

Abstract:

The purpose of this thesis is to contribute to the analysis of drought in Mitidja plain and make predictions in order to tackle it in the event of its possible occurrence.

A presentation of the plain allowed us putting on the map the potentials it has as far as economic sectors are concerned.

A climatology study of the area, developed from on recent database led us to better understand its functioning system.

Calculation of the various drought indexes (deviation from the mean and standardized precipitation index SPI) helped us to conclude the recurrence rate for the drought that is raging in this geographic area and the severity state of this drought.

Application of the Markov chains led to obtaining the percentages for the risks of succession of drought years according to various scenarios on monthly and annual scales for order 1 and order 2.

Keywords: drought; Mitidja; Markov chains; drought indexes.