

## **Climatic and dynamic variability of the vegetation in the Ziz- Rhésis watershed: Region of Tafilalet-Morocco**

Hajar Aatabou, Sofia Hakdaoui, and Anas Emran  
Mohammed V University faculty of science Rabat, Morocco

Tafilalet is listed by UNESCO (2000) as part of the Biosphere Reserve of South Moroccan Oasis ReBOSuM. The ecological, environmental and socio-economic importance of the region knows several challenges such as human activities, population pressure and climate change that are constantly degrading the natural ecosystems existing in this region : Mountain forests, routes and oases.

The Tafilalet region covers a land area of 77500Km<sup>2</sup> and includes four big watersheds: The Ziz, The Rhésis, The Guir and the Maider. For this study we are going to be interested in the biggest watershed of the Tafilalet region which is the Ziz-Rhésis.

The interaction between agricultural and pastoral activities and the pluviometry has led to vegetation degradation from 1986 till 2015. To highlight this degradation, this study leans on the analysis of different resolution images (NOAA from 1986 till 2015 and MODIS). For a particular and detailed approach of the land use evolution during that period, besides from images of MODIS, Landsat images of 1987, 2010 and 2015 were classified. Land use maps are a result of a maximum likelihood classification and they highlighted a strong growth in built and bare ground unlike forests and agriculture parcels.