



Climate indices over the last three decades in Tunisia using Weather Research and Forecasting Model:WRF

Meriem Deli (1), Nadia Mkhinini (2), Mohamed Sadok Guellouz (3), and Sadok Benjabrallah (2)

(1) Ecole Polytechnique de Tunisie, Université de Carthage, Tunisie (meriem.deli@gmail.com), (2) Faculté des Sciences de Bizerte, Université de Carthage, Tunisie(sbenjabrallah@gmail.com) , (3) Ecole Nationale d'ingénieur de Bizerte, Université de Carthage, Tunisie(Sadok.Guellouz@enib.rnu.tn)

Tunisia is a country situated in the south of the mediterranean basin. This region undergoes direct and indirect effects of climate change. Actually, we notice that summer temperatures have risen during the last decades. Nevertheless research on the tunisian climate are not well developed and are mainly based on observations; short and mid term forecast are not available for the tunisian case.

In this context we have studied the climate properties of Tunisia over the last 30 years using Weather Research and Forecasting model WRF. Afterwards we compared our results to the observations that we have obtained on behalf of the National Institute of Meteorology. Results were then used to calculate different climate indices related to the air temperature such as extreme values during a specific period exceeding specific limits (Percentile), warm and cold spell duration and growing season length. We admit that we have created a reliable database for the Tunisian climate.