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{Hydrological Trend in Different Basins in China}

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Hydrological cycle has been highly influenced by climate change and human activities and it is significant for analyzing the hydrological trends that occurred in past decades in order to understand past changes and predict future trends. Precipitation, runoff and evaporation are the three main processes in the hydrological cycle. The trends of precipitation and runoff in a basin can be analyzed with observation data and the actual evaporation can be simulated with water balance if the water storage change is known. Lots of observations show that the rate of evaporation from open pans of water has been steadily decreasing all over the world over the past 50 years but the trend of actual evaporation is not clear. The relations between actual evaporation and potential evaporation can be described by the Budyko curve with a complementary relation. The whole China are divided into ten basins, including Songhua River Basin, Liaohe River Basin, Haihe River Basin, Yellow River Basin, Huaihe River Basin, Yangtze River Basin, Pearl River Basin, Southeast Basin, Southwest Basin and Northwest Basin. With the weather data and hydrological data from 1956 to 2005, the hydrological trends and the Budyko curve are discussed in different basins. For the Yellow River Basin, we found that the actual evaporation decreased and the runoff decreased with the decreasing in precipitation and the decreasing in potential evaporation in the past 50 years. For the Yangtze River Basin, we found that the actual evaporation decreased and the runoff increased with the increasing in precipitation and the decreasing in potential evaporation in the past 50 years. The different hydrological trends are explained with the Budyko curve.