



## **Heat wave Characteristics in the Eastern Mediterranean and Middle East using Extreme Value Theory**

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Heat waves in the eastern Mediterranean and Middle East can have large socioeconomic impacts. We apply a newly developed statistical framework, based on extreme value theory, to study the characteristics of heat waves in the region during the period 1973-2010 using data from fifteen measurement stations across the region. The analysis shows increasing trends in the highest daytime temperatures in the Persian Gulf region in summer. Increasing trends in the number of heat waves are found at all stations, whereas the maximum temperature during heat waves is found unchanged, implying no change in their intensity. Furthermore, no significant trends in the heat wave duration are also observed. Return levels are calculated for the individual hot days and found to be very high in the Persian Gulf region.