

Assessment of Human Discomfort Index in the CORDEX-MENA Region in a Changing Climate

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In recent years, the frequency, intensity, and duration of the climate extremes have been significantly increasing with global climate change. This increase has a major influence on human health. In this study, our aim is to examine the impact of climate change on human comfort in the CORDEX-MENA (Middle East & North Africa) region. For this purpose, we assessed the changes in the human discomfort index (DI) for the last three decades of the 21st century compare to the control period of 1971-2000 under two distinct concentration pathways (i.e. RCP4.5 and RCP8.5). Discomfort indices are calculated using relative humidity (RH) and dry bulb temperature (TD) variables which are obtained from dynamically downscaled (i.e. 50 km horizontal resolution) outputs of HadGEM2-ES via the Regional Climate Model (RegCM4.4) of the Abdus Salam International Centre for Theoretical Physics (ICTP).

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