

Impact of Climate Change on Rainy Days in Bangladesh during 1950-2009

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The impact of climate change on annual rainy days has received a great deal of attention by scholars worldwide. Many studies have been conducted to illustrate that changes in annual rainy days is becoming evident on a global scale. Bangladesh is likely to be one of the most vulnerable countries in the world due to climate change. In the present study, 60 years (1950-2009) daily rainfall data of 13 meteorological stations of Bangladesh Meteorological Department (BMD) have been used. Seasonal and yearly trend of rainy days (greater than 01 mm/day) are studied. Variation of three threshold rainy days named: Moderated Heavy (22-44 mm/day), Heavy (45-88 mm/day) and Very Heavy (greater than 88 mm/day) are also studied. The country is divided into two regions named: wet region and dry region. All the stations show positive trend of yearly variation of rainy days except in Srimongal (situated in northeastern part of Bangladesh) during 1950-2009. All the four seasons (winter, pre-monsoon, monsoon and post-monsoon) showed positive trend of rainy days during the study period 1950-2009. The country's averaged three threshold rainy days also showed positive trend. The yearly averaged rainy days in the wet region (122 days) was higher than that of dry region (105 days) during 1950-2009. The averaged rainy days in the winter, pre-monsoon, monsoon, and post-monsoon period was 04, 23, 77 and 10 days, respectively. The wet (dry) region showed negative (positive) trend of rainy days during 1950-1979 whereas wet (dry) region showed positive (negative) trend of variation of rainy days during 1980-2009. The country's averaged rainy days showed negative trend during 1950-1979 and positive trend during 1980-2009. These changes indicate that the climate of Bangladesh is changing. The yearly averaged increase of rainy days was 0.35 days/year.