

CHAPTER 34

RAINFALL

India Meteorological Department (IMD) is the central agency which records, and archives rainfall data in India. The IMD maintains a large rain gauge network consisting of various types of observatories.

Daily Rainfall data of about 9000 rain gauge stations are available at the archive of India Meteorological Department since 1875 to date.

As on January, 2006, the network consists of 660 surface observatories and 697 hydromet observatories. In addition, rainfall data are also recorded at 7941 observatories maintained by various state governments and other non-IMD agencies. Since 1992, IMD had introduced District-wise Rainfall Monitoring Scheme (DRMS) under which 2821 selected observatories (411 surface observatories + 232 hydromet observatories + 2178 state rain gauge stations) record rainfall and transmit to the respective Regional Met Centres of the IMD on real time basis for better rainfall representation. The rainfall data given in this section in respect of 36 meteorological sub-divisions of India are derived from the DRMS observatories.

Daily rainfall is recorded at 08.30 hours everyday throughout the country. The daily rainfall at an observatory is the total rainfall for the preceding 24 hours ending at 08.30 hours of the date of the measurement. The monthly rainfall is the sum of all the daily rainfall recorded during that month.

The monthly "Actual rainfall" of a sub-division is the mean of monthly rainfall of all the stations in that sub-division for which rainfall data are available for that month. The sum of actual monthly rainfall for the 12 months is the "actual annual" rainfall of the sub-division for that year.

The 'monthly normal' rainfall of a station was calculated using all the available data during the period 1941-1990. (In the Statistical Abstract, India 2004 this period was 1901-1970). (The monthly "normal rainfall" of the sub-division is the mean of monthly normal rainfall of the corresponding stations and "annual normal rainfall" is the sum of the monthly normal rainfall for all the 12 months).

When the rainfall for the monsoon season of June to September for the country as a whole is within 10% of its long period average, it is categorized as a "Normal" monsoon. It is categorized as "Excess" monsoon, if it is above 110 % of long period average and "Deficient", if it is below 90% of long period average. The performance of monsoon rainfall over smaller areas of the country is monitored by evaluating the departures from the normal for each meteorological sub-division and district. The rainfall is classified as excess, normal deficient or scanty as per the following criteria. Excess +20% of normal or more, 'Normal': + 19% to -19% of normal, Deficient -20% to -59% of normal, Scanty: -60 % of normal or less

- For the Country as such, the Actual Annual Rainfall for the year 2007, 2008 and 2009 are 1179.3, 1118.0, and 953.7 (Millimeter).
- Normal rainfall for All India for 2007, 2008 and 2009 are 1195.9, 1196.7 and 1196.5. Table 9.1 gives sub-division wise actual monthly rainfall.

This chapter contains the following tables:-

Table- 34.1- Monthly (Actual) Rainfall.

Table- 34.2 –Annual Rainfall.