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## Dynamic of consecutive dry-wet days in the coastal area of China during 1961-2017

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Coastal Area of China (CAC) is of high ecological vulnerability and extremely sensitive to the adverse effects of climate change. Based on the daily precipitation dataset of 156 surface meteorological station records, Consecutive Dry Days (CDD) and Consecutive Wet Days (CWD) on meteorological station scale in the CAC were calculated by RClimDex model. And a set of statistical methods, including trend analysis, Pettitt test, Mann-Kendall test and Accumulative anomaly analysis were employed to investigate the dynamics of CDD and CWD in the CAC. Results showed that annual average of CDD and CWD presented the opposite spatial patterns of north-high south-low and north-low south-high, respectively and annual average of CDD is generally more than that of CWD, especially in the Hebei province and western of Liaoning province. The continuous dry situation is most prominent in Shandong, Guangdong and Guangxi and the consecutive wet condition is more obvious on the border of Jiangsu and Zhejiang, especially in the Yangtze estuary. However, the dry-wet conditions are more uncertain in Liaoning, Hebei and Jiangsu, where the dry and humid climate change is more complicated. The mutation of CDD and CWD mainly occurred between 1970s and 1990s and the mutations in CDD were slightly earlier that those in CWD. This study are beneficial to raise awareness of extreme climate change in the coastal area of China and provide scientific basis and support for climate change mitigation and adaptation as well as climate change risk management at the regional scale, which is an important supplement to the study of regional responses to global climate change.

### Biography

Xiaoli Wang is dedicated to assessing and predicting climate change as well as risk management of meteorological disasters, especially focusing on such a region with high climate vulnerability in the coastal area of China. She has used a set of mathematical and statistical methods and models to conduct a thorough research on extreme temperature events and extreme precipitation events in the coastal area of China. Her expert research provides a reference for understanding of regional climate change in-depth and a technical support for mitigation and adaptation of climate change.

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