

**ABSTRACT:** In this work, the future trends of extreme temperature indices are investigated for 9 stations located at Sinai Peninsula for the period 2016 until 2050. Daily future projection scenarios RCP45 and RCP85 data downloaded from Canadian regional climate model (CRCM4) for the period (2016-2050). About 8 extreme temperature indices calculated from the daily minimum and maximum temperatures of crcm4 model by using CLIMPACT2 R-package. Results of RCP45 scenario show that all stations have significant positive trend for SU35, TR20, TX90p and TN90p but all stations also have significant negative trend for, TX10p and TN10p. the results from RCP85 scenario is same but have large slops for all indices than RCP45 scenario.

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