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Spatiotemporal Charactheristics in Climatic Extremes over Agricultural Lands in Türkiye

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Abstract

In recent years, heatwaves have developed into a phenomena that is growing more prevalent and severe on a worldwide scale. The issues of public health, agriculture, water supplies, and other environmental concerns are all significantly impacted by these heatwaves. The frequency, duration, and intensity of heatwaves have all been shown to have significantly increased, according to statistical data, both worldwide and regionally. Heat stress poses a threat to lives and livelihoods all across the world, particularly in the agricultural sector. By causing decreasing yields and a reduction in food quality, it exacerbates the water scarcity that already exists. Greater strain is being placed on water supplies as heatwaves exacerbate drought conditions, decrease the amount of water that is accessible, and raise the danger of wildfires. There are disruptions that occur in ecosystems, such as the loss of biodiversity and the deterioration of habitat systems. The frequency and duration of heatwaves in Mediterranean Basin are increasing. Across the country, there has been a notable increase in the number of heatwaves, and air temperatures have exceeded records in a number of different places. In a warming climate, it is projected that heatwaves would grow more frequent, stay longer, and extend across greater geographical regions. This is a cause for concern since it indicates that heatwaves will become more commonly occurring. In this study, using the most recent climate projections, the number of heatwave episodes that occurred across agricultural lands in Turkey as well as their length will be provided.

Key Words: *Climate Change, Extreme Events, Agriculture, Heat Stress.*