## Monsoon 2000

Southwest Monsoon (June-8.3 The September) normally brings 80 per cent of annual rainfall to the country and covers almost the entire country. After the withdrawal of the Southwest Monsoon from the country, rainfall is mainly confined to (a) South Peninsula particularly Tamilnadu, which comes under the influence of the Northeast Monsoon during October-December and (b) Northwest India which receives winter rains during October-March in association with the passage of extratropical systems called western disturbances. There are no large-scale weather systems, that can bring rain over other parts of the country, except generating some local thunderstorm activity in the summer season of April-May.

## Southwest Monsoon (June-September 2000)

8.4 The Southwest Monsoon advanced over Kerala on its normal date, 1 June. Initially the



monsoon current was active due to the formation of low pressure area in the west-central Bay of Bengal and its northwestward movement over the central parts of the country. The monsoon flow was weak from 10 June onwards and it strengthened again on 23 June. The Monsoon covered the entire country by 2 July, about a fortnight earlier than the normal date.

8.5 During the entire season of four months, the country as a whole had an average rainfall of 83.4 cms, which is 92 per cent of the long period average (LPA) (Table 8.1, Fig. 8.1).

8.6 Thus statistically, the country experienced a normal monsoon, this being defined as +/- 10 per cent of LPA, yet, at the end of the

TABLE 8.1   South-West Monsoon Performance   (1 June – 30 September)								
Year	Excess/ Normal rainfall (No. of m sub-di	Deficient/ Scanty/No. rainfall eteorological ivision@)	Normal/ Excess rainfall (percentage of districts)	percent of Normal rainfall received (All India)				
1991	27	8	68	91				
1992	32	3	65	93				
1996	32	3	82	103				
1997	32	3	81	102				
1998	33	2	81	106				
1999	28	7	67	96				
2000	28	7	66	92				
@ Total number of Meteorological sub-division is 35.								



monsoon season, the following 7 out of 35 meteorological sub-divisions of the country had received deficient rainfall:

Meterological sub-divisions	Per cent
Saurashtra and Kutch	-44
West Madhya Pradesh	-35
Gujarat Region	-31
Andaman and Nicobar Island	-31
East Rajasthan	-30
East Madhya Pradesh	-28
West Rajasthan	-22

In more disaggregated terms, 142 out of 424 meteorological districts of the country (34 per cent) received deficient rainfall, i.e. –20 per cent or less (Fig 8.2). States with large number of rainfall-deficient districts were:

State	No. of Districts	State D	No. of istricts
Madhya Pradesh	32	Orissa	6
Rajasthan	26	Punjab	6
Gujarat	16	Tamil Nadu	5
Uttar Pradesh	9	Chhatisgarh	4
Haryana	8	Himachal Prades	h 4
Kerala	7		

It is important to note that there were 71 districts which received deficient monsoon rainfall not only in 2000 but also in 1999, that is, for two successive years. Further, there were 17 districts which received less rainfall for three successive years 1998, 1999 and 2000.

8.7 Heavy rains were reported from isolated places in Andhra Pradesh in association with a depression that crossed Andhra Pradesh coast on the night of 23 August near Kakinada. This led to severe flood situation. Flooding also occurred in some areas of East Uttar Pradesh, Bihar, West Bengal in the month of September.

## Post Monsoon (October – December 2000)

8.8 South Peninsula comes under the influence of northeast monsoon during October-December and Northwest India receives winter rains during October-March. The normal rainfall over South Peninsula during the northeast monsoon season (Oct.–Dec.) is 313 mm. But this year less rainfall was received which was –25 per cent of the normal rainfall during this season. The normal rainfall during the winter season of October-March over Northwest India is 136 mm. Rainfall in the first three months of October-December accounts for 33 per cent

of the season's normal and, rainfall in the latter three months of January-March is 67 per cent of season's normal. During October-December 2000 period departure of rainfall from the normal was -82 per cent over Northwest India.

8.9 For the country as a whole the cumulative rainfall during post monsoon season 2000 (Oct-Dec) was excess or normal in 4 out of 35 meteorological sub-divisions as compared to 26 sub-divisions in 1999 (Table 8.2). It is not a satisfactory situation and the country may face

severe water shortage in summer months of 2001.

TABLE 8.2									
Post Monsoon Rainfall (October-December)									
(Number of Meteorological sub-divisions)									
1	995	1996	1997	1998	1999	2000			
	333	1330	1331	1330	1333	2000			
Excess/Normal	16	26	27	33	26	4			
Deficient/Scanty	19	9	8	2	9	31			
Total	35	35	35	35	35	35			