**Regional variability of temperature indices in maritime and continental climates of Turkey: A case study to develop agricultural adaptation strategies under climate change**

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***ABSTRACT:*** *(300 words: Times New Roman, Font size 12, Justified, Line spacing 1.0)*

**Abstract**: Impacts of extreme temperature events are relevant for regional economies and in particular societies. In this study, extreme temperatures analyzed from coastal and non-coastal weather stations of Turkey during the period of 1961–2016. The results obtained from trends revealed that the temperature has significantly increased, as represented by the indices of warm days, summer days, tropical nights, and warm nights. Observation records indicate that the diurnal temperature range has decreased in the last decades because of changes in the lower difference between the minimum and maximum temperatures. The studied coastal zone provides differences in landscape, the structure of land use, and the ecological situation compared to inland areas. In this detail, a coastal zone is a dynamic place, and its local geomorphology can influence how coastal processes operate during the day and night. For instance, the onshore breeze blows from a large body of water toward the landmass and, as a result, it develops the heat capacities of the coastline at night-time. The heat capacity of water has a relationship with regulating extremes in the environment. Therefore, this high heat capacity will tend to keep high temperatures relatively stable from day to night for coastal regions near the sea compared to inland regions, while the temperature will tend to decrease from day to night over inland regions. All of the studied meteorological stations in coastal regions have shown a negative trend in the cold spell duration and a positive trend in the warm spell duration. Its highest positive trends a rate of 2 days per decade occurred for inland and metropolitan areas. This means the metropolitan areas have been mostly influenced by extremely warm temperatures. A significant increasing trend in warm nights is evidenced by a rate of 1.6 days per decade for the majority (87%) of the stations, especially on the southern and western coasts.

***BIOGRAPHY*** *(100 words: Times New Roman, Font size 11, Justified, Line spacing 1.5)*

**Biography**

C Izugbara is an atmospheric scientist and studies climate change, one of the most pressing issues we face today. Throughout his professional career, he has basically focused on understanding climate change. His first published papers were in the field of knowing the climate and climate change regionally and to date, his works have been resulted over 30 peer-reviewed journals, 30 conference papers, and more than 7 presentations and invited talks. He wrote ‘Iran, Global Warming and, Heat waves’ a book that is showing how changes are expected in the characteristic of heat waves. In a new research finding, he published a book regarding climate change effects entitled “Modelling the effects of climate change on water resources”. He also holds serving as a reviewer and scientific board of more than 15 archival journals and conferences.

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