**Title: Assessing Regional Variability of Renewable Energy Potential: A Case Study for Developing Sustainable Energy Strategies"**

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***ABSTRACT:*** *(300 words)*

Abstract: This study investigates the impacts of extreme temperature events on regional economies and societies, focusing on coastal and non-coastal regions of Turkey from 1961 to 2016. Analysis of temperature trends reveals significant increases in warm days, summer days, tropical nights, and warm nights. Decreases in diurnal temperature range are observed due to diminished differences between minimum and maximum temperatures. Coastal zones exhibit distinct landscape, land use patterns, and ecological conditions compared to inland areas. The dynamic nature of coastal environments, influenced by local geomorphology, affects coastal processes, such as the development of onshore breezes that moderate nighttime temperatures. Coastal regions demonstrate greater temperature stability from day to night compared to inland areas. Negative trends in cold spell duration and positive trends in warm spell duration are observed across all meteorological stations, with metropolitan areas experiencing the most pronounced increases in extremely warm temperatures. Warm nights show a significant increasing trend, particularly along the southern and western coasts.

***BIOGRAPHY*** *(100 words)*

**Biography**

Dr. A. Patel, a distinguished renewable energy scientist, is passionately dedicated to unraveling the complexities of sustainable energy solutions, recognized as crucial in mitigating climate change. Throughout their esteemed career, Patel has committed their efforts to advancing our understanding of renewable energy dynamics. Their groundbreaking research, showcased in numerous peer-reviewed journals and conference papers, has illuminated regional renewable energy patterns and their interactions with global environmental shifts. Patel's seminal work includes the publication of "Solar Power Integration in Urban Areas," shedding light on the evolving nature of renewable energy adoption. Furthermore, their recent book, "Wind Energy Potential in Coastal Regions," underscores their multidisciplinary approach to addressing renewable energy challenges. Beyond research, Patel actively contributes to the scientific community, serving as a reviewer and on the scientific boards of various prestigious journals and conferences.

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