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**Detection of trends and changes in monthly maximum daily rainfall in North
Eastern Algeria**

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Abstract

The climatic change is a reality largely recognized today in the scientific committee. Nevertheless, its impact on precipitation, especially on maximum daily rainfall in arid and semi-arid regions is not yet certain. Indeed, very few studies dealt with this matter in Algeria. In this context, the present study examines rainfall variability in North-Eastern Algeria based on daily rainfall data registered over the period from 1970 to 2012 in 14 stations. Trends and ruptures in the different rainfall series were detected by Pettitt and Mann Kendall tests, considering both at-site and regional analyses. The indices characterizing the maximum daily rainfall as well as the number of days of rain for different classes were also computed and analyzed. The results obtained showed an alternation of dry and wet periods, without any particular cycles. A significant change in rainfall tendency was detected in the decade 1980 (pluviometric drops) for all the examined rainfall stations.

Key words: Rainfall, North-Eastern Algeria, Pettitt test, Mann Kendall test.