

BOX - JENKINS MODEL TO FORECAST THE AMOUNT OF RAINFALL DURING SOUTH WEST MONSOON OVER GANGETIC WEST BENGAL

Monsoon represents a seasonal wind, which blows with consistency and regularity during a definite period of the year and is absent for rest of the period. Such seasonal changes of wind are primarily due to differences in the amount of heat received by different parts of the earth's surface from the sun. A precise definition of monsoon is a matter of choice, because one needs hardly to frame a set of rules, which embraces all facets of monsoon. Opinions differ on whether monsoon should be defined by its rain generating capacity, or by changes in global wind.

The purpose of the present paper is to view monsoon by its rain generating capacity and forecast the amount of rainfall during summer monsoon / southwest monsoon over Gangetic West Bengal during the period from 1873 to 2003. Autoregressive model is developed for the purpose. The result reveals that the first order autoregressive model is a representative model for forecasting the yearly total rainfall during summer monsoon. The forecast error is observed to be 0.125 %. The result further shows that the pattern of rainfall depicts a decreasing trend from 1953, which seems to be an important finding of the study concerning climate change.
