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Climatic changes of landfall tropical cyclones in China over the past 58 years

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By analyzing the data from the Tropical Cyclone (TC) Yearbooks, we examined changes of landfall TCs in China over the past 58 years (1949-2006), including their tracks, numbers, duration, intensity as well as probability distributions. Results indicate that the numbers has decreased for TCs and hardly changed for TYs. Over the past 58 years, the most northern latitude of landfall for each year tends to be more southward, and the most southern latitude to be more northward with an strong inter-decadal variability, resulting in a decrease of the south-north range of landfall location, i.e., more TCs tend to make landfall near 25oN, and less around the north of 35oN as well as around the south of 20oN. The landfall season is decrease by about one month. The landfall TCs' intensity has been increased, and the intensity difference between the strongest and the weakest TC reduced. Finally the skew of intensity shows an upward tendency indicating the proportion of stronger landfall TC has increased.