



Multi-timescale Drought Variations based on standardized precipitation index in China during past 52 years

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Based on daily precipitation data from 566 weather stations during 1960 to 2011, the multi-timescale variations of drought in China were analyzed by using Standardized Precipitation Index. The results showed that there existed a northeast to southwest drought belt in China in recent 52 years. The climate in Northeast China, North China, eastern Inner Mongolia, east of Northwest China and Southwest China was becoming dry. Meanwhile it became significant wetter in Northern Xinjiang, central Qinghai and north central Tibet. The drought trend in North China mainly happened in summer, and drought in Northeast and Southwest occurred in summer and autumn, in the middle and lower reaches of the Yangtze River and the east part of Northwest it was mainly in spring and autumn. In Northeast China, the drought days in 1970s and 2000—2011 were more than other decades, and it were fewer in 1960s. In North China and the east of Northwest China, the driest decade was 1990s, and it was wetter from 1960s to 1980s. Southwest China experienced more droughts after 2000, and fewer in 1960s and 1970s. In the middle and lower reaches of Yangtze River, drought days were more in 1960s and after 2000, and fewer in 1980s. In 1960s, the high occurrence frequency of drought was in the west and middle of Northwest China and the middle and lower reaches of Yangtze River. In 1970s [U+FF0C] the droughts frequently occurred in Northeast and the west of Northwest. In 1980s [U+FF0C] drought events mainly took place in North China, Huang Huai plain, the west and middle part of inner Mongolia and east of Southwest respectively. In 1990s [U+FF0C] the areas with high occurrence were transferred to the southeast of Northwest, North China, and Huang Huai, Jiang Huai, Jiang Han plain. After 2000, drought frequently occurred in Northeast, the middle and lower reaches of Yangtze River and east part of Inner Mongolia, Northwest and Southwest China.