban sprawl is one of the main problems that reduce the limited highly fertile land. So, using the remote sensing and GIS technologies have shown their great capabilities to solve many earth resources issues. The aim of this study is to produce land use and cover map for the studied area at varied periods to monitor possible changes that may occurred, particularly in the urban areas and subsequently predict likely changes. For this, two spatial images SPOT and Landsat satellites from 1987 and 2014 respectively were used to assess the changes of urban expansion and encroachment during this period with photo-interpretation and GIS approach. The results revealed that the town of Bir El Djir has shown a highest growth rate in the period 1987-2014 which is 521.1 hectares in terms of area. These expansions largely concern the new real estate constructions falling within the social and promotional housing programs launched by the government. Indeed, during the last census period (1998 -2008), the population of this town has almost doubled from 73 029 to 152 151 inhabitants with an average annual growth of 5.2%. This also significant population growth is causing an accelerated urban expansion of the periphery which causing its conurbation with the towns of Oran in the West side. The most urban expansion is characterized by the new construction in the form of spontaneous or peripheral precarious habitat, but also unstructured slums settled especially in the southeastern part of town.

Keywords : urban expansion, remote sensing, photo-interpretation, spatial dynamics

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