



## **Impacts of the Future Changes in Extreme Events on the Regional Crop Yield in Turkey**

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The changes in extreme events caused by climate change have the greatest impact on agricultural sector specifically crop yield. Therefore, it requires a clear understanding of how extreme events affect the crop yield and how it causes high economic losses. In this research, we cover the relationship between extreme events and the crop yield in Turkey for the period of 2020 - 2045 with respect to 1980 - 2005. We focus on the role of those extreme event causing natural disasters on the regional crop yield. This research comprises 2 parts. In the first part, the projection is performed according to the business as usual scenario of IPCC, RCP8.5, via the RegCM4.4 in order to obtain extreme event indices required for the crop assessment. In the second part, the crop yield and the extreme event indices are combined by applying the econometric analysis in order to see the relationship between natural disasters and crop yield. The risks for crop yield caused by the extreme events are estimated and interpreted. This study aims to assess the effect of frequency of expected extreme events on the crop yield at the cropland of Turkey.

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