

## DROUGHTS AND FLOODS OVER INDIA IN SUMMER MONSOON SEASONS 1871-1980

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**ABSTRACT.** Utilizing the monthly rainfall of 306 stations with fairly even distribution over India and rational criteria, the incidence of droughts and floods over the country and regions thereof in the summer monsoon season has been examined for the period 1871-1980.

Droughts over India were severe in four years: 1877, 1899, 1918 and 1972. Floods over India were severe in three years: 1878, 1892 and 1961. The occurrence of droughts and floods has been found to be random. The only years when none of the regions of India experienced either drought or flood were 1930, 1931 and 1957. Having identified individual years of monsoon rainfall excess and deficit, differences in depression track behaviour and in the location of the monsoon trough were examined.

### 1. INTRODUCTION

In the tropics, rainfall is the climatic parameter that most concerns the farmer. Interannual (year-to-year) variability is an inherent characteristic of rainfall which affects a variety of economic activities.

With agriculture as the predominant occupation of the population and the monsoon contributing 80-95% of annual rainfall over a large part of the country, the activity of the summer monsoon (June to September) is the most important factor in the Indian economy. The seasonal rainfall in different parts of India varies markedly from year-to-year. Almost every year sees some region experiencing drought or flood, though the area so affected is generally a small part of the total land mass. However, occasionally, the variations are large and a large part of the country suffers from drought or flood, with the inevitable dislocation of the economy

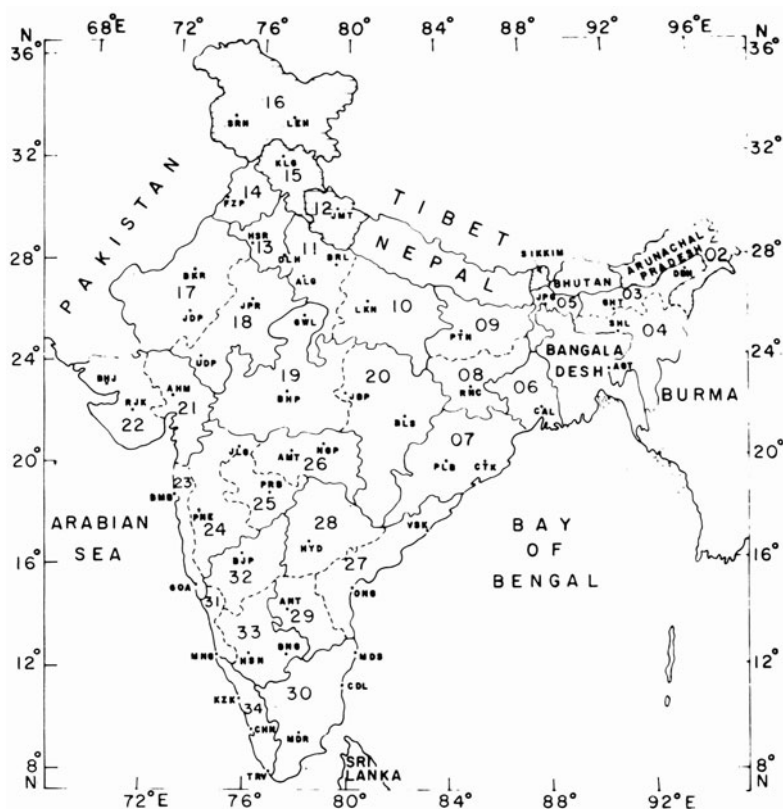


Fig. 1. Meteorological regions of India. Area considered: Contiguous India excluding hilly areas (hatched).