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Precipitations changes in the central and eastern region of Algeria towards the end of 21th century

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According to IPCC reports, the Mediterranean basin and particularly the North African area are amongst the most vulnerable regions to climate change. However, the information concerning the North-African zone is very limited and studies on climate change have rarely been conducted in Algeria up to now. In this study, we present and analyze the characteristics of future change in precipitations in the central region of Algeria. Based on data availability, our study areas concern Bordj Bou Arreridj in the East and Algiers in the central region of the country. Observed precipitations series collected from "l'Office Nationale Météorologique d'Alger", and climate projections for the actual period and for the distant future (2071-2100) obtained from the ARPEGE-Climate model of Météo-France run under the medium A1B SRES scenario, were used for the completion of this work. The comparison between current and future climate is based on anomaly method. Climate change is not similar for both areas, but a tendency toward higher aridity is clear especially in spring. In Algiers, annual precipitations decrease by -18%. Aside from the increase calculated on October (+ 6%), inter-annual monthly precipitations decreases throughout the year with a maximum in June and July (above -40%). In Bordj Bou Arreridj, the average decrease in precipitation is -8%. It is minimum in February (-13%) and maximum in April (-45%). However, from June until to October the anomalies indicate an increase of the future precipitations with a maximum of +54% calculated on July.